

Determining levels of unemployment anxiety among pharmacy students at Ege University

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ABSTRACT: Future young pharmacists have been reported to suffer from unemployment anxiety and despair due to numerous pharmacy faculties having been opened. This study aims to identify the level of anxiety and despair linked to unemployment perception among Pharmacy students attending Ege University as well as their thoughts on potential unemployment. The research is cross-sectional. Population comprises 691 undergraduate students studying at the Faculty of Pharmacy at Ege University. Data collection tools comprise descriptive questions and a questionnaire including "Job Anxiety Scale". The questionnaire was applied to the entire population on a voluntary basis without sampling and was answered by 402 students by self-reporting. Descriptive data were shown in frequency and percentage distributions, and Mann-Whitney U, Kruskal-Wallis and post-hoc tests were conducted to determine the correlation with categorical data. Students were most anxious about the excess number of pharmacy alumni decreasing their chances of finding jobs. As the level of income dropped among the students' families ($p=0.000$) and as students neared their last year at university their level of unemployment anxiety increased ($p=0.000$). However, students with a "very good" level of academic performance ($p=0.046$), who lived abroad for a long time ($p=0.034$), who are planning to start their own business ($p=0.001$) have been found to have lower levels of unemployment anxiety. Our study has concluded that pharmacy students are also facing unemployment anxiety particularly because of the increasing number of pharmacy faculties and placements. In light of these conclusions, we believe that the public authority should do a planning on labour market supply together with all of the stakeholders in the pharmacy sector, and that the number of faculties and placements should be determined accordingly.

KEYWORDS: Unemployment anxiety; youth unemployment; pharmacy students; pharmacist labour force; employment in pharmacy.

1. INTRODUCTION

Unemployment and future anxiety are a rather significant problem for the developed and especially all of the developing countries. As a matter of fact, unemployment has many destructive consequences in societal, economic, social and political terms. Growing into an even more significant problem alongside globalisation, unemployment has become more prevalent due to recent economic crises [1].

2022 OECD data on global unemployment indicate that our country has one of the highest unemployment rates among others [2]. Turkish Statistical Institute's (TURKSTAT) November 2021 data showed that the 15-24-year-old youth unemployment rate reached 23.2%, rising by 6.3 points from the same period in 2020 [3]. According to the published statistics, one in 4 youth in our country is unemployed. Such high youth unemployment rates result in unemployment anxiety among students as well as increased levels of general anxiety, leading to mental exhaustion [4].

Healthcare professions in Turkey have long been favoured by students due to high employment security they offered and job opportunities that abounded post-graduation [5-7]. Factors such as ever-challenging job placement and job-keeping conditions, current economic conjuncture, industry 5.0 have led to higher unemployment rates not only among the youth studying healthcare sciences but also among those studying other fields [8-10]. Additionally, the number of pharmacy faculties in our country has currently reached 60, from 11 in 2003 and 7 in 1997. This increase, which did not take into account employment planning, is set to trigger a further rise in unemployment specifically in pharmacy sector [11].

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Our research was planned to identify the level of unemployment anxiety among pharmacy students, or future pharmacists, who would assume important roles as healthcare service providers, and related socio-demographic factors as well as to develop potential solutions to the matter at hand.

2. RESULTS

Out of 402 students who responded to the questionnaire, 38.6% were male and 61.4% were female (Table 1). Average age of the respondents was 21.41 ± 2.07 (min: 18, max: 33). 52.7% of the students reported to have lived in larger cities (metropolitan areas), 39.8% in urban centres for the longest period of time, and 64.2% of the families reported to maintain a balanced income-expenditure (Table 1).

