

The Determination of Stress Experienced by Nursing Undergraduate Students during Their Education

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Abstract—Objective: Nursing students face with stress factors affecting academic performance and quality of life as from first moments of their educational life. Stress causes health problems in students such as physical, psycho-social, and behavioral disorders and might damage formation of professional identity by decreasing efficiency of education. In addition to determination of stress experienced by nursing students during their education, it was aimed to help review theoretical and clinical education settings for bringing stress of nursing students into positive level and to raise awareness of educators concerning their own professional behaviors. Methods: The study was conducted with 315 students studying at nursing department of Semra and Vefa Küçük Health High School, Nevşehir Hacı Bektaş Veli University in the academic year of 2015-2016 and agreed to participate in the study. “Personal Information Form” prepared by the researchers upon the literature review and “Nursing Education Stress Scale (NESS)” were used in this study. Data were assessed with analysis of variance and correlation analysis. Results: Mean NESS Scale score of the nursing students was estimated to be 66.46 ± 16.08 points. Conclusions: As a result of this study, stress level experienced by nursing undergraduate students during their education was determined to be high. In accordance with this result, it can be recommended to determine sources of stress experienced by nursing undergraduate students during their education and to develop approaches to eliminate these stress sources.

Keywords—Stress, nursing education, nursing student, nursing education stress.

I. INTRODUCTION

NURSING education is a process that covers theoretical and practical teaching and learning, it requires the acquisition of theoretical knowledge and hand skills, and observation and interpretation [1]. The aims of nursing education at university level in this process are providing the continuation of the creativity of students, the ability to think critically, and self-development [2]. While achieving these aims, nursing students may face some stress factors that affect their academic performance and quality of life from the earliest moments of their educational experiences [1].

In order for the learners to gain the knowledge, skills and values at the desired level during the nursing education, it is necessary to understand the experiences that the learners perceive as stress and experience in this process [2].

Stress of students is defined in three groups as academic, clinical and personal/social stresses [3]. Academic and clinical

difficulties, technological developments, financial concerns, interpersonal communication difficulties, family problems, physical and mental health problems, inadequate support and inadequate coping skills are included among the factors that cause stress and anxiety in nursing students [4]. In a study conducted by Güler and Çınar, it was determined that 65.8% of the students experienced stress related to education while 50.4% of them experienced stress related to social life during the nursing education [5]. Altınok and Üstün reported that the sources of stress related to the trainer in clinical practices were judgmental attitudes, the fear of getting low marks, being warned, the insistence/pressure about care plan, the status, distinguishing between students. In their work; the students stated in the clinic that the trainee was negatively affected by the application of pressure, distinction between students and scare with notes, and that they had eliminated motivation for their nursing and even came to the point of schooling [2]. It is stated in the literature that stress is a universal problem and the clinical practice increases the stress level of the students [1], [4].

Compared with the general population and the students in other health disciplines, it is stated that the risk of developing health problems for the undergraduate nursing students is higher [6]-[8]. Stress creates health problems such as physical, psychosocial and behavioral disorders in students, and it can also damage the process of professional identity formation by lowering the efficiency of education [1], [2], [9]. However, the educational process is an important preparation stage for the professional role of the student [2].

Providing necessary support to the students in the clinical and academic areas and focusing on improving the self-awareness levels of the students by the educators can ensure that the students are less exposed to the negative effects of stress during the education process [10].

Stress is defined as “a state of psychological and physiological imbalance resulting from the disparity between situational demand and the individual's ability and motivation to meet those needs.” Stress is the perception and evaluation of stressors and stressors are forces that have a compelling and negative effect on the human biopsychosocial system [6]. Therefore, for the educators to identify the cases creating stress in students is reported to be important in reducing the effects of stress [1]. It is necessary to increase the quality of education to ensure that nurses serve human health at a professional level. Nursing practices develop essential skills for the nursing profession and create a suitable environment for the students' professional learning. Nursing education continues in the first year of hospital practice. It is considered

that the problems encountered during the application, the student-side consideration of these problems and the suggestions for the solution should be beneficial for the attempts to increase the quality of education [11].

The purpose of the study is to determine the stress conditions experienced by nursing students in the process of professional identity development, to revise the academic training environments that will enable the production of appropriate solutions for stressful situations and provide the awareness for the educators about their own professional behaviors.

II. METHOD

A. Material and Methods

The study was descriptive. The study consisted of 450 students studying in the Nursing department of Haci Bektas Veli University, Semra and Vefa Kucuk Health Community School in the spring semester of 2015-2016 academic year. Sample selection was not used in the study; the population also formed the sample of the study. Nevertheless, students who did not agree to participate in the study did not attend the classes during the days when the data were collected, and who do not continue their education even though they are registered were not included in the sampling and the incorrectly filled surveys were removed. The study was completed with a total of 315 students. Written permission was obtained from the institution where the study will take place before starting the study.

The data were collected with the Participant Information Form [1], [2], [5], [6] and the NESS prepared in the light of the literature by the researchers.

Participant Information Form is consisting of 6 questions and questioning the demographic characteristics of the students.

