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# EVALUATION OF THE EMPLOYMENT STATUS OF GRADUATED PARAMEDICS: THE CASE OF TURKEY

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## **ABSTRACT**

**Aim:** Study shows the necessity of the required status of graduated paramedics.

**Methodology:** It is a descriptive type of research. The universe of this research consists of paramedics who have graduated from the related programs of universities with First aid and Emergency Aid Programs in the last five years (2015-2019).

**Results:** 58.2% of the participants are female, 41.8% are male and 64.6% of them are vocational high school graduates regarding the high school from which they graduated. 6% of the participants stated they could not find a job in the last year after graduation and 66.4% of them stated they were not currently employed. According to the current education, 98.2% are associate degree graduates, 1.5% have undergraduate degree and 0.3% have master's degree While 76.6% of graduated paramedics consider the completion of undergraduate degree, 48.0% of them consider completing master degree. It was determined 17.0% of the paramedics participating in the study were working at 112 Emergency Health Services Station and 48.0% of them were not working while only 58,2% of the working paramedics were working as a paramedic in the staff. As a result of the study, it was found more than half of the paramedics who had graduated in the last five years were not able to find a job in the last year after graduation and most of them were not currently employed. As a result, it is understood that paramedics graduating from the first aid and emergency programs of universities in the country in the last five years have serious employment problems. In this regard, it is particularly important to reduce student quotas in the paramedic programs of the universities in order to avoid further employment problems in the future.

Keywords: Paramedic, Employment Status Emergency Care, Prehospital.

### INTRODUCTION

Profession of paramedic is a group of professions that first emerged in USA and started to become widespread as a result of the thought it would be beneficial in reducing deaths. In the 1960s, efforts were made to establish ambulance systems and provide standardization in the provinces. <sup>1-2</sup>In Turkey, the specific pre-hospital paramedic field education started in the early 1990s.<sup>3</sup>

Since 2004, professional paramedics have worked in 112 ambulance services. The number of first aid and emergency aid programs is increasing day by day and continues to be a demanded department.<sup>4</sup> Employment deficit occurred because the number of students graduating from the paramedic programs of that period are not enough to carry out the Works in the Republic of Turkey Ministry of Health 112 Emergency Health Services especially between 2007-2010. After the negotiations made with the request of the Ministry of Health in order to increase the number of graduates, it was decided to increase the quotas of the paramedic programs whose infrastructure was not sufficient instead of distant education. The quick and easy appointment of paramedics to the public staff increased the demand for paramedic programs.<sup>3</sup> After these developments the number of paramedic first and emergency aid programs opened by universities, the number of their quotas of Higher Education Institution and the number of graduated paramedics have started to increase in a fast way and still continues to be effective today.<sup>5</sup>

In our country, the number of paramedic programs and student quotas are above the employment projection regarding the relevant professional field. This situation also covers the most vital challenge area in terms of providing standardization in paramedic education and increasing the quality. <sup>6-7</sup> In the study carried out by Pak demirli, the average quota increase rate in the 10years period is 77% for state universities and 75% for foundation universities. In 2008, the number of programs was 29 and the quota was 711; in 2018, the number of programs increased to 324 and the quota increased to 11829. <sup>7</sup>

In addition to the quota of the paramedic profession, determining the employment status of the graduated paramedics is vital to prevent further employment and unemployment in the future. This study was carried out to evaluate the employment status of graduated paramedics.

#### **METHODOLOGY**

## **Research Design**

This descriptive study was conducted between 30 March- 30 May 2020. The universe of the research consists of paramedics who have graduated from the related programs of universities with First and Emergency Aid Programs in the last five years (2016-2020). Since the research sample and the information about the problems discussed are homogeneous according the universe, the whole universe was tried to be reached by using simple random sampling method without sample selection.

## **Data Collection Tools**

It is a form of 18 questions that asks the socio demographic characteristics (age, gender), introductory information (high school graduated, university graduated and graduation year) and the experience for employment after graduation of paramedics. This form was prepared to be sent electronically to students via electronic form to be sent electronically via "Google Forms" and a short URL link was sent to the graduated paramedics.

## **Data Analysis and Evaluation Techniques**

The data were collected by electronic survey method. Verbal information was given to participants before the survey was applied and their consents were obtained. The obtained data

were transferred to IBM Statistical Package for the Social Sciences (SPSS) version 25.0 program, data control was performed and analyzed in the same program. Continuous variables arithmetic mean  $\pm$  standard deviation, median (maximum and minimum values) and categorical variables were expressed as numbers and percentages.<sup>8-9</sup>

## **Application of the Research**

The researchers informed the paramedics who graduated about the purpose and method of the research in the data collection process and received their consent. Later, an URL link of short form which was prepared electronically was sent to the participants via social media. They were given a month to fill. The information obtained from electronic questionnaire forms were collected as Microsoft Excel on the system via Google Form. These data were transferred to SPSS and necessary analyzes were made.

