**Res Dev Med Educ, 2015,** 4(1), 85-90
doi:10.15171/rdme.2015.014
http://journals.tbzmed.ac.ir/rdme

# Social Anxiety in Nursing Students of Tehran Universities of Medical Sciences

**Sima Ghezelbash[1], Farzad Rahmani[2]*, Hamid Peyrovi[3], Mehrnoosh Inanloo[4]**

[1] *Department of Psychiatric Nursing, Faculty Member of Nursing and Midwifery School, Ardabil University of Medical sciences, Ardabil, Iran*

[2] *Research Center of Psychiatry and Behavioral Sciences (RCPBS), Department of Emergency Medicine, Tabriz University of Medical Sciences, Tabriz, Iran*

[3] *Center for Nursing Care Research, Department of Critical Care Nursing, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran*

[4] *Center for Nursing Care Research, Department of Psychiatric Nursing, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.*

**Article info**

***Article Type:***
Original Research

***Article History:***
Received: 21 Jan 2015
Accepted: 6 June 2015
ePublished: 4 July 2015

***Keywords:***
Anxiety,
Students,
Nursing,
Education

**Abstract**

***Introduction:*** Social anxiety is an important factor in peoples' mental health. Good mental health while studying in university makes students able to deal effectively with numerous stressors that they experience. The purpose of this study was to determine and compare the social anxiety of nursing students in grades one to four of medical universities in Tehran.

***Methods:*** In this analytic cross-sectional study, 400 students from universities of medical sciences in Tehran were recruited by stratified sampling with proportional allocation. Data were collected during the first semester in 2010. Students completed a two-part questionnaire including the Liebowitz social anxiety questionnaire and a demographic information form. Data were analyzed using descriptive statistics methods and an analytical test by SPSS statistical software.

***Results:*** There was no statistically significant difference in the total scores of social anxiety of first- to fourth-year students. The mean score of the avoidance of social interaction dimension in fourth-year students was significantly lower than in first year students ($p<0.05$).

***Conclusion:*** In regard to the relationship between social anxiety and interpersonal communication as an associated part of nursing care, decrease of social anxiety of students could play an important role in their mental health. According to the results of this study, it seems that the placement of students in the nursing education system does not produce any changes in their social anxiety.

## Introduction

Nursing is one of the professions that requires a high level of psychological health. It is clear that the ability to have interpersonal relationships is inseparable from an effective care process.[1]

Having very low levels of social anxiety is one factor that demonstrates psychological health and is a requisite for interpersonal communication that can affect the nurse's thinking, feeling and performance in providing care services. Studies indicate that the mental health of nursing students not only influences their education and daily life, but also influences the quality of their professional practice in future and how long they stay in the nursing profession. Therefore, identifying factors affecting mental health has a special importance.[2]

Epidemiological studies have found social anxiety in the United States is the third most common psychiatric disorder after major depression (17%) and alcohol abuse (14%).[3] In 1994, Kessler et al. found that social anxiety prevalence in younger individuals was increasing, and if this trend continues it is predicted that social anxiety will become a major problem for clinicians and public health agencies in the future.[4]

Social anxiety at a young age significantly interferes with the shaping of coping skills, and if it is not detected and tracked, can cause many problems in the long-term personality and social performance of an individual.[5-7] More than half of the people with social anxiety experience average or serious disability in performing their roles, 12%

***Corresponding authors:** Farzad Rahmani, Email: Rahmanif@tbzmed.ac.ir

of them have negative growth at work, 11% will never be employed and 8% will leave their work. Results of Stein's studies in the United States indicated that people with social anxiety have failed in academic performance twice as much as non-anxious individuals, which eventually led them to lower economic and social levels.[8] Shepherd found 22% of American bachelor's students suffer from social anxiety.[9] Also, Randle reported that 19% of university students have social anxiety. Some of the problems related with social anxiety during education were dropping out and inability to pass the courses.[10]

The education system plays a significant role in students' mental health by creating a competitive environment, conferment of responsibility to students, providing support and supervision, providing positive feedback, providing rewards and engaging in punishment strategies.[11,12] Educational courses help students gain required skills by offering activities such as group discussions, research and group work, the opportunity to experiment, practice and thus facilitate the situations needed to enter in professional life. In spite of these activities enabling most of the students to manage social relationships, they might cause some social and mental problems like social anxiety in situations such as speaking in public, participating in group activities and so on.[13]

