

# Autonomy levels of final year baccalaureate nursing students attending different curricula: Cross-sectional survey

Farklı müfredat programlarında öğrenim gören hemşirelik son sınıf öğrencilerinin otonomi düzeyleri: Kesitsel çalışma

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**Received/Accepted:** October 09, 2014/May 22, 2015

**Conflict of interest:** There is not a conflict of interest.

## SUMMARY

**Objective:** It is important for nursing students who will provide health care in the future to become professionals with high levels of autonomy. However, there is very limited information on this issue in the national or international literature. This study descriptive and cross-sectional design was carried out to determine autonomy levels of final year baccalaureate nursing students attending schools with different curricula.

**Methods:** The study included 464 students studying in six different nursing schools in Turkey. Of these nursing schools, two have the classical education program, third have the integrated education program and one has the problem-based learning program. Data was collected with the Personal Information Form and Autonomy subscale of the Sociotropy/Autonomy Scale.

**Results.** Of the students, 93.8% were female and their mean age was  $22.73 \pm 1.25$ . Of the students, 26.7% stated that they did not feel that they belonged to the nursing profession. The mean score students obtained from scale was  $80.62 \pm 16.75$ . Although the difference was not statistically significant ( $p > 0.05$ ), autonomy levels of the students attending the integrated program were higher than those of the students in the other two programs.

**Conclusion.** As a result, if the total GA score to be obtained from the scale is accepted to range between 0 and 120, it can be said that autonomy levels of the nursing students who attended the schools with different curricula were determined to be higher than moderate, but lower than it should be. Therefore, it can be suggested that all the curricula implemented in nursing schools in Turkey should be revised and strengthened so that all the students' autonomy levels can be developed.

**Keywords:** Nursing education, nursing students, autonomy, Turkey

## ÖZET

**Amaç:** Gelecekte sağlık hizmeti verecek olan hemşirelik öğrencilerinin otonomi düzeyleri yüksek profesyoneller olmaları önemlidir. Ancak bu alanda ulusal ve uluslararası literatür bilgisi oldukça sınırlı düzeydedir. Bu çalışma farklı müfredat programlarında öğrenim gören son sınıf hemşirelik öğrencilerinin otonomi düzeylerini belirlemek amacıyla kesitsel ve tanımlayıcı olarak yapılmıştır.

**Yöntem:** Araştırma Türkiye'de klasik program ile eğitim yürütülen iki, entegre program ile üç ve probleme dayalı program (PDÖ) ile bir olmak üzere altı hemşirelik okulunda öğrenim gören toplam 464 öğrenci üzerinde yapılmıştır. Verilerin elde edilmesinde Kişisel Bilgi Formu ve Sosyotropi-Otonomi Ölçeği'nin Otonomi Alt Ölçeği kullanılmıştır.

**Bulgular:** Öğrencilerinin %93,8'inin cinsiyeti kız ve yaş ortalaması  $22,73 \pm 1,25$ 'tir. Öğrencilerin

%26,7'si kendini hemşirelik mesleğine ait hissetmediğini belirtmiştir. Öğrencilerin, Genel Otonomi puan ortalaması  $80,62 \pm 16,75$ 'tir. İstatistiksel olarak anlamlı bir fark olmaksızın ( $p>0,05$ ), entegre program yürütülen okul öğrencilerinin otonomi düzeyleri diğer program öğrencilerine göre daha yüksektir.

**Sonuç:** Sonuç olarak, ölçekten elde edilecek toplam GO puan ranjının 0-120 olduğu göz önüne alındığında, genel olarak lisans düzeyinde farklı müfredat programlarında öğrenim gören son sınıf hemşirelik öğrencilerin otonomilerinin orta düzeyden yüksek, ancak olması gerekenden daha düşük olduğu söylenebilir. Bu anlamda Türkiye'de uygulanan tüm hemşirelik müfredat programlarının öğrencilerde otonom özellikleri geliştirmeye yönelik yeniden gözden geçirilmesi ve güçlendirilmesi gerektiği ifade edilebilir.

**Anahtar sözcükler:** Hemşirelik eğitimi, hemşirelik öğrencileri, otonomi, Türkiye

## INTRODUCTION

Autonomy is derived from the Greek word *autonomos* [auto (self) and *nomos* (law)] which refers to one's own self-governance<sup>1, 2</sup>. Self-governing is the foundation of autonomy<sup>1, 4</sup>. Autonomy is the power to choose between conflicting demands and trends<sup>5-7</sup>. In this context, autonomy reflects a person's potential for controlling his own life, and taking active steps and making his/her own decisions in order to ease this control<sup>8, 9</sup>.

Autonomy has two dimensions: Individual and professional. Individual autonomy is shaped in the process of socialization. Since individual autonomy is the basis of professional status, it is of great importance for the nursing profession<sup>10</sup>. Professional autonomy refers to having the main control in professional practices and to professional members' ability to gain control over their functions in their professions<sup>9, 11, 12</sup>. The prerequisite of professionalism is to undertake tasks in which routines are replaced with creative power and to have enough effort to appropriately fulfill these tasks<sup>13-15</sup>. Professional autonomy requires an independent but collaborative approach through the decision-making process, and it is based on the mutual trust and communication between the team members<sup>2</sup>. In this sense, autonomy is one of the essential elements of a profession<sup>2, 16-21</sup>.

