Background: Nurse Educators have an important role in clinical learning that can reduce nursing students’ stress and perception of nurse educator’s effectiveness in clinical settings. To find the relationship between nursing students’ tension and perception of nurse educator’s effectiveness in clinical settings in Tabriz University of Medical Sciences, 2010.

Methods: This is a descriptive and correlational study. All of the 181 students who had to pass clinical subject in Tabriz Nursing & Midwifery faculty were selected. Data collection instruments were demographic questionnaire; scale subset nursing clinical educators’ role in such situations, in learning that can reduce nursing students’ stress. However, studies have been conducted on the relationship between nursing students’ tension and clinical educators’ role in such situations, in Tabriz university. So, in this study, we evaluate nurses’ perception of their role in clinical setting.

Results: Results showed that the mean of students’ stress and nurse educator effectiveness (M=71.62±11.56) and (M=71.62±11.56), respectively. There was negative significant correlation between them in clinical setting.

Conclusions: The results of the study presented that the students’ tension decreases when their perception of nurse educators’ effectiveness in clinical settings.

Keywords: Stress; Nursing Student; Clinical Setting; Nurse Educator
INTRODUCTION

The purpose of nursing education is to improve creativity, the ability to think critically and self-promoting. To achieve these objectives, nurse training system should have a scientific and practical approach (1).

Clinical training is the main part of nursing education that has an important role in the development of students' professional identity. Without clinical training, efficient education would be impossible (2). Therefore, theoretical and practical training must be provided together (1). Nursing students and educators work together in clinical setting. During this period, the opportunity to convert knowledge into practical skills is given to students. Obstacles and problems of clinical education have undesirable effects to achieve nursing professional goals. Stress is one of the most important problems. Like all students, nursing students have stress of exams and assignments. In addition, they experience many physical and psychological pressures in the hospital environment during clinical setting (3).

Stress is the influence of external pressures or unsuitable conditions on the human body and the individual's reaction toward it. Selvey mentions "Stress is the nonspecific response of the body to any demand, whether it is caused by, or results in, pleasant or unpleasant conditions. Demand may be a threat, conflict, or any change that requires body adaptation. Stressor is the body responds to a stimulus that causes stress (4). Tension is necessary for life and growth to some extent, however, unusual amount of it may cause various illnesses and personality disorders (5). Hospital is considered as one of the most stressful working environment since it is a matter of life and death (5).

Nursing is a stress-inducing job due to the nature, complexity, difficult tasks of patient care and communication with different patients. Nurses are exposed to corrosion from hard work. Also, tension is seen among nursing students (6).

Medical and paramedical students' stress can be seen in the first meet with the patient and clinical work (7). The stressful environment of hospitals might lead not only to dropout and physical disorders but also inappropriate behavior among students that affect personality development (5).

Stressful hospital environment makes students more than others to experience depression and mental illness (8). Since student's professional characteristic is formed during education, stress can cause extreme fatigue, depression and erosion of the job. Such a situation would be nursing shortage that could have negative effects on patient care, family and community health. (9).

Studies have indicated the main stressor of clinical setting for students are taking care of seriously ill patients, fearing to injure patients, the limited time of patient care, instructor evaluation, facing situations such as death, dealing with terminally ill patients, expectations of staff, lack of adequate support from the teachers and staff, lack of critical thinking and the difference between what is taught in the classroom and what is done in the clinical course (10).

Being under considerable pressure leads to negative effect on students’ learning and success in the clinical environment, therefore, it is necessary to reduce students' stress. Nursing instructors can recognize stressors better than any other person in clinical training. Educators can help students to overcome stress (11). The relationship between teachers and nursing students has a key role in educating the students and can be effective in overcoming stress. Training programs and score, as assessing indicators, are the source of stress for students. Instructor behavior and teaching methods influence students' stress. Instructors' support is the best intervention in clinical setting (12).

Clinical instructor has complex activities and the most significant ones are to teach and monitor practices and students, monitor the health and safety of patients under students' treatment and cooperate with staffs (13).

Since clinical instructors spend much time along with students, it is better to provide less stressful condition. Lack of sufficient knowledge causes more tension during the four years of education (10). Teachers should support and guide students to gain critical thinking skills and problem solving ability (14).

In students’ opinion, the most effective behavior of teachers are the ability to communicate effectively, assess fairly, have confidence and respect in students, allow the students to express feelings, intimacy, have enough knowledge, flexibility, and motivate students to question during education. The most important thing about a teacher is to respect students (12).

