

Overview of Paramedic Quotas at Universities and Number of Health Technician Staff in Turkey Between the Years 2008-2018

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ABSTRACT

Objectives: Over the years the number of paramedic programs and student quotas increased at universities. The aim of this study was to investigate the quota status and program numbers of the universities in Turkey and Turkish Republic of Northern Cyprus (KKTC) and 'Health Technician' staff announcements between the years 2008-2018.

Patients and Methods: The data was taken from Turkish Republic assessment selection and placement center. Emergency and First Aid programs between 2008- 2018 in Turkey and Turkish Republic of Northern Cyprus including formal education and evening education and quota status of state universities and foundation universities and also 'Health Technician' staff announcements between the years 2008-2018 were examined.

Results: In 2008, the number of programs was 29, while the total quota was 711; in 2018, the number of programs increased to 324 and the total quota increased to 11829. In the 10-year period, the average annual quota increase rate was 77% for public universities and 75% for foundation universities.

Conclusion: In this study, the number of students and programs in Turkey and the Turkish Republic of Northern Cyprus universities Health Services Vocational School Paramedic Programs and health technician staff announcement has been investigated. There was no significant difference between the public and the foundation universities in terms of quota change rates ($p > 0.05$). First and Emergency Aid programs and quotas have increased continuously over the years. No significant difference was found as a result of the evaluation of the number of programs and quotas with the number of public personnel appointments of the graduates of the department.

Keywords: paramedic quotas, first and emergency aid, education, health technician staff

INTRODUCTION

The training of the paramedic started in the 1950's in the world. In Turkey, for the first time, Dokuz Eylul University was opened "Ambulance and Emergency Care Technician" program at 1993 with 15 students (1). Over the years, with the adoption of the profession definition of paramedics, at 2005, interest and need for paramedic schools has increased (2). Paramedic education was started in 2006 at Istanbul Bilim University, which is a foundation university for the first time, and in 2012 at Turkish Republic of Northern Cyprus.

Turkey and The Turkish Republic of Northern Cyprus between the years 2008-2018 within the Health Services Vocational part of a 2-year associate degree programs "Ambulance and Emergency Care Technician" program name changed to "Paramedic" in 2009, and after the 2010 it was changed to "Emergency and First Aid" (3).

Since the paramedic education was started in Turkey until today, system of educational problems have been occurred.

These problems were solved by revising both education plans and regulations in this field (4). However, in the early years, the problem of lack of employment in the public sector was solved with the effect of the Health Transformation Program in 2014. Additionally since the date, several paramedic programs were opened. The increase in the number of paramedic programs brought about the increase in the number of graduates, the development of medicine and the responsibilities of paramedic personnel increased (5).

In this study, Turkey and the Turkish Republic of Northern Cyprus universities Health Services Vocational School site located between the years 2008-2018, the number of students and programs of the Emergency Assistance Program has been investigated and also between the years 2008-2018 'Health Technician' staff announcements were examined (6).

MATERIAL METODS

The sample is located in Turkey and Turkish Republic of Northern Cyprus Health Services Vocational School has established Emergency and First Aid Programs, including formal education and evening education. The data was taken from Turkish Republic assessment selection and placement center by permission with petition. Emergency and First Aid program between 2008- 2018 in Turkey and Turkish Republic of Northern Cyprus including formal education and evening education and quota status of state universities and foundation universities and last ten years 'Health Technician' staff announcements were examined.

Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS) software version 24.0. Descriptive statistics and nonparametric Mann-Whitney U test, spearman's correlation coefficient were used. The level of statistical significance was defined as $p < 0.05$.

RESULTS

The number of paramedic programs was 29 in 2008 (State university formal education: 19, evening education:1, foundation university: 9). This number increased to 324 in 2018 State university formal education: 89, evening education:33, foundation university formal education: 119, foundation university evening education: 59, Turkish Republic of Northern Cyprus universities: 24). In 2008, there was paramedic education department 18% (16% state, 2% foundations) of the 120 universities with associate degree programs. The distribution of those who have paramedic departments in universities with associate degree in 2008 is shown in Figure 2 (quantile) and Table 2 (number).