In the literature, it is emphasized that nursing does not have enough individual and professional autonomy since it is considered as a profession for females and since, of its functions, those which come to the forefront are the ones which comply with the demands of a physician<sup>1, 9, 10, 15, 16, 19, 21-26</sup>. In an environment, where one is deprived of his/her rights to choose be-

tween conflicting demands and tendencies, it would be very difficult to gain autonomy. As a result of this environment lacking autonomy, dependence begin, and the constant dependence causes hesitation in controlling one's own actions and in making decision<sup>7</sup>. Successful development of autonomy requires self-governing opportunities. In this context, when the cultural characteristics of Turkish society are taken into consideration, it can be said that there is a close relationship between the limited rights recognized for girls in the family and the community and women's dependent and passive profile in the future.

There is a strong relationship between nursing education and gaining individual and professional autonomy<sup>16, 17, 26-31</sup>. Autonomous decision-making process is built upon knowledge. Knowledge is the basis for self-governing<sup>1, 32</sup>. As one's knowledge and education level increases, so does his/her self-confidence, which supports critical thinking, problem solving and independent decision-making<sup>21, 33, 34</sup>. Investigations conducted on students emphasize the differences between the personality traits of nursing students and those of students from other schools. Nursing students often display more caring, dependent, obedient and feminine characteristics and therefore, do not wish to hold positions requiring being active and autonomous<sup>25</sup>. It has been demonstrated that nursing students are more orderly, disciplined, caring, and obedient<sup>24</sup> but lack autonomy, independence and self-worth<sup>24, 35</sup>. While nursing students have such values as self-sacrifice, love and compassion, they lack values such as personal authority and influence<sup>23</sup>. According to the results of the study, nursing students can be said to have less autonomy than do students in other

departments.

However, due to the use of high and expensive technology in the changing dynamics of the world, increasing need for qualified personnel, people's expectation to receive better quality and innovative health service and the competitive environment; quality-focused nursing education has come to the fore. Quality is affected by autonomous behaviors of professionals integrated with their knowledge, skills and experiences<sup>36-38</sup>. In this context, nursing students who will be a professional health worker in the near future should attain qualifications necessary for a caregiver, decision maker, communicator, community leader and administrator<sup>36</sup>. Therefore, it is important that nursing education curricula should ensure that nursing students are equipped with these competencies.

Nursing curricula which are not student-centered, ignore students' viewpoints in the process of education, lack the features which gain students qualifications to become a professional nurse or do not satisfy students well enough will probably be inadequate to support and improve autonomous behaviors in students<sup>39</sup>. Wade<sup>21</sup> emphasized the importance of student-centered educational programs which support students' development in the process of learning professional autonomy. Here the question is how to get autonomous professionals out of students lacking autonomy with the current nursing education programs. If things run their natural course, the outcome is to get non-autonomous professionals out of non-autonomous students<sup>23, 35</sup>. Nurses' ability to assume responsibility and to make decision is one of the characteristics of professionalism which should be developed and supported during the nursing education<sup>35, 39-41</sup>.

Final year baccalaureate nursing students who will provide health care in the future should be individuals with high levels of autonomy so that they can communicate more easily and make more effective decisions to protect the public's, families' and individuals' health using their professional knowledge and skills. In this context, it is thought that determining the

autonomy levels of final year baccalaureate nursing students will play an important role in the development of curricula which will support and develop the autonomous behaviors of nurses and contribute to the reflection of these behaviors on quality nursing care. This study was conducted to determine the autonomy levels of final year baccalaureate nursing students studying in different curricula.

#### **Specific research questions;**

Regarding the final year baccalaureate nursing students studying in different curricula;

1. What are their thoughts and feelings towards their undergraduate nursing education?
2. What is their autonomy level?
3. Are there any differences between their autonomy levels in terms of their curriculum?
4. Do their opinions regarding the competence levels of some professional qualifications which they have gained through the education system they are in have any effects on their autonomy levels?

#### **MATERIAL AND METHODS**

Final year baccalaureate nursing students attending 6 nursing schools comprise the population of this cross-sectional and descriptive study. Of these 6 nursing schools, 2 have the Classical Education Program (CEP), 3 have the Integrated Education Program (IEP) and 1 has The Problem-Based Learning Program (PBL). The schools included in the study were chosen because they are the oldest, most established and most preferred nursing schools in Turkey. In 2011 in Turkey, the following 96 schools had "Nursing Undergraduate Program": School of Nursing (8), School of Health (63), School of Health Sciences (3), Faculty of Health Sciences Nursing Department (21) and Faculty of Nursing (1)<sup>42</sup>. Nursing education is maintained through the classical curriculum in 89 of these schools, through the integrated curriculum in 6 of these schools and through the PBL curriculum in 1 of these schools.

The schools included in the study enroll students who pass the Student Selection

Examination (SSE) prepared by the Council of Higher Education (CHE) in Turkey every year. In these schools, education is given in 4600 hours in 8 semesters, and the content of the programs complies with European Union criteria. At the end of the four-year education, students graduate with a bachelor's degree. The four-year undergraduate education in these schools covers basic medical sciences and theoretical and practical nursing sciences. In the schools where the study was conducted, education activities were maintained by the faculty members and research associates employed in 8 departments: Fundamentals of Nursing, Internal Medicine Nursing, Surgical Nursing, Women's Health and Diseases Nursing, Pediatrics Nursing, Psychiatry Nursing, Public Health Nursing, Nursing Management.