An effective teacher has practical and high professional skills, the ability to make connection between science and practice, and also sufficient theoretical knowledge (15). Communication skills are also an integral part of clinical training, which is one of the tasks of teachers (16).

Since people have different cultural backgrounds, students have different experiences of stressors in their culture and educational environment. The purpose of the current study is to analyze nursing students’ tension and its relationship to perception of nurse educators’ effectiveness in clinical setting at Tabriz University of Medical Sciences, 2010.

METHODS

This is a descriptive and correlational study. All of the 181 students who had to pass medical-surgical clinical course in Tabrize Nursing & Midwifery faculty were selected. In the present research, sample was parallel to population study and sampling method was conducted via census. All of the students, who had medical-surgical clinical course and agreed to participate in the study, were enrolled with the full number.

Inclusion criteria included nursing students who are studying at the School of Nursing and Midwifery in Tabriz that had Medical-surgical clinical training course and are trained under official faculty teachers.

Exclusion criteria were acute physical or mental illness at the time of the study, guest or transferred students from other schools; students in probationary status, employment in other medical centers, the dissatisfaction of the research unit to continue the investigation. Data were collected by a standardized questionnaire. The questionnaire consists three parts. The first part includes 6 questions about demographic characteristics, the second one includes 25 questions about
students’ understanding of the instructors’ behavior and the third part has 24 items related to students stress. Questions related to students ‘understanding of teachers’ behavior were measured using Likert score, from 1 to 4: strongly disagree (1), disagree (2), agrees (3), strongly agree (4). Total scores range is between 25 and 100 and the highest score represents students’ effective perception of behavior (17).

Students’ stress was assessed by Cohen stress standard tool and measured with Likert model. Scores were as follow: 1 mean “did not have stress at all” and 4 stands for “had severe stress”. Total scores range was from 24 to 96 that the highest score represents the highest level of stress (17).

No item has been added or removed from the questionnaire after translation. Content validity was used to evaluate the validity of the instrument. 10 experts evaluated the questionnaire and the reforms were conducted. Hence, test-retest reliability method was conducted. The questionnaire was filled out by 20 students and within 10 days completed by the same participants again. Moreover, it was approved by Pearson correlation with reliability 0.72 on the effectiveness of teachers and 0.82 on students stress. To access all subjects of the study, the researchers referred to Students Nurse Training to gather data via questionnaire. Obtaining the necessary permits from the Ethics Committee of Tabriz University of Medical Sciences and gaining informed consent from research participants and emphasizing on the confidentiality of their information, questionnaires were distributed among subjects who fulfilled inclusion criteria. Data analysis was conducted by SPSS (ver. 15). Descriptive and inferential statistics methods were used. To determine the stress of nursing students in the clinical environment and students’ perceptions of nursing educators’ effectiveness, descriptive statistics were used (frequency - Percent, ± SD and mean). To determine the relationship of stress among nursing students and their perceptions of the effectiveness of clinical nursing instructors, Spearman correlation coefficient and chi-square test were used.

RESULTS

In this study, the mean age of participants was 22.29 ± 1.42 years. Most of the participants were female and students’ average grade was 17.16 ± 2.12 (table 1).

Descriptive statistics (frequency - Percent and mean ± SD) showed that the greatest amount of stress is in emergency conditions 2.80 ± 0.91, the patient’s condition (death, serious illness, terminally ill) 2.78 ± 0.96, exposure to infectious diseases 2.78 ± 0.96 and the probability of making a mistake (in giving medicine or examining patients) 2.64 ± 0.90, respectively. Mean stress was 57.09 ± 16.97. Score range was between 24 and 96 (table 2).

Moreover, the highest levels of understanding of the effectiveness, according to the mean, were as follow: guide the students to upgrade learning 3.02 ± 0.71, readiness for clinical practice 2.98 ± 0.81, interested in teaching and learning 2.97 ± 0.77, provide clear answers to students’ questions about their educational needs 2.97 ± 0.85, take urgent action in serious conditions 2.96 ± 0.77, provides a suitable learning environment 2.94 ± 0.83 and respects the confidentiality of students 2.93 ± 0.86, respectively. The average rate of effectiveness in this study was 71.62 ± 11.56 and the range was between 25 and 100, respectively (table 5).

Survey results of the Spearman correlation coefficient showed that there is a significant inverse statistical relationship between scores instructors’ effectiveness and the students’ stress score in relation with clinical experience (Table 4).

Analyzing the relationship between demographic-social characteristics of nursing students with level of stress and understanding of instructors’ effectiveness in clinical setting, it presented that there is a significant correlation between age, training location and internship semester.

