

Gender difference in the learning of nursing skills among nursing students of Medical sciences of Abadan, 2011-2015

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ABSTRACT

Objective: Nursing students need to learn and pass the influential course of nursing skills in order to enter to clinical environment. The level of learning of this course will affect their success rate and professional development in future. **Methods:** This research is a cross-sectional-descriptive study conducted on 245 first-semester nursing students in years 2011-2015. All data, including the score of theoretical and practical courses of nursing principles and skills, GPA of the first and third semesters of high school, and the gender of students were extracted from the students' educational file and recorded. Then, they analyzed using spss software. **Results:** The majority of participants (57.6% of students) were female. The mean score in the practical course of nursing principles and skills in males was 16.64 ± 2.27 and 15.87 ± 2.25 in females. The mean score in the theoretical course of nursing principles and skills in males was 14.58 ± 2.01 and 14.44 ± 2.04 in females. A significant difference was seen between two genders in the score of practical course of nursing principles and skills (0.009). However, this difference in the theoretical course scores was not significant (0.57). **Conclusion:** This research suggests that males obtained higher scores in practical courses and females obtained higher results in theoretical courses. It is necessary to consider this difference in the factors of academic achievement.

Keywords: Nursing principles and skills, nursing students, gender, learning, academic achievement

Introduction

Learning achievement is one of the most important outcomes and products of educational system for both the individual and the community. Achieving productivity and improving the quality of the educational system can be considered as the most influential factor in the development of countries. The experiences of developed countries such as Japan in the area of comprehensive development also suggest investment in educational resources and human resources. In order to achieve these goals and improve the quality, students' academic achievement is one of the main goals of the educational

programs, while educational failure is nowadays one of the concerns of families and authorities in education. One of the issues, drawn the attention of the educational science experts, is finding the required and effective conditions and facilities for successful educating and academic achievement. Those students achieve a high position in community in light of their successful education who use maximum of their internal and external potential to achieve higher educational goals and gain the conditions necessary for successful social life. In contrast, educational failure leads to personal and social problems and deviation from the achievement of educational system goals^[1]. Students, as the spiritual resources of the community and the future of the country, are the selected forces in terms of talent, creativity and persistence, and in order to achieve educational achievement and successful life, they require peace of mind and security in all aspects. In other words, community, especially, the university, is responsible for the fate, successful development and the position of the person in the community. One of the criteria for the effectiveness of the educational system at the university is the level of academic achievement and academic failure. It could be stated that the problem of success or failure in education is one of the main concerns of each educational system in all communities, so that the academic

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achievement of students in each community indicates the success of the educational system of universities in achieving the goals of university. Academic failure is a serious problem, so that about 50% of students face it in the first year of their entrance to university^[2]. Nursing students also need to learn and pass the influential course of nursing skills to enter to clinical environment and hospital units. These courses are presented in two theoretical and practical ways. The level of learning this course, starting from the first semester in all nursing schools, would have great impact on their success and professional development in the future.

Theoretical part of this course is usually taught in the form of lectures and assessed in written tests. However, the practical part is taught at the Center for Clinical Skills and assessed using a method such as OSCI. Many factors can be involved in the teaching-learning process, such as age, gender, cultural background, and learner status. These factors are related to the hereditary, educational and personality traits of different individuals and cause individual differences in them^[3]. Although it seems that the GPA of female students to be higher than that of male students, there are contradictions among the studies conducted in this regard. In a study conducted by Edraki *et al*, a significant relationship was found between gender and educational achievement, but in the study conducted by Sadeghi Movahed, no significant relationship was reported between gender and marital status and academic achievement and failure^[2].

In a research conducted by Masoud Rudbari and Behzad Asl Marz entitled academic achievement among students of Zahedan University of Medical Sciences and its related factors in the academic year of 2007-2008, the relationship between the university GPA and the gender of the students and the higher GPA in female students were reported^[4]. Given the importance of learning level of nursing principles and skills by nursing students and given the difference views of researchers on the role of gender in practical learning of these skills, this research was conducted to determine the gender differences in learning in the nursing principles and skills among the nursing students and examine the gender role on the level of learning this course among nursing students and also evaluate the impact of some other factors in this regard, while explaining gender differences.

Methodology

This cross-sectional descriptive research was conducted on first semester nursing students in the academic year 2011-2015. After exclusion the cases with information defect, 245 students were selected for investigation. The tool used in this research was a checklist prepared by using the information inserted in the students' educational records and all information was recorded only based on the students' educational files. This information includes: the score of the theory of nursing principles and skills, the course of practical course of nursing principles and skills, the first semester of the first semester, the three-year average of the high school and the gender of the students. Finally, all the

information was entered into the SPSS software. Data was analyzed using descriptive statistics (mean and standard deviation, frequency and percentage), t-test and Pearson correlation. This information included the score of the theoretical course of nursing principles and skills, score of the practical course of nursing principles and skills, the first semester GPA, the three-year high school GPA, and the gender of the students. Finally, all the information was entered into the SPSS software AND analyzed using descriptive statistics (mean and standard deviation, frequency and percentage), t-test and Pearson correlation.