In this study, in the nursing schools with the traditional classical curriculum, education was teacher centered. Lessons were based on theory and given in classrooms with a great number of students. Nursing care skills were developed in laboratory studies and clinical applications. In the nursing schools with the integrated curriculum, education includes the basic knowledge, attitude and skills of professional nursing and is structured from health to disease. The program aims to develop students' nursing care skills through a systematic and bio-psychosocial approach and to gain them skills such as effective communication, critical thinking, problem solving etc. Attention is paid to the use of active learning methods in the integrated curriculum. In the only school where the problem-based learning model is used in Turkey, PBL sessions are carried out in groups of 8-12 people, and learning objectives are determined during the sessions under the direction of teaching members. Nursing concepts and skills are included in the curriculum throughout the four years of education, and problem-based training sessions, communications laboratories and clinical applications are carried out within the scope of educational goals.

The study data were collected between December 15, 2010 and March 15, 2011 in the 2010 - 2011 academic year. Of the 633 students attending the nursing schools

when the study was conducted, 315 were in 3 schools with the integrated program, 255 in 2 schools with the classical program and 63 in 6 schools with the PBL program. In the study, no sample was selected, and it was aimed to reach the entire population of the study. However, 84 students in the integrated program, 71 students in the classical program and 6 students in the PBL program were not reached due to such reasons as suspension of registration, school absenteeism and sickness. In addition, 4 integrated program students, 1 classical program student and 3 PBL program students were excluded from the study because they did not fill in the data collection forms completely. Thus, the study was conducted on 464 students (227 integrated program students, 183 classical program students and 54 PBL program students). The participation rate in the study was 74.6%.

The mean age of students in the study was  $22.72 \pm 1.25$  and 93.8% of them were female. Of the students included in the study, 48.9% were in the integrated program, 39.5% in the classical program and 11.6% in the PBL program. In Turkey, students who take student selection examination to enter a college make a preference list indicating which universities they would like to go, and nursing education took the 5th or lower place in the preference list of 57.3% of the students who preferred nursing schools. Of these nursing students, 26.7% stated that they did not feel that they belonged to the nursing profession (Table 1).

**Table 1: Personal Characteristics of the Students (n=464).**

| Characteristics                                      | Number | %    |
|--|--------|------|
| Age ( $22.72 \pm 1.25$ )                             |        |      |
| <b>Gender</b>  |        |      |
| Female   | 435    | 93.8 |
| Male   | 29     | 6.3  |
| <b>Curriculum</b>                                    |        |      |
| Integrated   | 227    | 48.9 |
| Classical  | 183    | 39.5 |
| PBL  | 54     | 11.6 |
| <b>Students' school preference ranking</b>           |        |      |
| 1  | 67     | 14.4 |
| 2  | 49     | 10.6 |
| 3  | 43     | 9.3  |
| 4  | 39     | 8.4  |
| 5 and over   | 266    | 57.3 |
| <b>Feeling that he/she belongs to the profession</b> |        |      |
| Yes  | 340    | 73.3 |
| No   | 124    | 26.7 |



Two forms were used for data collection in this research: A Personal Information Form and the Sociotropy-Autonomy Scale.

The Personal Information Form was developed by the researchers based on information in the literature to determine the students' socio-demographic characteristics and included a total of 15 open-ended and closed-ended questions to determine the students' feelings and thoughts about their nursing education and their opinions about the nursing education's level of adequacy in instilling in them some professional characteristics. The open-ended questions were grouped according to the students' statements.

The Sociotropy/Autonomy Scale (SAS) is a 60-item tool, 30 items of which are for the sociotropy subscale and 30 for the autonomy subscale<sup>43, 44</sup>. The Autonomy Subscale measures personal characteristics of dependency and autonomy. Scale is a measuring tool directed to self evaluation of the people and it can be applied in both adolescents and adults. The use of scale is not limited to a special population such as patient groups. The total score for the 30-item Autonomy scale is obtained by calculating the Subfactors, the 12-item Individual Achievement Autonomy Subfactors (ASF) that are preconditions for autonomy, the 12-item Independence ASF, which facilitates independent decision making, and the 6-item Preference for Solitude ASF, which reflects the ability to be independent and self-sufficient. This tool was developed by Beck et al.<sup>45</sup> and was adapted for Turkish in 1993 by Şahin, who also tested its reliability and internal consistency, finding a Cronbach's alpha coefficient of 0.81<sup>43, 44</sup>. In our research, the result of the reliability analysis of the tool was a Cronbach's alpha coefficient of 0.86. As SAS is the only scale which is adapted to Turkish and widely used in Turkey and as its individual level of autonomy, reliability and consistency studies were carried out in Turkey, it has been used as the measuring tool in this study.

There are five choices in response to the items on the Autonomy Subscale to indicate to what degree the participants would

describe themselves from the aspect of dependency and autonomy. These are marked from 0 (does not describe me at all), 1 (somewhat describes me), 2 (describes me fairly well), 3 (describes me well), to 4 (describes me very well). The highest possible score from the tool is 120 and the lowest is 0. A high score reflects a high level of autonomy. The tool takes approximately 15 min to complete.

Following the approval of university institutional review boards, each school of students was gathered together separately to complete the forms. The study was performed in accordance with the principles of the Helsinki Declaration in 1995 (as revised in Edinburgh 2000). First, the purpose of the study was explained to the students and their informed consent to participate was obtained. All participants gave informed consent for the research, and that their anonymity was preserved. The students were told that it was entirely up to their own decision whether or not to participate in the study, they were not supposed to specify a name on the questionnaire, the data to be collected in the study were to be used only within the scope of this study and their confidentiality would be protected. Students who wanted to participate in the study were given the forms to complete at the same time. The students completed the forms without writing their names on them. It took every group of students approximately 20-25 minutes to complete the forms.