DISCUSSION

In our study, nursing students’ stress in relation with their perceptions of nursing educators’ effectiveness in clinical setting was investigated. Mean of students’ stress was 57.09 ± 16. The mean score of the effectiveness of teachers was 71.62 ± 11.56, respectively. Results of Spearman correlation coefficient showed that there is significant inverse correlation between the effectiveness of instructor score and the effects of stress on the students’ clinical experiences. Consequently, stress is reduced while the understanding of student to effectiveness of the instructor increases.

The findings of the study in “determining the stress of nursing students in clinical environments,” showed that the highest level of mean stress are in the emergency condition, patients’ condition (death, serious illness, terminally ill patients), being exposed to infectious diseases and the risk of making mistake (giving medicine and examining patients), respectively.
The results of Tracey research on the 60 nursing students in clinical training showed that there is no significant relation between students’ stress and their perception of the effectiveness of the instructor. The stress level of students and effectiveness of the instructor was average. But the effectiveness of the instructor score in clinical training was higher than stress score (17). This study is inconsistent with the current research.

Chan conducted a research on 205 students and reported that students experienced a moderate level of tension which was lower in compare with Western students. Students with religious beliefs experienced less tension in compare with unreligious ones. Moreover, using effective methods can reduce tension among students (14). In Abazari research on 274 nursing students, it was reported that students experience moderate tension (5).

Gibbons and colleagues in Turkey found that nursing students in clinical training experience higher levels of stress. The main sources of stress were working with terminally ill and dying patients, problem with the staff and patients, lack of confidence to care and worry about learning clinical skills, less time to do the training, time management training, and start anew training course. In this study, working with terminally ill patients was the first stressor that is consistent with the present study. The above results indicate that terminally ill patients that are in emergency condition have the greatest effect on the students (4).

Melo et al. study showed that the most important stressors in clinical courses were as follows: problem with the instructor, environmental stress, fear of failure, death, lack of skills, difficulty in communicating with others, start a new training and evaluation, and being observed by the teacher. In this study, fear of failure, and death was the third and fourth stressors that are consistent with the present study. Another difference in the present study may be due to cultural differences, and differences in the relationship in the clinical environments (18).