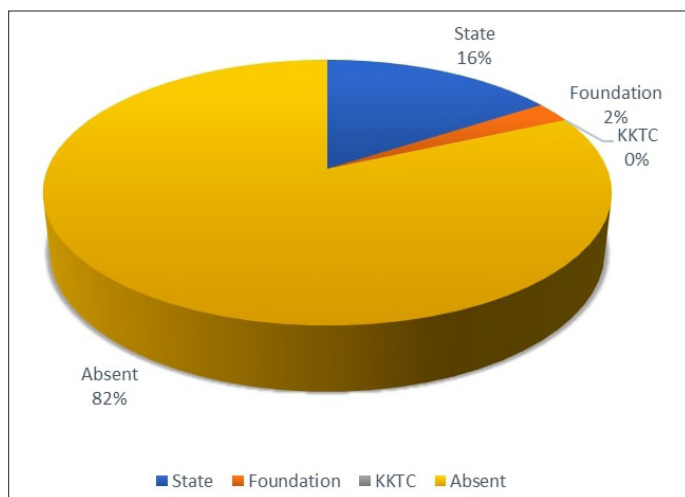


Figure 1.

Table 1. Number of paramedic departments in universities with 2008 associate degree program and percentage

		Percentage
State	19	16%
Foundation	3	2%
KKTC	0	0%
Absent	98	82%
Total	120	100%

In 2018, 71% of the 170 universities with associate degree programs (45% state, 22% foundations, 4% KKTC) have paramedic education. The distribution of those who have paramedic departments in universities that have associate degree in 2018 is shown in Figure 2 (quantile) and Table 2 (number).

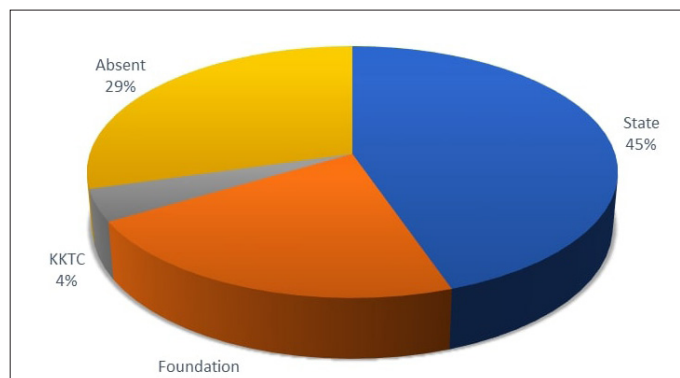


Figure 2.

Table 2. Number of paramedic departments in universities with 2018 associate degree program and percentage

		Percentage
State	76	45%
Foundation	37	22 %
KKTC	7	4 %
Absent	50	29 %
Total	170	100 %

Figure 3 shows the number of paramedic departments. In 2008; The number of state formal education is 19, the number of state evening education is 1, the number of foundation formal education is 9 and the total number of programs is 29. 2018; The number of state formal education is 89, the number of state evening education is 33, the number of foundation formal education is 119, the number of foundation evening education is 59, the number of Turkish Republic of Northern Cyprus education is 24, and the total number of programs is 324.

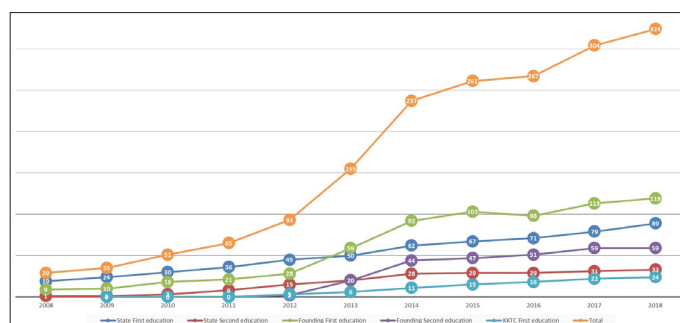


Figure 3. Number of departments change by years

Figure 4 shows the change of the quota of paramedic departments for the years 2008-2018. In 2008; The number of state formal education is 495, the number of evening education is 50, the number of foundation formal education is 116, and the total number of programs is 711. 2018; The number of state formal education is 5366, the number of state evening education is 2027, the number of foundation formal education is 2520, the number

of foundation evening education is 1430, the number of Turkish Republic of Northern Cyprus education is 486, and the total number of programs is 11829.