The evaluation of the research data was completed in two phases. In the first phase the scores from the scales were calculated. A score of 0 was given for the answer, "does not describe me at all", 1 for "somewhat describes me", 2 for "describes me fairly well", 3 for "describes me well" and 4 for "describes me very well." Then the separate ASF and Autonomy Subscale's general score means were calculated.

The scores the students used for grading themselves for their level of satisfaction they derived from theoretical and clinical training ranged between '1' (the lowest) and '5' (the highest).

The data collected in the investigation were analysed using SPSS (Version 15.0-For Windows; SPSS Inc., Chicago, IL, USA). Frequency distribution, arithmetic mean used to analyze the data. When parametric test assumptions were met Variance Analysis (One-Way ANOVA) and Independent-Samples t Test were used in the statistical evaluation of the data. However, the parametric test assumptions were not met Kruskal-Wallis and Mann-Whitney U test were used. p-Value less than 0.05 ( $p < 0.05$ ) was considered statistically significant.

## RESULTS

According to the findings of the study, the students' mean General Autonomy score

was  $80.57 \pm 16.73$ . When the different educational programs were compared, it was found that the Integrated Program students had higher levels of autonomy ( $82.50 \pm 16.43$ ) than did the students in the other programs.

The autonomy level of the classical program students ( $78.74 \pm 16.96$ ) was close to that of PBL students ( $78.64 \pm 16.60$ ) and the difference between the mean scores of the students in the 3 programs was statistically insignificant ( $F=2977$ ;  $P=0.052$ ) (Table 2).

**Table 2: Students' mean general autonomy scores and students' mean autonomy scores in terms of their curriculum.**

|  | <b>X <math>\pm</math> SD</b> | <b>Min.</b>      | <b>Max.</b>         | <b>Significance test</b> |                |
|--|------------------------------|------------------|---------------------|--------------------------|----------------|
| Students' mean general autonomy scores                             | 80.57 $\pm$ 16.73            | 28.00<br>(0.00)* | 120.00<br>(120.00)* |                          |                |
| <b>Students' mean autonomy scores in terms of their curriculum</b> |                              |                  |                     |                          |                |
| Integrated program   | 82.50 $\pm$ 16.43            | 33.00            | 120.00              | <b>F=2.977</b>           | <b>p=0.052</b> |
| Classical program  | 78.74 $\pm$ 16.96            | 28.00            | 120.00              |                          |                |
| PBL  | 78.64 $\pm$ 16.60            | 41.00            | 113.00              |                          |                |

\*: Minimum and maximum values to be obtained from the scale.

When the mean general autonomy scores of the students were evaluated in terms of their education programs and some of their individual characteristics (Table 3), it was determined that the autonomy levels of the male students both in the integrated program ( $93.75 \pm 8.02$ ) and in the classical program ( $82.70 \pm 18.04$ ) were higher than those of the female students attending the same education programs and that the difference in the integrated program was statistically significant ( $p=0.007$ ). However, autonomy levels of the female nursing students who considered the female gender as an obstacle to professional nursing were higher than the autonomy levels of female students in all other programs (IEP:  $87.20 \pm 15.21$ ; CEP:  $83.88 \pm 13.47$ ; PBL:  $79.10 \pm 15.68$ ). Of the integrated program students, those who preferred the school they were attending in the 1st place and of the classical program and PBL program students, those who preferred the school they were attending in the 5th or lower place had higher autonomy levels ( $85.41 \pm 17.29$ ,  $80.35 \pm 17.73$  and  $81.05 \pm 12.02$  re-

spectively). Of the classical program students, those who felt they belonged to their profession and of the integrated and PBL program students, those who felt they did not belong to their profession had higher levels of autonomy ( $79.14 \pm 16.76$ ;  $85.09 \pm 16.58$  and  $83.39 \pm 16.98$  respectively). Of the integrated program students, those who stated that they had a student-centered education and of the classical and PBL program students, who stated that they did not have a student-centered education had higher levels of autonomy ( $83.50 \pm 15.61$ ;  $79.12 \pm 17.01$  and  $82.88 \pm 16.19$  respectively). However, when such factors as school preference, sense of belonging to the profession and that the education was student-centered were taken into consideration, the difference between the mean scores of the students in all the programs was found to be statistically insignificant ( $p > 0.05$ ). Of the integrated program students, those who stated that students' opinions were of importance in maintaining the education program and of the PBL program students, those who stated that stu-

dents' opinions were not of importance in maintaining the education program had higher levels of autonomy ( $83.41 \pm 16.18$  and  $89.70 \pm 14.76$  respectively). The difference between PBL students was statistically significant ( $p=0.018$ ).

Of the integrated program students, those who stated that the education gained them enough knowledge and skills and of the classical and PBL program students, those who stated that the education did not gain them enough knowledge and skills had higher levels of autonomy ( $83.45 \pm 15.71$ ;  $79.87 \pm 18.35$  and  $90.33 \pm 24.11$  respectively). However, the difference between the groups in all the programs was found to be statistically insignificant ( $p>0.05$ ). Of the integrated and classical program students, those who stated that they were satisfied with the theoretical education ( $91.73 \pm 13.57$  and  $83.90 \pm 19.59$  respectively) and clinical education ( $85.88 \pm 14.80$  and  $86.10 \pm 16.86$  respectively) to the greatest extent had higher levels of autonomy. In terms of satisfaction obtained from the theoretical education, the difference between integrated students was statistically significant ( $p=0.037$ ). On the other hand, of the PBL program students, those who

stated that they were satisfied with the theoretical education and clinical education to the lowest extent had significantly higher ( $p=0.039$ ) levels of autonomy (Table 3).