### Table 2. Frequency distribution (percentage) of nursing students’ tense factors

<table>
<thead>
<tr>
<th>Choices</th>
<th>I don’t have tense at all</th>
<th>A little tense</th>
<th>Moderate tense</th>
<th>Strong tense</th>
<th>Average ± variance measure of tense</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teacher assessment (by observation)</td>
<td>37 (20.7)</td>
<td>48 (26.8)</td>
<td>70 (39.1)</td>
<td>24 (13.4)</td>
<td>2.45 ± 0.96</td>
</tr>
<tr>
<td>2. Meeting patients’ expectations</td>
<td>37 (20.7)</td>
<td>65 (36.3)</td>
<td>54 (30.2)</td>
<td>23 (12.8)</td>
<td>2.35 ± 0.95</td>
</tr>
<tr>
<td>3. Accessibility of teacher to help</td>
<td>42 (23.5)</td>
<td>67 (37.4)</td>
<td>47 (26.3)</td>
<td>23 (12.8)</td>
<td>2.28 ± 0.96</td>
</tr>
<tr>
<td>4. Respecting of priority by teacher to help</td>
<td>55 (30.7)</td>
<td>53 (29.6)</td>
<td>45 (25.1)</td>
<td>26 (14.5)</td>
<td>2.23 ± 1.04</td>
</tr>
<tr>
<td>5. Competence level (preparation sense to take care of patient)</td>
<td>46 (25.7)</td>
<td>52 (29.1)</td>
<td>47 (26.3)</td>
<td>34 (19)</td>
<td>2.38 ± 1.06</td>
</tr>
<tr>
<td>6. Patient condition (death, acute, patient bad appearance)</td>
<td>19 (10.6)</td>
<td>50 (27.9)</td>
<td>61 (34.1)</td>
<td>49 (27.4)</td>
<td>2.78 ± 0.96</td>
</tr>
<tr>
<td>7. Patient age</td>
<td>52 (29.1)</td>
<td>42 (23.5)</td>
<td>46 (25.7)</td>
<td>39 (21.8)</td>
<td>2.40 ± 1.12</td>
</tr>
<tr>
<td>8. Patient sexuality</td>
<td>48 (26.8)</td>
<td>53 (29.6)</td>
<td>46 (25.7)</td>
<td>32 (17.9)</td>
<td>2.34 ± 1.06</td>
</tr>
<tr>
<td>9. Contact with patient</td>
<td>60 (33.5)</td>
<td>48 (26.8)</td>
<td>45 (25.1)</td>
<td>26 (14.5)</td>
<td>2.20 ± 1.06</td>
</tr>
<tr>
<td>10. Conflict with other treatment personnel</td>
<td>59 (33)</td>
<td>51 (28.5)</td>
<td>47 (26.3)</td>
<td>22 (12.3)</td>
<td>2.17 ± 1.02</td>
</tr>
<tr>
<td>11. Physical environment of treatment center (light, smell, equipment)</td>
<td>49 (27.4)</td>
<td>57 (31.8)</td>
<td>49 (27.4)</td>
<td>24 (13.4)</td>
<td>2.26 ± 1.00</td>
</tr>
<tr>
<td>12. Having the essential ability for doing clinical assignments</td>
<td>48 (26.8)</td>
<td>63 (35.2)</td>
<td>48 (26.8)</td>
<td>20 (11.2)</td>
<td>2.22 ± 0.96</td>
</tr>
<tr>
<td>13. Exposed to experiences that make me ready for nursing (levels and doing exercise step)</td>
<td>49 (27.2)</td>
<td>51 (28.3)</td>
<td>42 (23.3)</td>
<td>38 (21.1)</td>
<td>2.38 ± 1.09</td>
</tr>
<tr>
<td>14. Probability of making mistake (medical and patient examination)</td>
<td>17 (9.4)</td>
<td>66 (36.7)</td>
<td>61 (33.9)</td>
<td>36 (20)</td>
<td>2.64 ± 0.90</td>
</tr>
<tr>
<td>15. Doing the motive nervous skills</td>
<td>36 (20)</td>
<td>69 (38.3)</td>
<td>46 (25.6)</td>
<td>29 (16.1)</td>
<td>2.37 ± 0.98</td>
</tr>
<tr>
<td>16. Exposing to infectious diseases</td>
<td>2 (11.1)</td>
<td>46 (25.6)</td>
<td>66 (36.7)</td>
<td>48 (26.7)</td>
<td>2.78 ± 0.96</td>
</tr>
<tr>
<td>17. Being in urgent conditions (alteration in patient condition)</td>
<td>17 (9.4)</td>
<td>45 (25)</td>
<td>74 (41.1)</td>
<td>44 (24.4)</td>
<td>2.80 ± 0.91</td>
</tr>
<tr>
<td>18. Being in a new environment and situation</td>
<td>36 (20)</td>
<td>61 (33.9)</td>
<td>58 (32.2)</td>
<td>25 (13.9)</td>
<td>2.40 ± 0.96</td>
</tr>
<tr>
<td>19. Performance evaluation by nurses of the ward</td>
<td>39 (21.7)</td>
<td>67 (37.2)</td>
<td>56 (31.1)</td>
<td>18 (10)</td>
<td>2.29 ± 0.91</td>
</tr>
<tr>
<td>20. Being ready to do clinical works</td>
<td>39 (21.7)</td>
<td>69 (38.3)</td>
<td>46 (25.6)</td>
<td>26 (14.4)</td>
<td>2.32 ± 0.97</td>
</tr>
<tr>
<td>21. Truck to clinical training place</td>
<td>49 (27.2)</td>
<td>46 (25.6)</td>
<td>57 (31.7)</td>
<td>28 (15.6)</td>
<td>2.35 ± 1.04</td>
</tr>
<tr>
<td>22. Performance evaluation by patients</td>
<td>51 (28.3)</td>
<td>66 (36.7)</td>
<td>46 (25.6)</td>
<td>17 (9.4)</td>
<td>2.16 ± 0.94</td>
</tr>
<tr>
<td>23. Facing with unknown case</td>
<td>30 (16.7)</td>
<td>60 (33.3)</td>
<td>69 (38.3)</td>
<td>21 (11.7)</td>
<td>2.45 ± 0.90</td>
</tr>
<tr>
<td>Total Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.09 ± 16.97</td>
</tr>
</tbody>
</table>
The results of Sheu et al. study showed that entering the workplace for the first time is stress-inducing due to lack of clinical training of professional knowledge and expertise to take care of patients. Other stressors include assignments and hard work, the stress induces by teachers, staff, and classmates and personal problems. Probably, the most
important difference between stressors of Sheu study and the present study are cultural differences, the clinical setting and individuals’ relationships (19).

To assess “students’ understanding of nursing educators’ effectiveness”, results regarding the effectiveness of instructor indicated that the mean maximum effectiveness were as follows: guide students to enhance learning, always ready for clinical practice, show interest for teaching and training, answer students’ questions about their educational need, take urgent action in urgent conditions, provides a good learning environment and respects the confidentiality of students, respectively.