Based on the research by Kirkland and Yousef & Goodrich, some features, such as hard courses, can reduce students' self-esteem, and these students' inefficiencies may cause teachers' criticism; this can eventually cause a further decline in students' self-esteem and increase the development of anxiety in students.[14] Students may experience anxiety at the beginning of their courses because of lack of free time, long-time studies, failure to respond to students' needs, phobia of failure and feelings of incompetence in clinical skills; at the end of their courses, they may experience anxiety about fear of patients' death, communicating with clinical managers and the possibility of being criticized in front of the patient and others. It is expected that as students reach upper stages, their social anxiety will decrease, but research on this issue reports conflicting results.[14-19]

Confrontation of all students, especially medical students, with multiple stressors and the need to adapt appropriately in order to achieve academic and professional success clarifies the importance of having good mental health in this social group.[20] So helping with social anxiety, which is among the factors affecting mental health, can significantly influence a students' mental health and prevent other problems. Considering that there is no similar study on nursing students, our aim of this study was to determine and compare the social anxiety of nursing students in grades one to four of medical universities in Tehran.

## Materials and Methods

This research was an analytic cross-sectional study. The population of the study included all freshmen to fourth-year undergraduate nursing students of Tehran University of Medical Sciences, Iran University of Medical Sciences and Shahid Beheshti University of Medical Sciences in Tehran.

In this regard, considering the fact that the study population consisted of three groups of nursing students from each of the aforementioned universities, samples were chosen by stratified random sampling, and in order to divide the samples between the classes of society, proportional allocation stratified sampling methodology was used. In this method, the sample size for each class is allocated based on class size. The studied sample was estimated about 400 using the sample size determination formula

$$n \geq \frac{2S^2 \times \left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta}\right)^2}{d^2}$$

, so based on the proportional allocation, 144, 111 and 145 students who were in the first semester during the 2010-2011 academic year from the colleges of nursing and midwifery of Iran, Shahid Beheshti and Tehran universities, respectively, were selected using the table of random numbers The researcher not only explained to the participants about the research and its goals, but also ensured them that the acquired information would be private and informed them that they were allowed to leave the study whenever they wanted. The consent form for participation in the study was completed by the research unit. Inclusion criteria consisted of being a first- to fourth-year nursing student in undergraduate medical universities in Tehran and exclusion criteria included being a student at another university and studying at the universities in Tehran as a guest student, known history of psychiatric disease, history of drug abuse and pregnancy.

For collecting data in this study, the demographic information form and Liebowitz social anxiety questionnaire were used. The demographic information form includes 10 questions related to personal information such as gender, academic semester, the college name, grade point average, work experience of the student, residence, marital status, family economic status, history of mental disorders and history of using drugs. We used the answer to the last two questions as exclusion criteria.

The Liebowitz social anxiety questionnaire has 24 items; 11 of the items assess individuals' anxiety in social interactions and the other items evaluate anxiety in social performance situations. This instrument consists of six subscales of fear of social interactions, fear of social performance, avoidance of social interactions, avoidance of social performance, total fears and total avoidance. Using the same questions, items related to social interactions examine two aspects of "fear of social interactions" and "avoiding social interactions" and items related to social performance situations similarly measure "fear of social performance situations" and "avoidance of social performance situations." For the convenience of the participants in answering the questions, two copies of the questionnaire was given to the participants which had the Likert 4 part-scale, but one of them asked the participants to report fear of social interaction and fear of social

performance situations, and the other one asked them to report avoidance of social interactions and avoidance of social performance situations. In the questionnaire that measures fear, answering “no” means “no fear” (score=0) and answering “strongly” means “extreme fear” (score=3). Also, in the avoidance questionnaire answering "not at all" means “no avoidance” (score=0) and answering "usually" means “severe avoiding” (score=3). The sum scores of questions “fear of social interactions” and “fear of social performance situations” express the total fear, and the sum scores of “avoidance of social interactions” and “avoidance of social performance situations” present the total avoidance score. This questionnaire reports the social anxiety in four levels including average (score 55-65), significant (score 65-80), extreme (score 80-95) and very extreme (score over 95). It should be noted that scores lower than 55 indicated normal anxiety levels. Considering the number of questions and the score of each dimension of this questionnaire were not the same, in order to compare the social anxiety dimensions, each dimension score was applied to a base of 100. Time for answering the social anxiety questionnaire was 20 to 30 minutes.