The NESS was developed by Rhead [13] by modifying from the Nurse Stress Scale developed by Gray-Toft and Anderson in 1981 [12]. The validity and reliability of NESS was made by Karaca et al. [1]. The NESS consists of two sub-dimensions and 32 items which is likert type (0-3 points). In this study Cronbach's α value of the NESS was found to be 0.913 in this study.

SPSS 16.0 program was used for data analysis, demographic data were evaluated with percent, mean, standard deviation, calculations related to the scale scores were assessed by t-test and the comparison of demographic characteristics and scale mean scores was evaluated by analysis of variance.

III. RESULTS

It was found that total mean score obtained by nursing undergraduate students from NESS was 66.46 ± 16.08 , their mean score for the subscale practice stress of NESS was 32.93 ± 8.76 , and their mean score for the subscale academic stress was 33.52 ± 8.25 (Table I).

TABLE I
 TOTAL AND SUBSCALE SCORES OBTAINED BY NURSING STUDENTS FROM NESS

SCALE	N	X \pm SD
Total NESS Mean Score	315	66.46 \pm 16.08
Mean Score for the Subscale Academic Stress	315	33.52 \pm 8.25
Mean Score for the Subscale Practice Stress	315	32.93 \pm 8.76

TABLE II
 CORRELATION BETWEEN NESS TOTAL MEAN SCORE AND SUBSCALE MEAN SCORE OF THE NURSING STUDENTS IN TERMS OF VARIABLES

Variables	N	%	Mean Score for Academic Stress Subscale, X \pm SD	Mean Score for Practice Stress Subscale, X \pm SD	Total NESS Mean Score, X \pm SD
Gender					
Female	239	75.9	34.68 \pm 7.69	34.35 \pm 8.14	69.03 \pm 14.89
Male	76	24.1	29.89 \pm 8.95	28.47 \pm 9.20	58.36 \pm 17.05
Test			t= 4.538, p= 0.000	t= 5.311, p= 0.000	t= 5.254, p= 0.000
Year					
1	84	26.7	32.11 \pm 8.24	31.27 \pm 8.71	63.39 \pm 16.21
2	73	23.1	32.67 \pm 8.91	32.63 \pm 9.86	65.30 \pm 17.80
3	74	23.5	33.79 \pm 7.16	32.72 \pm 7.07	66.52 \pm 12.99
4	84	26.7	35.44 \pm 8.33	35.04 \pm 8.88	70.48 \pm 16.28
Test			F= 2.646, p= 0.490	F= 2.718, p= 0.045	F= 2.956, p= 0.033
Status of choosing the profession					
Choosing their profession willingly	128	40.6	33.75 \pm 8.40	33.23 \pm 8.61	66.99 \pm 15.98
Choosing their profession unwillingly	187	59.4	33.36 \pm 8.17	32.73 \pm 8.88	66.10 \pm 16.17
Test			t= 0.410, p= 0.682	t= 0.498, p= 0.619	t= 0.482, p= 0.630
People Who Lived Together with the family	35	11.1	33.85 \pm 7.44	33.45 \pm 8.21	67.31 \pm 14.95
With their friends in the dormitory	174	55.2	33.73 \pm 8.34	32.57 \pm 8.77	66.31 \pm 16.33
With their friends at home	106	33.7	33.07 \pm 8.41	33.35 \pm 8.98	66.43 \pm 16.15
Test			F= 0.241, p= 0.786	F= 0.331, p= 0.718	F= 0.057, p= 0.945

It was determined that 75.9% of undergraduate nursing students participating in the study were female, 26.7% were the fourth-year students, 59.4% chose nursing profession unwillingly, and 55.2% were staying with their friends in the dormitory (Table II).

Female students (69.03 \pm 14.89) were found to experience stress more than male students (58.36 \pm 17.05). Total mean score of NESS showed a significant difference in terms of gender ($p < 0.005$) (Table II).

NESS total mean scores of the first, second, third, and fourth-year students were determined as 63.39 \pm 16.21,

65.30±17.80, 66.52±12.99, and 70.48±16.28, respectively. There was a significant difference between the year and total mean score of NESS ($p < 0.005$). It was found that while NESS total mean score of the students who chose nursing profession willingly was 66.99±15.98, total NESS mean score of those who chose nursing profession unwillingly was 66.10±16.17. There was no significant difference between NESS total mean score and status of choosing nursing profession willingly ($p > 0.005$) (Table II).

IV. DISCUSSION

The aim of nursing education is to develop critical thinking skills of the students. At the end of this process, it is expected that individuals will use their knowledge, attitudes and skills to solve problems by using scientific problem solving method [14]. While trying to meet these expectations, the student may experience frustration due to stress sources besides positive experiences [15].

High levels of stress decrease the academic success of students by distorting their ability to think and make decisions [16]. Nursing students who are exposed to negative impacts of the stress cannot benefit from their education in expected level. It is thought that this situation may negatively impair the quality of the care. For this reason, it is necessary to determine the stress sources of nursing students [1].