Results

In this research, 245 nursing students were evaluated, which 141 (57.6%) of them were female and 104 (42.4%) were male. The mean score of the practical course of nursing principles and skills was 15.87 ± 2.25 in female students and 16.64 ± 2.27 in male students.

The mean score of the theoretical course of nursing principles and skills was 14.44 ± 2.04 in female students and 14.58 ± 2.01 in male students. The mean three-year high school GPA was 17.82 ± 1.75 in female students and 15.86 ± 2.27 male students, and the first-semester GPA was 15.66 ± 1.34 in the female students and 14.93 ± 1.39 in the male students. Comparison of the practical and theoretical courses scores of students and the GPA separately by gender is presented in Table 1 and the relationship between male students' scores compared and female students' scores and Pearson correlation coefficient are presented in Table 2.

Table 1: comparison of mean scores of male and female students

| Variable | n | students | min | max | Mean±SD | pvalue |
|--|-----|----------|-------|-------|------------|--------|
| score of practical course of nursing principles and skills | 104 | male | 9.26 | 20 | 16.64±2.27 | 0.009 |
| | 141 | female | 4.12 | 20 | 15.87±2.25 | |
| score of theoretical course of nursing principles and skills | 104 | male | 10 | 19 | 14.58±2.01 | 0.576 |
| | 141 | female | 9 | 19 | 14.44±2.04 | |
| Three-year high school GPA | 104 | male | 9.55 | 19.25 | 15.86±2.27 | 0.0001 |
| | 141 | female | 10.45 | 19.86 | 17.82±1.75 | |
| First-semester university GPA | 104 | male | 12.06 | 18.85 | 14.93±1.39 | 0.0001 |
| | 141 | female | 12.25 | 19.06 | 15.66±1.34 | |

Table 2: Comparison of the scores of male students with those of female students (Pearson correlation coefficient)

| Variable | n | students | Pearson Correlation Coefficient | p-value |
|--|-----|----------|---------------------------------|---------|
| Relationship between practical score of nursing principles and skills and three-year high school GPA | 104 | male | 0.303 | 0.002 |
| | 141 | female | 0.379 | 0.0001 |
| Relationship between theoretical score of nursing principles and skills and three-year high school GPA | 104 | male | 0.378 | 0.0001 |
| | 141 | female | 0.242 | 0.004 |
| | 104 | male | 0.286 | 0.003 |

| | | | | |
|---|-----|--------|-------|--------|
| Relationship between practical score of nursing principles and skills and first-semester university GPA | 141 | female | 0.301 | 0.0001 |
| Relationship between theoretical score of nursing principles and skills and first-semester university GPA | 104 | male | 0.308 | 0.001 |
| | 141 | female | 0.497 | 0.0001 |
| Relationship between first-semester university GPA and three-year university GPA | 104 | male | 0.338 | 0.0001 |
| | 141 | female | 0.235 | 0.005 |

Discussion and Conclusion

Given the fact that nursing principles and skills course is one of the most important courses of nursing and it is presented at the university entrance stage, its teaching and learning face challenges, which can be influenced by different factors. In this research, some of them were investigated. The results showed that in the practical course of nursing principles and skills, the mean score of males was higher than that of females, and this difference was statistically significant. In the studies conducted in Iran, no comparison was performed in this regard and due to the significant differences in Iran's educational system and foreign countries' educational system and given significant differences between these two educational systems, they are not comparable. Moreover, there was a significant difference in practical course score based on gender (0.009), so that male students obtained higher scores in this regard. However, this difference was not seen in the theoretical course. Given the fact that no study was conducted in Iran in this regard, it was not impossible to compare the results.

In contrast to studies conducted on gender and academic achievement, Edraki et al.^[2] confirmed this issue, but Sadeghi Movahed et al found no relationship in this regard^[2]. Rudbari and Asl Marz reported the relationship between the university GPA and student's gender and the higher GPA among the females, which it is in line with the results of the current research. However, no distinction was made between scores of practical scores and those of theoretical scores^[4]. There was a significant relationship between the score of the theoretical course of nursing principles and skills and the first-semester university GPA in male and female students (0.0001).

As this course consists of 4 units, its significant effect on GPA is statistically significant and justifiable. A significant correlation was also found between the three-year high school GPA and the first-semester university GPA of students, which this result is consistent with that of other studies (Moniri, Shams and Rudbari). The reason for non-use of the last year high school GPA of students in this study was their probable stress due to thinking on and determining the path of life (such as being qualified or lack of being qualified in university entrance exam,

finding or not finding a job and marital status). Thus, the three-year high school GPA was examined due to non-significant effect of the mentioned stressful factors in it.

The results of this research suggest that in practical courses, male students obtained higher scores, and in theoretical courses, female students obtained higher scores. Possible causes of these results are more sensitivity of female students in social encounters compared to males, which leads to lower willingness to practice in order to learn practical courses in the presence of their teacher or their classmates (especially the opposite sex). In addition to the initial review of students, future studies can be conducted to examine the relationship between the final GPA of males and females and to compare them with mean scores of internship course.

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