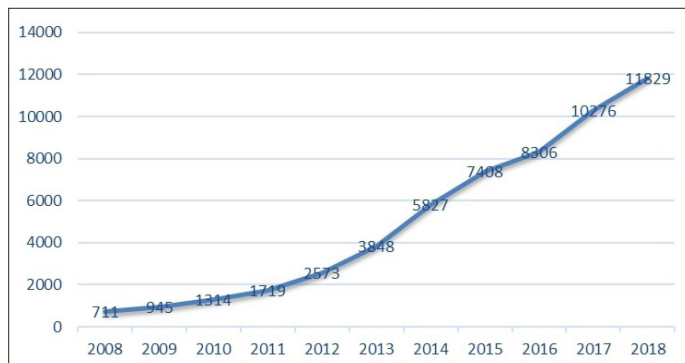


Figure 4. First and Emergency department quotas

Figure 5 shows the quota changes in paramedic departments in state and foundation universities (excluding Turkish Republic of Northern Cyprus) by years.

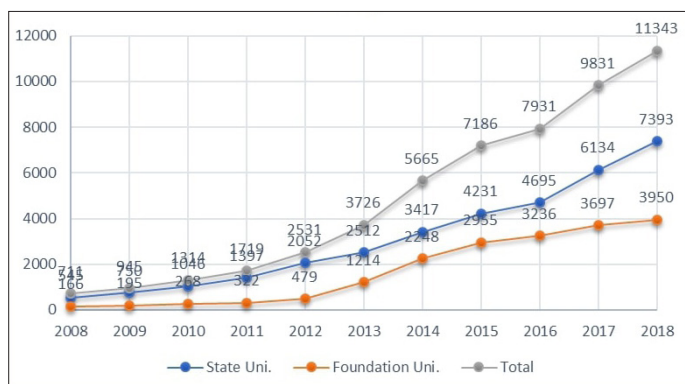


Figure 5. Quota change of paramedic departments at state and foundation universities (Except KKTC)

Paramedic departments in state and foundation universities were examined separately. The change of quotas for paramedic departments in state universities is shown in Figure 6 and the change of quotas for paramedic departments in foundation universities is shown in Figure 7.