To evaluate the scientific validity of tools, content validity and face validity methods were used. Researchers set the personal information questionnaire after studying the related literature, using masters' opinions along with the Liebowitz social anxiety questionnaire, and then they gave these questionnaires to eight faculty members of the Nursing School at Tehran University of Medical Sciences and necessary revisions were made.

To determine the reliability of the data collection instruments, Cronbach's alpha correlation coefficient and the test-retest methods were used. The Cronbach's alpha coefficient of social anxiety questionnaire was 0.97 which is an acceptable validity. In the test-retest method, the questionnaire was given to 20 students of the nursing and midwifery school of Tehran University of Medical Sciences twice in a 20-day period, and after filling out and collecting the questionnaire, the Pearson correlation coefficient for social anxiety questionnaire was calculated 0.9 between the answers. The Pearson coefficient was calculated separately for each dimension of the Liebowitz social anxiety questionnaire, and ranged from 0.88 to 0.95. Finally, the raw data were analyzed by version 16 of SPSS software using descriptive statistics that included the calculation of statistical indicators and adjustment of the frequency distribution and inferential statistics (independent t-test, ANOVA and Scheffe determination test).

### *Ethical Consideration*

This study was approved by the Ethics Committee of “Iran University of Medical Sciences” and registered under the Code Number 1715946.

## Results

Results of this study show that the most participants were from Shahid Beheshti nursing and midwifery school (38%), followed by Iran (33%) and Tehran (29%). The most studied samples were women (58.1%). Of the juniors, 85.9% have a grade point average of 15 and over, and 26.4% of them have a grade point average lower than 15. Out of all the students, 26.4% of first-year students, 26.6% of second-year students, 54.8% of third-year students and 56.4% of forth-year students live in a dormitory and 59.3% of all students lived in Tehran. In total, 92.2% of students were single and only 7.8% of them were married. The majority of students (73.2%) had an average socioeconomic status, 5.7% of them were economically weak and 21.1% were wealthy. Independent t-test results represented that the average score of social anxiety for students with and without work experience in university statistically differed (P=0.02, t=2.336), meaning that the average score of social anxiety for students with work experience were lower than students without work experience (respectively, 32.1±19.4 and 38.2±20). In this study, one-way ANOVA test results showed that there are significant differences between the mean scores of social anxiety of the students in different studied colleges (P=0.01, F=4.365) and with the Scheffe determination test it was made clear that there was a difference between the nursing and midwifery college of Iran and the nursing and midwifery college of Tehran. Comparison of mean scores shows that the social anxiety for students of the nursing and midwifery college of Iran is higher than the ones in Shahid Beheshti and Tehran universities of medical sciences. The results of one-way ANOVA test showed that there is no significant difference between the mean scores of social anxiety in students with different semester (P=0.2, F=1.242) and socioeconomic status (P=0.6, F=0.45) (Table 1).

The results of the one-way ANOVA test in Table 2 shows the overall mean scores of social anxiety (P=0.1, F=2.077) and the mean scores for fear of social interactions (P=0.2, 1.387), fear of social performance (P=0.2 and 1.387), total fear (P=0.2, F=1.301), avoidance of social performance (P=0.3, F=1.078) and total avoidance (P=0.06, F=2.417) in the first- and fourth-year students were not significantly different. The results of the ANOVA test showed that there were statistically significant differences between the mean scores of the "avoidance of social interactions" of the first- and fourth-year students (F=4.680 and P=0.003). The Scheffe determination test showed that the mean score of fourth-year students in avoidance of social interactions were significantly lower than the mean scores in each of the first three years. The Scheffe determination test showed that the mean score of avoidance of social interactions for fourth-year students was significantly lower than the mean scores in each of the first three years. As shown in the comparison of dimensions of social anxiety in Table 3, most of the social anxiety of studied students relates to the "fear of social interactions" (5.18 ± 31).