When the mean general autonomy scores of all the students were analyzed in terms of their opinions regarding the competence levels of some professional qualifications which they have gained through the education system, it was observed that the students who stated that their education program significantly contributed to factors such as decision-making ( $81.79 \pm 15.88$ ), assuming responsibility ( $81.61 \pm 15.58$ ), setting their own rules ( $82.16 \pm 15.96$ ), autonomy ( $81.83 \pm 15.49$ ), being an agent of change ( $81.98 \pm 16.08$ ), feeling himself/herself strong and valuable ( $81.82 \pm 15.38$ ), having enough intellectual flexibility to join discussions and comparisons ( $81.91 \pm 16.64$ ) and the sense of being ready for the profession ( $81.87 \pm 16.16$ ) had statistically significantly higher levels of autonomy ( $t=2.596$ ,  $p=0.010$ ;  $t=2.276$ ,  $p=0.023$ ;  $t=2.377$ ,  $p=0.018$ ;  $t=2.372$ ,  $p=0.018$ ;  $t=2.167$ ,  $p=0.031$ ;  $t=2.101$ ,  $p=0.036$ ;  $t=2.537$ ,  $p=0.012$ ;  $t=2.054$ ,  $p=0.041$ , respectively) (Table 4a).

**Table 3: Students' mean general autonomy scores in terms of their education programs and some of their personal characteristics.**

| Personal Characteristics   | Integrated Program |             |                   | Classical Program |             |                   | PBL |              |                    |
|--|--------------------|-------------|-------------------|-------------------|-------------|-------------------|-----|--------------|--------------------|
|  | n                  | X±SD        | Significance test | n                 | X±SD        | Significance test | n   | X±SD         | Significance test  |
| <b>Gender</b>  |                    |             |                   |                   |             |                   |     |              |                    |
| Female (n=435)   | 215                | 81.87±16.56 | p=0.007           | 166               | 78.34±16.86 | p=0.376           | 54  | 78.64±16.60  |                    |
| Male (n=29)  | 12                 | 93.75±8.02  |                   | 17                | 82.70±18.04 |                   | 0   |              |                    |
| <b>Students' school preference ranking</b>                                   |                    |             |                   |                   |             |                   |     |              |                    |
| 1 (n=67)   | 39                 | 85.41±17.29 | F=0.865; p=0.485  | 19                | 79.00±15.52 | F=1.227; p=0.301  | 9   | 71.77±17.69  | F=0.514; p=0.726   |
| 2 (n=49)   | 24                 | 81.50±17.74 |                   | 17                | 73.52±14.08 |                   | 8   | 77.75±21.85  |                    |
| 3 (n=43)   | 23                 | 78.82±18.15 |                   | 13                | 73.07±15.39 |                   | 7   | 78.71±13.81  |                    |
| 4 (n=39)   | 20                 | 79.05±15.08 |                   | 9                 | 74.00±14.36 |                   | 10  | 80.70±21.82  |                    |
| 5 and over (n=266)   | 121                | 83.03±15.79 |                   | 125               | 80.35±17.73 |                   | 20  | 81.05±12.02  |                    |
| <b>Feeling that he/she belongs to the profession</b>                         |                    |             |                   |                   |             |                   |     |              |                    |
| Yes (n=340)  | 176                | 82.24±16.31 | t=0.438; p=0.662  | 121               | 79.14±16.76 | t=0.445; p=0.657  | 43  | 77.00±16.39  | p=0.190            |
| No (n=124)   | 51                 | 83.39±16.98 |                   | 62                | 77.96±17.48 |                   | 11  | 85.09±16.58  |                    |
| <b>Appropriateness of the education for a student-centered understanding</b> |                    |             |                   |                   |             |                   |     |              |                    |
| Yes (n=185)  | 92                 | 83.50±15.61 | t=0.754; p=0.451  | 57                | 77.91±16.98 | t=0.447; p=0.655  | 36  | 76.52±16.62  | p=0.263            |
| No (n=279)   | 135                | 81.82±16.99 |                   | 126               | 79.12±17.01 |                   | 18  | 82.88±16.19  |                    |
| <b>Asking students' opinions in the maintenance of the education program</b> |                    |             |                   |                   |             |                   |     |              |                    |
| Yes (n=213)  | 105                | 83.41±16.18 | t=0.779; p=0.437  | 64                | 78.90±15.84 | t=0.092; p=0.927  | 44  | 76.13±16.10  | p=0.018            |
| No (n=251)   | 122                | 81.71±16.66 |                   | 119               | 78.66±17.61 |                   | 10  | 89.70±14.76  |                    |
| <b>The level of knowledge and skills the education provides</b>              |                    |             |                   |                   |             |                   |     |              |                    |
| Adequate (n=290)   | 158                | 83.45±15.71 | t=1.325; p=0.187  | 81                | 77.33±15.03 | t=1.005; p=0.316  | 51  | 77.96±16.13  | p=0.273            |
| Inadequate (n=174)   | 69                 | 80.31±17.89 |                   | 102               | 79.87±18.35 |                   | 3   | 90.33±24.11  |                    |
| <b>Satisfaction level from the theoretical education</b>                     |                    |             |                   |                   |             |                   |     |              |                    |
| 1* (n=34)  | 21                 | 78.63±18.20 | F=2.608; p=0.037  | 10                | 81.60±18.93 | F=1.066; p=0.375  | 3   | 103.00±14.14 | KW=7.489; p=0.112  |
| 2 (n=66)   | 37                 | 84.54±17.31 |                   | 26                | 73.65±16.73 |                   | 3   | 85.00±2.64   |                    |
| 3 (n=186)  | 79                 | 81.35±16.16 |                   | 91                | 79.95±17.18 |                   | 16  | 73.75±17.89  |                    |
| 4 (n=136)  | 66                 | 80.80±15.73 |                   | 46                | 77.50±15.57 |                   | 24  | 76.70±16.67  |                    |
| 5** (n=42)   | 4                  | 91.73±13.57 |                   | 20                | 83.90±19.59 |                   | 18  | 85.00±11.51  |                    |
| <b>Satisfaction level from the clinical education</b>                        |                    |             |                   |                   |             |                   |     |              |                    |
| 1* (n=38)  | 15                 | 84.66±16.34 | F=0.893; p=0.469  | 20                | 78.95±17.87 | F=1.262; p=0.287  | 3   | 103.00±14.14 | KW=10.072; p=0.039 |
| 2 (n=73)   | 21                 | 82.38±18.67 |                   | 49                | 79.55±17.13 |                   | 3   | 60.66±3.78   |                    |
| 3 (n=115)  | 46                 | 80.28±19.19 |                   | 55                | 75.10±18.72 |                   | 14  | 73.50±21.16  |                    |
| 4 (n=162)  | 95                 | 81.48±15.31 |                   | 48                | 80.47±13.83 |                   | 19  | 79.31±15.27  |                    |
| 5** (n=76)   | 50                 | 85.88±14.80 |                   | 10                | 86.10±16.86 |                   | 16  | 82.68±10.24  |                    |
| <b>Seeing the female gender as an obstacle to professional nursing ***</b>   |                    |             |                   |                   |             |                   |     |              |                    |
| Yes (n=78)   | 34                 | 87.20±15.21 | t=1.784; p=0.076  | 30                | 83.88±13.47 | t=1.921; p=0.056  | 14  | 79.10±15.68  | p=0.894            |