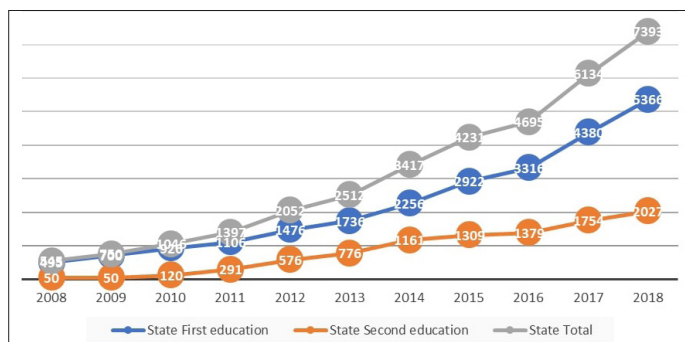


Figure 6. Change of quota of paramedic-state

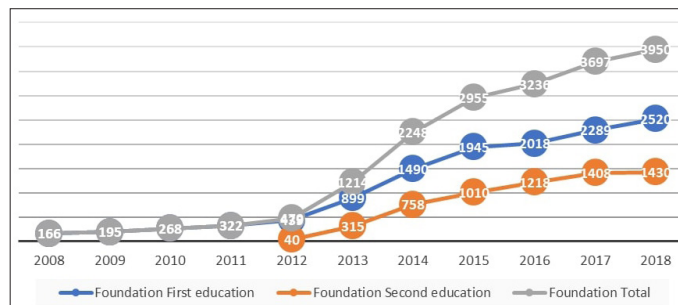


Figure 7. Change of quota of paramedic-foundation

There was no significant difference between the two groups in terms of the quota change rate between state and foundation universities ($p > 0.05$). While the total quota of the program in 2008 was 711 (State: 495, Evening Education: 50, Foundation: 166) in 2018, 11829 (State Formal Education: 5366, Evening Education: 2027, Foundation Formal Education: 2520, Foundation Evening Education): 1430, Turkish Republic of Northern Cyprus: 486).

First and Emergency Aid Program in Turkish Republic of Northern Cyprus was opened for the first time in 2012 with 42 quotas and this number increased 486 in 2018. The change of the quota between 2012-2018 is shown in Figure 8.

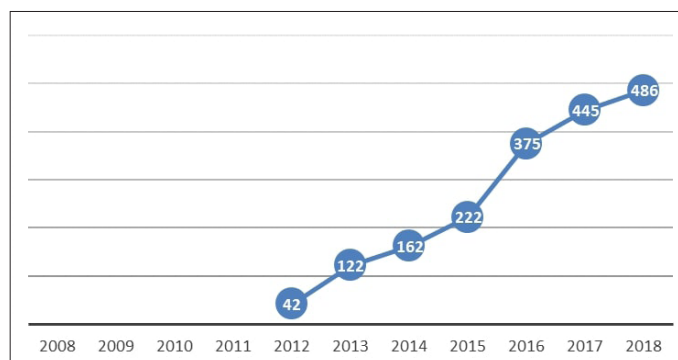


Figure 8. KKTC formal education

The average quota increase of the paramedic departments between the years 2008-2018 was examined. The average quota increase in state and foundation universities is shown in Figure 9.

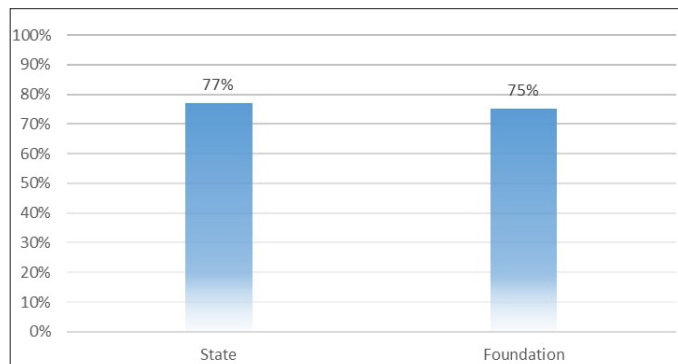


Figure 9. Increase of average quota of paramedic departments between 2008-2018

In the 10-year period, the average annual quota increase rate was 77% for state universities and 75% for foundation universities.

Figure 10 shows the quota change rates of paramedic departments in state and foundation universities by years. There was no significant difference between the two groups in terms of the quota change rate between public and private universities ($p > 0.05$).

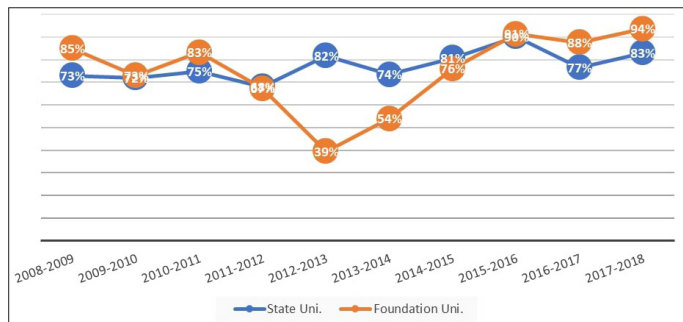


Figure 10. Quota change rates of paramedic departments at state and foundation universities by years