## Discussion

In regard to the relationship of social anxiety and interpersonal communication as an associated part of nursing care, decrease of social anxiety in students could play an important role in their mental health. The results of this study expressed that there was no significant statistical

**Table 1.** Frequency distribution of demographic variables in the first- to fourth-year nursing students

| Variable | | Social anxiety mean and Standard Deviation | Result Test |
|---|---|---|---|
| Gender | Female | 37.1±20.3 | P= 0.7 |
| | Male | 36.4± 19.4 | t =0.313 |
| Academic semester | First | 37.2 ±19.1 | |
| | Second | 41.8±19.7 | |
| | Third | 35.3±19.2 | |
| | Forth | 37±23.3 | P= 0.2 |
| | Fifth | 36.3±21.1 | F= 1.242 |
| | Sixth | 40.4±18 | |
| | Seventh | 31.4±20 | |
| | Eighth | 33.4±18.4 | |
| College | Iran | 41.3±22.4 | P= 0.01* |
| | Tehran | 33.7±17.4 | F= 4.365 |
| | Shahid Beheshti | 35.3±18.9 | |
| Grade point average | Lower than 15 | 36.4±20.1 | P=0.8 |
| | Higher or equal 15 | 36.9±20.1 | t= 0.167 |
| Student work experience | Yes | 32.1±19.4 | P= 0.02* |
| | No | 38.2±20 | t= 2.336 |
| Place of Residence | Native Tehran | 37.5±20.1 | P= 0.4 |
| | Hostel | 35.9±19.6 | t= 0.694 |
| Marital status | Single | 37.3±20 | P= 0.1 |
| | Married | 31.8±18 | t= 1.351 |
| Family economic Status | Poor | 39.5±19.4 | P= 0.6 |
| | Average | 37.1±20.5 | F= 0.45 |
| | Good | 35.1±18.1 | |

*Correlation is significant at $p < 0.05$

difference between the mean score of total social anxiety and the mean score of its dimensions (fear of social interactions, fear of social performance, total fear, avoidance of social performance and total avoidance) in first- to fourth-year students. In this study, the mean score for the "avoidance of social interactions," of students in the first and fourth years was significantly different (F=4.680 and P=0.003), and the Scheffe determination test showed that the mean score of avoiding social interactions of students in the fourth year is significantly lower than mean scores for each of the first three years. These findings were consistent with the results of the study on medical students conducted by Khan in 2006. Those study results stated that the prevalence of anxiety and depression was higher in first- and second-year students compared to students in their last year.[21] The results of Asadi and Sadeghi's study also showed that anxiety of first-and second-year students is higher than the third- and fourth-year students.[22] Inam et al. showed that the anxiety of newcomer students (first and second year) compared with the more upper year students is higher.[23] It seems that the stress of a new environment in lower years influences students, leading to these results. Students in lower years encounter several stressors and conflicts that can affect their performance and their mental health. For many students, the acceptance to university is considered their first separation from their families. Failure to comply with the new social environment and other students can be attributed to other causes of anxiety in these students. Based on the present findings, students being in nursing education may be effective in reducing their anxiety. According to the results of this study and reports achieved from other related studies, the reduction of students' anxiety could be caused by the development of their social self-esteem which is obtained by being in several social groups and student communities for socialization.[24,25]

Another finding of this study showed that most of the students' social anxiety was related to "fear of social interactions." Although there is no similar study in this field, it seems that factors such as fear of humiliation and negative evaluation by others in interpersonal