It is important for the nursing students should be active, self-confident individuals, establishing healthy relationships; not only for professional success, but also for individual satisfaction [6], [17]. It is thought that one of the factors that prevent this fulfillment during nursing education is stress [6].

A high level of stress can lead to learning difficulty, while a low level of stress provides learning motivation. In this context, the stress experienced in education in nursing education is influential on the performance of the student and the academic success of the students with high stress level is negatively affected [18].

Total NESS mean score of the nursing undergraduate students is found as 66.46±16.08, NESS mean score for practice stress subscale and mean score for academic stress subscale are found as 32.93±8.76 and 33.52±8.25, respectively. According to this, it can be said that the students experienced high levels of stress during their nursing education. Similar results have been found in [6]; total score of the students from NESS is 62.23±16.01, score for academic stress subscale is 30.90±8.26 and the score for practice stress subscale is 31.82±8.57. Similarly, in Güler and Çınar's study, 65.8% of the students were related to education; 25.8% of these students were in the lectures, and 10% of them were stressed about the application area [5]. It is seen that the effects of stressful lives will lead to negative consequences such as quitting from the educational life, and the intense course load may cause the student to be exhausted and thus the students need help [19]. Studies conducted with nursing students in different countries, including our country, have shown that students cannot demonstrate effective strategies to cope with the stress situations they are experiencing [5], [7], [18], [20]. These results are important in terms of

understanding the stresses at different levels experienced by the students during the education process and showing that the educators have important responsibilities in planning the programs to reduce their stress levels.

Although clinical practice environments are inevitable for students to develop professional knowledge and skills, they are also an important source of stress [21], [22]. In the works done, it is stated that the stressor is always a factor in the clinical training process, while the factors causing the stress in the students are the fear of being in an unknown environment, making mistakes and harming the patient, the idea that professional knowledge and skills are not enough for application, problems and fear of being evaluated by the instructors [2], [5], [7], [14], [20]. It is determined in this study that the stress experienced is in high level but it is in the same degree in the academic and practice subscales. It is reported in the literature that stress is a factor that negatively affects the student's success and that academic success of the students with high stress levels decreases [21], [23], the students experiencing high level of stress cannot determine the patient needs well and this prevents the nursing interventions to reach their goals by affecting the between the patient and the nurse [23].

In the study results, it was determined that female students (69.03±14.89) were more stressed than male students (58.36±17.05) and it was determined that NESS mean score, mean scores for academic and clinic practice do not show significant difference ($p < 0.005$). Especially the experiences during the theoretical and clinical education can lead to some changes in students' thinking process, personality structures, and emotion control [2]. As a matter of fact, it is stated that students experiencing to be inadequate to control their own emotions in clinical practice have an increase in their stress and anxiety levels [24]. These results suggest that girls fail to control their emotions more than boys.

There are also differences in the stress sources experienced by students according to the class they are studying. In a study, the stress experience of third-year nursing students is found to be higher than the previous years [6]. Temel et al. stated that the depression mean scores of the fourth grade nursing students are higher comparing to the other classes [24]. In another study, it was determined that the students in the fourth grade had the same level of stress as the first grade students with a mean of 64.44 + 11.32 points [6]. In the study conducted by Dinç et al., because of the lessons' intensity in the second class, it was determined that second class students' stress level was excessive than other class students [25]. In the related studies, it is emphasized that depression, somatic anxiety and psychological symptoms are higher in second year students [26]-[29]. The stress factors experienced at every grade level can cause a negative change in the psychosocial lives of the students. [6]. In this study, it was determined that the class of education had an effect on the NESS mean score, clinical practice mean score and the fourth grade students had higher stress than those studying in the other classes ($p < 0.005$). This suggests that fourth grade students have anxiety about the time after graduation and this anxiety is also

increases the stress level they are experiencing about the clinical practice. It also suggests that these differences in research results can vary according to the students' mental state, the class they are studying, cultural factors and stress perceptions.

Some stressors may be more meaningful and important for the individual. This depends on the individual's family life and surroundings. The factors that cause the stress are the stimuli that originate from the internal or external environment that cause the stress life to change the adaptation capacity of the organism. Education is one of the important stress factors in life as it is an important part of the person's life. The most important source of stress in nursing education is that students are afraid to fail. Success plays an important role in increasing one's confidence in one's life. Self-confidence and self-esteem may gradually decrease with the fear of failure of individuals who are experiencing stress in education [4].

V. CONCLUSION

As a result of this research, the level of stress experienced by nursing undergraduate students during their training is determined to be high. It is determined that female students experience higher level of stress than male students and the fourth grade students experience more stress than the student in the other grades.

In line with this result, it can be suggested to develop approaches to determine and eliminate the level of stress and stress sources experienced by nursing undergraduates during their education according to both genders and the class they are studying. At the same time, the organization of orientation programs involving academics responsible for nursing education and the clinical field for pre-clinical students to strengthen the individual during the nursing education process. It is suggested that the work to be done in this area should be designed for exploring the stress that is specific to the broader sample and for the entire education area.

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