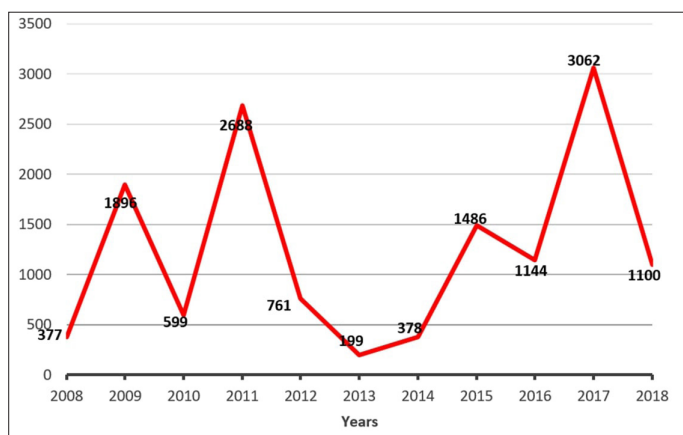


Figure 11.

Figure 11 shows the number of Health Technician staff announcements during the last ten years.

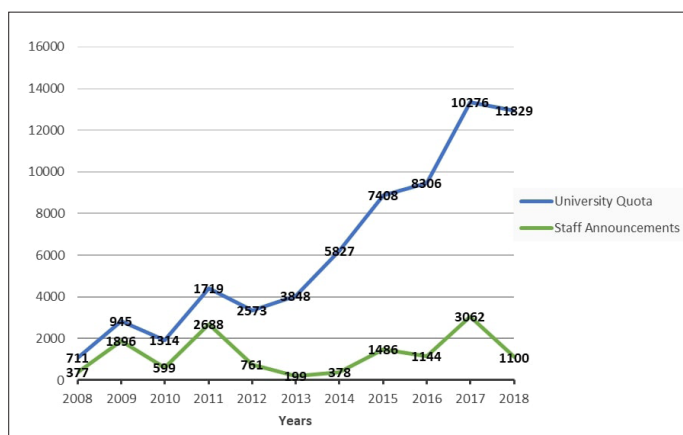


Figure 12

Figure 12 shows the change in the number of university quotas and staff between 2008-2018. There was no significant difference between the two groups in terms of university quota and the rate of change in the number of staff by years ($p > 0.05$).

Table 3. The numbers of university quotas and staff between 2008-2018

Year	Staff Announcements	University Quota
2008	377	711
2009	1896	945
2010	599	1314
2011	2688	1719
2012	761	2573
2013	199	3848
2014	378	5827
2015	1486	7408
2016	1144	8306
2017	3062	10276
2018	1100	11829

Table 3 shows the numbers of university quotas and staff between 2008-2018. The quota was 711 in 2008 where the number of appointments was 377, while the quota was 11829 in 2018, the number of staff remained at 1100. However, no significant difference was found as a result of the evaluation of the number of programs and quotas with the number of public personnel appointments of the graduates of the department.

DISCUSSION

It is seen that foundation universities contributed the most to the significant increase in the number of paramedic departments between 2008-2018. However, public universities also increased. By the year 2018, the fact that there are many paramedic departments in universities with associate degree programs is promising for development in this field. Paramedic departments and quotas have increased continuously in state and foundation universities compared to years. There is no significant difference between the quota change rates between foundation and state universities shows that they both give importance to this area. It is seen that the paramedic departments started education in Turkish Republic of Northern Cyprus in 2012 increased in 2018 in a short time.

There was no significant difference between the number of programs and quotas with the number of public personnel appointments of the graduates of the department.

In the strategy plan made by Ministry of Health in 2014, the estimated number of students and graduates until 2023 was prepared by years, according to our study we have reached the student quota number of 11829 while their expectation was

2622 for the year 2018 (7). The evaluation of the number of departments and quotas by the number of department graduates and the number of public personel appointments will guide the academic community as to whether a new program is needed.

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