No (n=386) | 192 81.32±16.72 | 146 77.05±16.81 | 48 78.54±16.98  
 \*: The lowest level of satisfaction, \*\*: The highest level of satisfaction, \*\*\*: Answered by the female students

**Table 4a: Students' mean general autonomy scores in terms of their opinions regarding the competence levels of some professional qualifications which they have gained through the education system.**

| Some professional qualifications  | X±SD        | Significance test |
|---|-------------|-------------------|
| <b>Decision making</b>  |             |                   |
| Adequate (n=239)  | 81.79±15.88 | t=2.596;p=0.010   |
| Inadequate (n=225)  | 77.27±18.53 |                   |
| <b>Assuming responsibility</b>  |             |                   |
| Adequate (n=344)  | 81.61±15.58 | t=2.276; p=0.023  |
| Inadequate (n=120)  | 77.59±19.44 |                   |
| <b>Setting one's own rules</b>  |             |                   |
| Adequate (n=265)  | 82.16±15.96 | t=2.276; p=0.023  |
| Inadequate (n=199)  | 78.45±17.53 |                   |
| <b>Autonomy</b>   |             |                   |
| Adequate (n=315)  | 81.83±15.49 | t=2.372; p=0.018  |
| Inadequate (n=149)  | 77.90±18.87 |                   |
| <b>Being an agent of change</b>   |             |                   |
| Adequate (n=275)  | 81.98±16.08 | t=2.167; p=0.031  |
| Inadequate (n=189)  | 78.51±17.48 |                   |
| <b>Feeling himself/herself strong and valuable</b>                                |             |                   |
| Adequate (n=292)  | 81.82±15.38 | t=2.101; p=0.036  |
| Inadequate (n=172)  | 78.45±18.67 |                   |
| <b>Having enough intellectual flexibility to join discussions and comparisons</b> |             |                   |
| Adequate (n=316)  | 81.91±16.64 | t=2.537; p=0.012  |
| Inadequate (n=148)  | 77.70±16.64 |                   |
| <b>The sense of being ready for the profession</b>                                |             |                   |
| Adequate (n=282)  | 81.87±16.16 | t=2.054; p=0.041  |
| Inadequate (n=182)  | 78.56±17.44 |                   |

**Table 4b: Students' mean general autonomy scores in terms of their opinions regarding education programs and the competence levels of some professional qualifications which they have gained through the education system.**