In another study, Chan and colleagues showed that effective behaviors reduce stress in some cases including preparing students to learn theories and practical skills just before entering the clinical setting and also problem-solving ability in stressful conditions which is consistent with the present study (14).

The results of Clawson’s research presented that the effective behavior of the teacher include encouraging and supporting students, having kind and respectful behavior and enhancing their self-esteem, respectively. The results of this study showed that encouraging students is consistent with the current study. However, the difference of other cases may be due to cultural differences, differences in the clinical environment and relationships between individuals (12).

Elcigil and colleagues demonstrated that negative feedback, haze, and lack of adequate guidance are the main problems of students with their instructors (20).

In order to determine relationship of the nursing students’ stress with their perceptions of nursing educators' effectiveness in clinical setting, Spearman correlation coefficient showed that there is significant inverse correlation among students’ tension and the effectiveness of instructors with clinical experience. As students’ perception of the teachers’ effectiveness increases, stress is reduced. Meanwhile, relationship between the score of teachers’ effectiveness and students’ stress in different sectors showed that in the Women, Internal and Heart Surgery sectors there was statistically significant effect reversed relationship between stress and effectiveness of instructors. That is by increasing understanding of the effectiveness of instructors, stress is reduced. In general, there is a direct correlation between stress level and effectiveness in surgery sectors. Increased effectiveness will increase the stress level that might be due to the characteristics of the patients, staff or students. In other cases, there was no significant association.

The results of the present study are consistent with Timmins and tension between students and teachers’ effectiveness there was a statistically significant reverse relationship (21). Tracey’s study showed that the level of stress among students in clinical training and their understanding of the effectiveness of clinical instructors, there is no statistically significant relationship. The results of the present study are inconsistent with Tracey’s research that could be due to individual differences of students, clinical environments and relationships between individuals (17).

The investigation correlation between individual-social characteristics of nursing students’ stress in their understanding of the effectiveness of teacher in clinical environment showed there is significant correlation between age and stress on students related to Spearman correlation coefficient.

The stress level increases as age increases. Also, between the age and understanding of the effectiveness of the teacher there was a statistically significant reverse relationship. As the age increased, understanding of the instructor effectiveness reduced. Abazari’s study showed that with increasing age the stress level of students is decreased. But this relationship is not statistically significant. The results of this study are inconsistent (5). In another study, Hilbun showed that as students grow older, they have more tension. The reason might be due to being more exposed to stress. The results of this study are consistent with the present study (22). In this study, the results of the variance analysis showed that there were a statistically significant relationship between the clinical training and academic semester with effectiveness of the instructor. So that the maximum effectiveness can be seen in thoracic sectors, skin and burn and the second and eighth semesters, respectively. Also tension between the clinical training and academic semester there is a statistically significant relationship. The maximum stress was in the fourth and fifth semesters, as well as skin, burns and surgery intervals respectively. Because in spite of the high level of students’ perception of the instructor effectiveness of skin intervals, the student stress level was very high which might be due to the nature of the skin intervals (of appearance of patients, the environment or its personnel), among others.

The study of Tracey showed that perception of the effectiveness of the instructor and the students’ clinical training, there is no statistically significant relationship. The instructor’s behavior is effective in reducing stress among students. But this relationship is not statistically significant. However, statistically significant relationship exists between students’ tensions and clinical training. The highest stress level can be seen in the pediatric emergency (17).

In another study Abazari showed that the relationship between years of education and degree of stress can be investigated so that the highest stress is related to the first year and they endured less stress than other students. Tension is high in the first year due to the onset of clinical training and skills are not enough. Probably because the high amounts of stress in the last year because of working seriously with patients and almost independent work experience (training in) and the imminent arrival of later life is education. That is consistent with the present study (5).

Yucha et al in another study showed that there is no statistically significant relationship between the academic semesters with sources of stress. These findings are inconsistent with the results of the present study (23).

One of the goals of any research is that its results be used in different areas so that it can be influential in reducing stress among students and the effectiveness of nursing instructors. The results of this study could be applicable in different nursing arenas (management, education and research).

The limitation of this study was lack of attention to ethnicity. It is recommended that this matter be considered in future.
research. Another limitation of the study was that the students did not complete questionnaires thoroughly, which caused a drop in the number of samples. Psychological and social status along with subjects' honesty while filling questionnaires could possibly affect the results. However, the researchers attempted to make a good connection with the subjects and also provide appropriate time and place while filling questionnaire.

REFERENCES


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Conflict of Interest: The authors declare that they have no conflict of interests.