**Table 2.** Comparison of social anxiety and its dimensions in first- to fourth-year nursing students

| Educational years / Social anxiety dimensions | First m±SD | Second m±SD | Third m±SD | Fourth m±SD | ANOVA test results |
|---|---|---|---|---|---|
| Total scores of social anxiety | 19.5±39.5 | 21.3±36.2 | 19.5±38.5 | 19.1±32.5 | F=2.077 P=0.1 |
| Fear of social interactions scores | 6.1±10.6 | 6.5±10.2 | 6.3±10.8 | 5.4±9.2 | F=1.181 P=0.3 |
| Fear of social performances scores | 5.6±10.3 | 6±9 | 5.4±10 | 5.2±8.8 | F=1.387 P=0.2 |
| Total fear scores | 11±20.9 | 12±19.2 | 11.2±20.9 | 10±18 | F=1.301 P=0.2 |
| Avoidance of social interactions scores | 5.7*±9.7 | 6.4*±9.4 | 5.4*±9.4 | 5*±6.8 | F=4.680 P=0.003 |
| Avoidance of social performances scores | 5.8±8.9 | 5.6±7.5 | 5.1±8.3 | 6.4±7.6 | F=1.078 P=0.3 |
| Total avoidance scores | 10.8 ±18.6 | 11.4±17 | 9.8±17.7 | 10.2±14.4 | F=2.417 P=0.06 |

*The Scheffe test showed that the avoidance of social interactions in the fourth-year students is statistically significant with the first-, second- and third-years students and it is lower for fourth-year students.

**Table 3.** Comparison of Social Anxiety Dimensions

| Educational years / Social anxiety dimensions | First m±SD | Second m±SD | Third m±SD | Fourth m±SD | ANOVA test results |
|---|---|---|---|---|---|
| Total scores of social anxiety | 19.5±39.5 | 21.3±36.2 | 19.5±38.5 | 19.1±32.5 | F=2.077 P=0.1 |
| Fear of social interactions scores | 6.1±10.6 | 6.5±10.2 | 6.3±10.8 | 5.4±9.2 | F=1.181 P=0.3 |
| Fear of social performances scores | 5.6±10.3 | 6±9 | 5.4±10 | 5.2±8.8 | F=1.387 P=0.2 |
| Total fear scores | 11±20.9 | 12±19.2 | 11.2±20.9 | 10±18 | F=1.301 P=0.2 |
| Avoidance of social interactions scores | 5.7*±9.7 | 6.4*±9.4 | 5.4*±9.4 | 5*±6.8 | F=4.680 P=0.003 |
| Avoidance of social performances scores | 5.8±8.9 | 5.6±7.5 | 5.1±8.3 | 6.4±7.6 | F=1.078 P=0.3 |
| Total avoidance scores | 10.8 ±18.6 | 11.4±17 | 9.8±17.7 | 10.2±14.4 | F=2.417 P=0.06 |

Notice: In order to compare the of social anxiety dimensions, first each of the dimensions was taken to the base of 100.

relationships, poor social skills, low self-esteem and people's need for perfection can influence students' fear of social interactions. It should be noted that the influence of individuals' emotional and mental conditions on their answers to studied units while completing questionnaires were the research limitations that were out of researchers' control.

## Conclusion

According to the importance of establishing social relationships in today's complex world, the failure of interpersonal relationships is undoubtedly a significant social handicap. Considering the important role of interpersonal relationships in nursing, it is essential for education systems to pay attention to factors such as social

anxiety, which is one of the most important causes in the interpersonal communication failure. The findings of this study can attract nursing planners' attentions to take effective steps to improve the quality of nursing education and promote students' mental health by adopting effective strategies in the form of guidance and counseling services and workshops to raise awareness levels and update students' information about mental health. Mental health of nursing students is an important issue that needs to receive special attention from the educational systems responsible. It is recommended that mental health promoting strategies be considered a priority in programs of nursing education.