| Some professional qualifications  | Integrated program |             |                   | Classical program |             |                   | PBL |             |                 |
|---|--------------------|-------------|-------------------|-------------------|-------------|-------------------|-----|-------------|-----------------|
|   | n                  | X ± SD      | Significance test | n                 | X ± SD      | Significance test | n   | X ±SD       | Önemlilik testi |
| <b>Decision making</b>  |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=239)  | 179                | 82.83±16.16 | t=0.584 p=0.560   | 112               | 81.01±14.90 | t=2.170 p=0.032   | 48  | 79.70±16.99 | p=0.107         |
| Inadequate (n=225)  | 48                 | 81.27±17.51 |                   | 71                | 75.16±19.36 |                   | 6   | 70.16±10.49 |                 |
| <b>Assuming responsibility</b>  |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=344)  | 188                | 82.48±15.77 | t=-0.026 p=0.979  | 111               | 81.25±14.98 | t=2.514 p=0.013   | 45  | 78.84±16.18 | p=0.618         |
| Inadequate (n=120)  | 39                 | 82.56±19.52 |                   | 72                | 74.88±19.11 |                   | 9   | 77.66±19.62 |                 |
| <b>Setting one's own rules</b>  |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=265)  | 135                | 83.91±15.94 | t=1.570; p=0.118  | 91                | 81.21±15.82 | t=1.975 p=0.050   | 39  | 78.33±15.86 | p=0.992         |
| Inadequate (n=199)  | 92                 | 80.43±16.99 |                   | 92                | 76.30±17.78 |                   | 15  | 79.46±18.98 |                 |
| <b>Autonomy</b>   |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=315)  | 168                | 82.50±15.51 | t=-0.003 p=0.998  | 105               | 82.29±14.95 | t=3.372 p=0.001   | 42  | 78.02±16.55 | p=0.884         |
| Inadequate (n=149)  | 59                 | 82.50±18.94 |                   | 78                | 73.97±18.39 |                   | 12  | 80.83±17.32 |                 |
| <b>Being an agent of change</b>   |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=275)  | 152                | 83.49±16.02 | t=1.296 p=0.196   | 83                | 81.75±16.66 | t=2.771 p=0.006   | 40  | 76.95±17.15 | p=0.221         |
| Inadequate (n=189)  | 75                 | 80.49±17.16 |                   | 100               | 74.87±16.66 |                   | 14  | 83.50±14.38 |                 |
| <b>Feeling himself/herself strong and valuable</b>                                |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=292)  | 147                | 83.83±14.79 | t=1.549 p=0.124   | 104               | 80.92±15.31 | t=2.005 p=0.046   | 41  | 76.87±16.60 | p=0.228         |
| Inadequate (n=172)  | 80                 | 80.05±18.93 |                   | 79                | 75.88±18.64 |                   | 13  | 84.23±15.94 |                 |
| <b>Having enough intellectual flexibility to join discussions and comparisons</b> |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=316)  | 170                | 83.02±16.36 | t=0.834 p=0.405   | 103               | 81.75±16.66 | t=2.771 p=0.006   | 43  | 77.88±17.41 | p=0.614         |
| Inadequate (n=148)  | 57                 | 80.92±16.69 |                   | 80                | 74.87±16.66 |                   | 11  | 81.63±13.26 |                 |
| <b>The sense of being ready for the profession</b>                                |                    |             |                   |                   |             |                   |     |             |                 |
| Adequate (n=282)  | 165                | 82.90±16.38 | t=0.599 p=0.550   | 74                | 81.89±15.32 | t=2.083 p=0.039   | 43  | 77.88±16.45 | p=0.739         |
| Inadequate (n=182)  | 62                 | 81.43±16.63 |                   | 109               | 76.61±17.75 |                   | 11  | 81.63±17.65 |                 |

When the mean general autonomy scores of the classical program students participated in our study were analyzed in terms of their opinions regarding the competence levels of some professional qualifications which they have gained through the education system, it was observed that the students who stated that their education program significantly contributed to factors

such as decision-making (81.01 ± 14.90), assuming responsibility (81.25 ± 14.98), setting their own rules (81.21 ± 15.82), autonomy (82.29 ± 14.95), being an agent of change (81.65 ± 15.31), feeling himself/herself strong and valuable (80.92 ± 15.31), having enough intellectual flexibility to join discussions and comparisons (81.75 ± 16.66) and the sense of being



ready for the profession ( $81.89 \pm 15.32$ ) had statistically significantly higher levels of autonomy ( $t=2.170$ ,  $p=0.032$ ;  $t=2.514$ ,  $p=0.013$ ;  $t=1.975$ ,  $p=0.050$ ;  $t=3.372$ ,  $p=0.001$ ;  $t=2.128$ ,  $p=0.035$ ;  $t=2.005$ ,  $p=0.046$ ;  $t=2.771$ ,  $p=0.006$ ;  $t=2.083$ ,  $p=0.039$  respectively). Similarly, the integrated program students who stated that their education program gained them some professional qualifications sufficiently had higher levels of autonomy but the difference was not statistically significant ( $p>0.05$ ). However, unlike the students in the other two programs, the PBL program students who stated that their education program did not gain them sufficient professional qualifications had higher levels of autonomy but the difference was not statistically significant ( $p>0.05$ ) (Table 4b).

## DISCUSSION

When the total GA score to be obtained from the Sociotropy-Autonomy Scale is accepted to range between 0 and 120, it can be said that autonomy levels of nursing students who attended schools offering undergraduate education in different curricula were determined to be higher than moderate, but lower than it should be (Table 2). In several studies in the literature conducted to determine the level of autonomy too, it is reported that nursing students' autonomy levels are lower than those of other undergraduate college students<sup>12, 24, 25, 35, 39</sup>.

One of the main objectives of undergraduate education is to improve autonomy characteristics of nursing students who will be the professionals of the future. However, in line with the results of our study, it can be said that undergraduate education carried out in different curriculum programs does not contribute to the development of autonomy characteristics of nursing students at an expected level. Among the reasons of this situation is the fact the infrastructure and education programs of nursing schools in our country are generally not adequate enough to achieve the desired goals, which suggests that the curricula aiming to develop professional qualifications, one of which is autonomy, in the field of nursing in Turkey should be revised and improved and that teaching

methods should be developed.