## Limitation of Research

Due to the shortage of time in the study and the COVID-19 pandemic that affects all people around the world, the paramedics that serve as health care workers are intense and high level of anxiety and failure to reach every university can also be counted as among the limitations of the research.

### RESULTS

Table 1 shows the socio-demographic characteristics and distribution of introductory information of paramedics. 60% are in the 19-22 age group, 35.6% are in the 23-26 age group and 4.4% are in the 27 and above age group when we look at the age groups. When we look at the distribution of paramedics by their gender, 58.2% are women, 41.8% are men; by their high school from which they graduated, 64.6% are vocational high school graduates, 9.6% are regular high school graduates, 21.1% are Anadolu high school graduates and 4.7% are graduates from other high schools; by their graduation year, 8% of them graduated in 2015, 21.9% of them graduated in 2016, 29.2% graduated in 2017, 19.8% graduated in 2018 and 20.4% graduated in 2019.

Table 1. Distribution of socio demographic and introductory information of paramedics

Variables	Number	%
Age		
Between 19-22	205	60.0
Between 23-26	122	35.6
27 and above	15	4.4
Gender		
Female	199	58.2
Male	143	41.8
High School Gr.		
Vocational	221	64.6
Regular	33	9.6
Anadolu	72	21.1
Other	16	4.7
aduation Year		
2015	29	8.4
2016	75	21.9
2017	100	29.2
2018	68	19.8
2019	70	20.4
Total	342	100.0

The distribution of the universities of paramedics graduating in the study, the highest number of participants were from Bartın University (58 persons), DokuzEylül University (40 persons), Selçuk University (35 persons), Haliç University (29 persons), Mustafa Kemal University (27 persons), Batman University (25 persons), KTO Karatay University (21 persons) Akdeniz University (22 persons), Acıbadem University (20 persons), İzmir KatipÇelebi University (12 persons) and other universities follow respectively.

Table 2. Distribution of information about the employment status of paramedics

Variables	Categories	Num ber	%
Status of finding a job in the past year	Yes	118	34.5
	No	224	65.5
Employment status in the workplace regarding	Yes	115	33.6
permanency	No	227	66.4
Total working year	1 year	70	20.4
	2 years	68	19.8
	3 years	100	29.2
	4 years	75	21.9
	5 years	29	8.4
Current educational status	Associate	336	98.2
	Undergraduate	5	1.5
	Master	1	0.3
Considering about completing undergraduate	Yes	262	76.6
degree	No	80	23.4
Considering about completing master's degree	Yes	164	48.0
	No	178	52.0
Entrance to Public Personnel Selection Exam	Yes	318	93.0
	No	24	7.0
Public Personnel Selection Exam (KPSS)Score	75 andbelow	47	13.7
	75-85	76	22.3
	85 and above	219	64.0
Considering about settling abroad	Yes	174	50.9
	No	168	49.1
Considering about entrance to Foreign	Yes	338	98.8
Language Exam	No	4	1.2
Foreign language score	40-70 points	4	1.2
Total		342	100.0

In Table 2, the distribution of information about the employment status of the paramedics who participated in the study is given. 34.5 % of participants answered yes and 65.5% answered no to the question "Did you find a job in the last year after graduation?"; 33.6% of the participants

answered yes and 66.4% no to the question "Are you working permanently where you are currently working?". When we look at the working year of the participants, at most %29.2 of them have been working for 3 years, while at least 8.4% of them have been working for 5 years. Regarding the current education level of paramedics, 98.2 % are associate degree graduates, 1.5% have bachelor's degree and 0.3% have master's degree. 76.6% of paramedics answered yes and 23.4% of them answered no to the question "Are you considering completion of undergraduate degree?"; 48.0% of them answered yes and 52.0% answered no to the question "Are considering to do master?". While 93.00% answered yes and 7.0% answered no to the question "Do you plan to enter KPSS?"; 50.9% of them answered yes and 49.1% answered no to the question "Do you consider about settling abroad?"; while 98.8% answered yes and 1.2% answered no to the question "Are considering to take the foreign language exam?". While 64.0% of the participants have a KPSS score of 85 or more, their foreign language scores are between 40-70.

The distribution of graduated paramedics participating in the study regarding institutions they work in is shown in Figure 2. Paramedics stated that 2.3% of them (8 persons) work in public hospital, 9.4% of them work in private hospital 17.0% of them (58 persons) work in 112 Emergency Health Services Stations (EHSS), 3.5% of them (12 persons) work in private ambulance and 48% of them (164 persons) do not work.

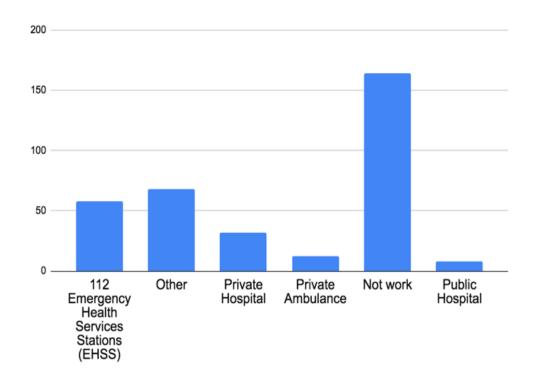


Figure 2. Distribution of graduated paramedics by institution they work

The distribution of the graduated paramedics participating in the study by their staff is given in Figure 3. They expressed that 58.2% of them (199 persons) work as paramedics, 7.6% of them (23 persons) work as nurse, 3.8% of them (13 persons) work as emergency medical technician and 31.3% of them work as other titles.