## Competing Interests

None to declare

## References


1. Ghezelbash S, Rahmani F, Peyrovi H, Inanloo M, Shekarchian S. Comparison of Self-Esteem Among First to Fourth Year Nursing Students From Universities of Medical Sciences in Tehran. Thrita 2015;4(1): e24336. doi:10.5812/thrita.24336
2. Ni C, Liu X, Hua Q, Lv A, Wang B, Yan Y.Relationship between coping, self-esteem, individual factors and mental health among Chinese nursing students: a matched case-control study. Nurse Educ Today 2010;30(4):338-343. doi:10.1016/j.nedt.2009.09.003
3. Eugene HR, Chales FZ. Adult psychiatry. Second ed. USA: Blackwell Publishinga; 2005.
4. Kessler RC, McGonagle KA, Zhao S, Nelson CB, Hughes M, Eshleman S, Wittchen HU, Kendler KS.Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey.Arch Gen Psychiatry 1994;51(1):8-19. doi:10.1001/archpsyc.1994.03950010008002
5. Reich J, Hofmann SG. State personality disorder in social phobia. Ann Clin Psychiatry 2004;16(3):139-144. doi:10.1080/10401230490486936
6. Dadashzade H. Compration of effectiveness cognitive-behavioral group therapy and confrontation therapy in social anxiety disorder. Tehran: Iran University; 2008. [In Persian].
7. Rahmani F, Behshid M, Zamanzadeh V, Rahmani F. Relationship between general health, occupational stress and burnout in critical care nurses of Tabriz teaching hospitals. Iran Journal of Nursing 2010;23(66):54-63. [In Persian].
8. Stein MB, Torgrud LJ, Walker JR. Social phobia symptoms, subtypes, and severity: findings from a community survey. Arch Gen Psychiatry 2000;57(11):1046-1052. doi:10.1001/archpsyc.57.11.1046
9. Shepherd RM. Volitional strategies and social anxiety among college students. College Quarterly 2006;9(4):1-12.
10. Randle J. Bullying in the nursing profession. J Adv Nurs 200343(4):395-401. doi:10.1046/j.1365-2648.2003.02728.x
11. Lees S, Ellis N. The design of a stress-management programme for nursing personnel J Adv Nurs 1990;15(8):946-961. doi:10.1111/j.1365-2648.1990.tb01951.x
12. Campbell J, Kyriakides L, Muijs D, Robinson W. Assessing teacher effectiveness, developing a differentiated model. Canada: Routledge Falmer;2004.
13. Billings D, Halstead J. Teaching in nursing a guide for faculty. Third edit. Elsevier;2009.
14. Suliman WA, Halabi J.Critical thinking, self-esteem, and state anxiety of nursing students.Nurse Educ Today 2007;27(2):162-168. doi:10.1016/j.nedt.2006.04.008
15. Timmins F, Kaliszer M.Aspects of nurse education programmes that frequently cause stress to nursing students -- fact-finding sample survey.Nurse Educ Today 2002;22(3):203-211. doi:10.1054/nedt.2001.0698
16. 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. doi:10.1016/j.nedt.2009.06.008
17. Begley CM, Glacken M. Irish nursing students' changing levels of assertiveness during their pre-registration programme. Nurse Educ Today 2004;24(7):501-510. doi:10.1016/j.nedt.2004.06.002
18. Randle J. The effect of a 3-year pre-registration training course on students' self-esteem. J Clin Nurs 2001;10(2):293-300. doi:10.1046/j.1365-2702.2001.00483.x
19. Suliman WA, Halabi J.Critical thinking, self-esteem, and state anxiety of nursing students.Nurse Educ Today 2007;27(2):162-168. doi:10.1016/j.nedt.2006.04.008
20. Zare N, Daneshpajooh F, Amini M, Razeghi M, Fallahzadeh MH. The relationship between self-esteem, general health and academic achievement in students of Shiraz University of Medical Sciences. Iranian Journal of Medical Education 2007;7(1):59-67.
21. Khan MS, Mahmood S, Badshah A, Ali SU, Jamal Y. Prevalence of depression, anxiety and their associated factors among medical students in Karachi, Pakistan. J Pak Med Assoc 2006;56(12):583-586.
22. Asadi Sadeghi A, Basirani N, Asadi B, Panahi Mirshekar A, Amirshahi M, Salehin S. Prevalence of anxiety and its relationship with self-esteem among Zabol University students, Iran. Educational research 2010;1:140-144.
23. Inam SN, Saqib A, Alam E. Prevalence of anxiety and depression among medical students of private university. J Pak Med Assoc 2003;3(2):44-47.
24. Burnard P, Hebden U, Edwards D.. Self-esteem and student nurses: An account of a descriptive study. Nurs Health Sci 2001;3(1):9-13. doi:10.1046/j.1442-2018.2001.00061.x
25. Sasat S, Burnard P, Edwards D, Naiyapatana W, Hebden U, Boonrod W, Arayathanitkul B, Wongmak W. 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. doi:10.1046/j.1442-2018.2002.00095.x