When the different educational programs were compared, it was noticed that, although the difference was not statistically significant ( $p>0.05$ ), autonomy levels of the students attending the integrated program were higher than those of the students in the other two programs, and that autonomy levels of the students attending the classical program and the PBL program were close to each other (Table 2). In the literature, we have not found any study comparing autonomy levels of nursing students studying in different curricula. However, despite the lack of literature in this context, in line with our study findings, it can be concluded that not the type of the curriculum but the students' perceptions of their profession and the quality of the education offered in nursing schools are important and have the priority in the development of autonomy, one of the essential features of professional nursing. Indeed, the following are the findings that support this idea: a. 57.3% of the students within the scope of our study preferred the nursing school they were attending in the 5th or lower place when they had taken the Student Selection Examination (SSE) prepared by the Council of Higher Education (CHE), b. 26.7% did not feel they belonged to the nursing profession although they were at the end of their nursing education (Table 1), c. a remarkable number of students thought that their education programs did not gain them sufficient professional qualifications (Table 4a, Table 4b).

Several other studies conducted in Turkey determined that the students did not prefer nursing school willingly or in the first place<sup>39, 46-50</sup>. Similarly, in their study, Özpancar et al.<sup>51</sup> reported that, of the nursing students, 53% preferred the nursing profession just because they did not have to worry about finding a job, 66.3% saw themselves as the assistant of a doctor, and 41.2% thought that nursing profession did not have an important status in the society. Several studies conducted in Turkey<sup>51-57</sup> report that students attending nursing schools have neither enough willpower to become a nurse nor knowledge about nursing. It can be said

that at the bottom of this reluctance lies the society's negative images of nursing. For instance, in her study, Emiroğlu<sup>58</sup> determined that Turkish society had negative images of nursing. In the literature, it has been reported that negative public image of nursing has adverse effects on nursing students who have just begun the school<sup>59-61</sup> and who have completed their 4-year education and are about to graduate<sup>59</sup>. However, a nursing student's being successful, having satisfaction<sup>62, 63</sup> and exhibiting autonomous behavior at school and later in working life is closely associated with his/her willingness and readiness about the profession.

In our study, it was determined that the autonomy levels of the male students were higher and that the difference in the integrated program students was statistically significant ( $p < 0.05$ ). Autonomy levels of the female students who considered the female gender as an obstacle to professional nursing were higher (Table 3). According to their statements, female students still consider that being female in nursing profession is a hindering factor in behaving professionally and autonomously, which may be associated with the fact that women perceive that they have a lower status in the nursing profession as in Turkish society. Turan et al.<sup>64</sup> states that gender discrimination is still in effect in the nursing profession the majority of whose members are women, as it was in the past.

However, nowadays, gender discrimination in nursing which has gained momentum in the process of professionalism should be put out of minds, and, as our study findings suggest, more and more male nurses who have a higher level of autonomy should take part in Turkish nursing. In recent studies in Turkey<sup>65-69</sup>, findings, similar to this view, have been determined and emphasized that there should not be only female nurses in the nursing profession in Turkey, that nursing can be achieved by males too, which will contribute to the rise of the current status of nursing profession in the society<sup>70</sup>.

The main goal of nursing education programs is to gain students an adequate level of professional qualifications<sup>71-74</sup>. One of

the essential professional qualifications in nursing is, of course, autonomy. However, although the quality of nursing education and practices has generally been attained in developed countries; in our country, attempts to improve it still continue<sup>48, 75</sup>. Since the early 2000s, in order to change and thus to improve nursing education programs in our country, integrated and PBL curricula have been launched<sup>76</sup>. Curriculum changes in nursing education in Turkey have been influenced by the goals and health policies of the World Health Organization and the criteria of the European Union. However, there are still some troubles in our country in terms of determining the targets of nursing education which will gain students professional qualifications, the use of contemporary teaching methods and objective evaluation of the students. When the current nursing education in our country is evaluated, it is observed that the students' individual characteristics and their need for individual learning are ignored, and that teacher-centered, classical education approach is still dominant<sup>71, 77, 78</sup>. In our study too, a remarkable number of students reported that their education programs did not gain them adequate professional qualifications. In our study, it was also determined that those students who reported that their education programs did not gain them adequate professional qualifications had lower levels of autonomy (Table 4a). In several other studies conducted in Turkey, the researchers obtained results which support our findings and the vast majority of nursing students who attended those studies reported that the education offered to them was not adequate<sup>79-81</sup>. Therefore, it can be presumed that the nursing curricula which are thought to have deficiencies in providing professional qualifications for prospective nurses will probably be inadequate to support and improve autonomous behaviors in students.

However, education programs should constantly be revised in order to prepare graduate students for the rapid changes in the health care system in the world. In addition, the quantity and quality of the teaching staff, their teaching methods, social, cultural and academic activities, physical

environment and the adequacy of technical equipment must comply with the contemporary educational approaches. According to Spitzer and Perrenoud<sup>82</sup>, reforms having been made in the nursing education system in the last 30 years in Western European Countries have gained momentum. In this context, schools providing nursing education in Turkey should revise and reorganize their curricula so that their graduates can be equipped with professional qualifications<sup>80, 83</sup>.

In line with our study findings, it can be said that autonomy levels of final year baccalaureate nursing students who attend schools offering undergraduate education in different curricula were determined to be higher than moderate, but lower than it should be, and that there is not a statistically significant difference between the programs. In this sense, it can be suggested that all the curricula implemented in nursing schools in Turkey should be revised and strengthened so that all the students' autonomy levels and other professional qualifications can be developed.

It can also be suggested that national and international studies should be accomplished in order to fill the void in this field in the literature, and to identify and improve students' current conditions aiming to develop autonomy, one of the indispensable professional characteristics of students having nursing education in different types of curricula implemented worldwide.

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