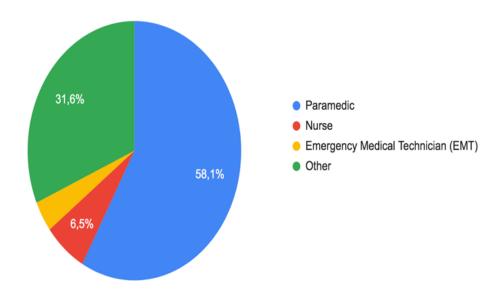


Figure 3. Distribution of graduated paramedics by titles (staff)

In the study, regarding the high school they graduated from, 64.4% of them are vocational high school graduates. 93.0% of them entered KPSS and 64.0% of them scored 85 and above. 65.5% of participants were not able to find a job in the last year after graduation and 66.4% of them are currently not employed. In line with the findings of the study, it can be said it is very unlikely less than half of them will find a job anywhere and also enter a permanent job although the majority of the graduates of paramedics got 85 and above from KPSS.

According to Turkey Statistical Institute (TÜİK) data, across the country, the number of employed persons in February 2020 period, decreased by 602 thousand persons, compared to the same period of the previous year, to 26 million 753 thousand persons, while employment rate decreased by 1.7% and was 43.1%. <sup>10</sup> The employment rate of graduated paramedics participating in our study in the last year (34.5%) is below the general employment rate.

17.0% of paramedics participating in the study work in 112 Emergency Health Services Station, 3.5% of them work in private ambulance and 48% of them do not work. On the other hand, only 58.2% of the working paramedics work in the paramedic staff, 7.6% of them work in the nursing staff and 3.8% of them work in emergency medical technician staff. When looked at the literature, it is seen there are very few studies on the employment status of the graduated paramedics. When we look at the studies conducted, similar to study results, in the study of Çelikli (2016) for standardization efforts and breaking points in paramedic education and the study of Pakdemirli (2019) for paramedic quotas of Turkish universities between 2008-2018, it is stated the number of paramedic programs and student quotas are much higher than the employment projection related to Professional employment field especially in the last ten years. <sup>3-7</sup> At the same time, it is pointed out that in the decisions taken by the "Paramedic Education Coordination Board Meeting" in 2019, increasing in paramedic programs increased rapidly in recent years and it create a number of situations negatively affect the standardization in paramedic education. <sup>6</sup>

Regarding the current education level of the participant in the study, 98.2% of them have associate degree, 1.5% of them have bachelor's degree and 0.3% of them have master's degree. While 76.6% of paramedics consider completing their bachelor's degrees after graduation, 48.0% are considering completing their masters. According to the study themed "16th paramedic education coordination board and paramedic education symposium result report" conducted by Ayla (2019), it is stated that the education at associate degree level is continuing in paramedic programs and paramedic education in developed countries is rapidly becoming to undergraduate

level.<sup>6</sup> In New Zealand, an undergraduate paramedic department was established in 2000 and it is currently the minimum qualification for working as a paramedic. <sup>11</sup> At the same time, to increase the number and qualification of the academics in paramedic programs, it is recommended to encourage people who have completed their bachelors in various fields in paramedics to complete masters and doctoral studies, and to open postgraduate programs on prehospital emergency care at universities.<sup>6-12</sup>

Graduated paramedics from 45 university and 2 Vocational College participated in the study. İt is seen that the participants are from Bartın University (58 persons), DokuzEylül University (40 persons), Selçuk University (35 persons), Haliç University (29 persons), Mustafa Kemal University (27 persons) and from other universities, respectively. Although academics from many universities throughout the country were contacted, the low and absence of participation in some universities can be explained that paramedics were busy due to COVID-19 pandemic and their level of anxiety was high. <sup>13-1</sup>

As a result of the study, it was found that more than half of the paramedics who graduated in the last five years (65.5%) could not find a job in any institution after graduation and most of them (66.4%) are not currently employed.

It is seen that only 17.0% of the paramedics participating in the study work at 112 Emergency Health Services Station and 48% do not work. It is determined that only 58.2% of working paramedics work in the paramedic staff.

As a result, it is understood paramedics who graduated from first and emergency aid programs across the country in the last five years have serious employment problems. In this context, it is very vital to reduce student quotas in the university's paramedic programs in order to prevent further employment problems in the future. At the same time, it is suggested to encourage graduated paramedics to complete bachelor's degree and to open postgraduate education programs by the relevant departments of universities because they enhance both the quality of graduated paramedics and providing employment space. It is though that studies should be conducted in a larger sample considering the employment of paramedics.

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