Table 1. Descriptive characteristics of respondents

	n=402	Percentage (%)
Gender		
Female	247	61.4
Male	155	38.6
Family's Income-Expenditure Ratio		
Income Lower Than Expenditure	71	17.7
Income Equal to Expenditures	258	64.2
Income Higher Than Expenditures	71	17.7
Unidentified	2	0.4
Place of Longest Residence		
Village	23	5.7
Urban Centre	160	39.8
Larger City (Metropolitan Area)	212	52.7
Abroad	7	1.7
Year at School		
1. Year	82	20.4
2. Year	98	24.4
3. Year	84	20.9
4. Year	85	21.1
5. Year	53	13.2
Level of Academic Performance		
Very Good (3.50-4.00)	43	10.7
Good (3.50-2.50)	252	62.7
Medium (2.50-2.00)	94	23.4
Poor (2.00-0.0)	13	3.2
Deliberate Preference for the Faculty of Pharmacy		
Yes	241	60
No	161	40

While most respondents were 2nd-year students with 24.4%, fewest respondents were 5th-year students with 13.2%. 10.7% of the respondents described their level of academic performance as “Very good” while 62.7% described it as “Good”. In other words, approximately 3/4 of the students have good and better level of academic performance. On the other hand, 60% of the students reported to have preferred to study at the faculty of pharmacy while 40% reported to have made that choice reluctantly (Table 1).

Research data revealed that fathers of 44.5% of the students as opposed to mothers of 28.6% had university degrees. 72.9% of the students reported that their parents had a democratic attitude towards them.

When respondent students were asked to consider the advantages they had besides university education, 54.7% checked the option of “having done an internship” which was required by the faculty curriculum. On the other hand, higher percentage of other advantages students had included “Having participated in vocational courses and training programmes (59%)” and “speaking a foreign language (45.5%)”. Additionally, 36.6% of the students are considering doing a Master's, 23.6% are considering starting their own business, 20.1% are considering participating in vocational courses if they failed to find a job within one year. 18.9% had no plan (Table 2).

Table 2. Distribution of students based on future plans and state of preparedness at the stage of finding a job

	N=794*	Percentage (%)
Advantages Students Have Besides University Education		
Speaking a foreign language	183	45.5
Having lived abroad	52	12.9
Having done an internship	220	54.7
Having participated in vocational courses and training programmes	237	59.0
Having received career-planning training	55	13.7
Other advantages	12	3.0
I have no advantage	35	8.7
Plan B They Consider Implementing If They Failed to Find a Job in One Year		
	n=519*	Percentage (%)
Military Service	45	11.2
Doing a Master's	147	36.6
Preparing for exams	56	13.9
Starting my own business	95	23.6
Participating in vocational courses and training programmes	81	20.1
I have no plans	76	18.9
Other	19	4.7

*402 respondent students gave multiple answers

It has been determined that the average unemployment anxiety point is 67.1±12.2 (min: 31, max: 95) based on the responses of the students participating in the study. Students were most anxious about the following issues related to job placement: reduced job opportunities, with departments producing too many graduates; seeing that the graduates are unable to work at jobs they wanted; number of placements to public institutions falling far behind the number of graduates; high unemployment rates in our country; and inadequacy of the government in combating unemployment (Table 3).

Table 3. Frequency and percentage distribution of job anxiety scale

	Strongly Disagree N %	Disagree N %	Undecided N %	Agree N %	Strongly Agree N %
1. Seeing that alumni of my department are unable to work at a job they want increases my anxiety.	16 4%	18 4.5%	38 9.5%	163 40.5%	166 41.3%
2. I am concerned about the number of assignments to public institutions being well below the number of alumni.	13 3.2%	16 4%	18 4.5%	163 40.5%	191 47.5%
3. The high unemployment rate in our country increases my job anxiety.	12 3%	32 8%	34 8.5%	141 35.1%	183 45.5%
4. Our department generating too many alumni reduce job opportunities.	11 2.7%	5 1.2%	27 6.7%	120 29.9%	239 59.5%
5. I live with thoughts of "I cannot find a job among so many alumni".	21 5.2%	62 15.4%	95 23.6%	120 29.9%	104 25.9%
6. Living with constant job anxiety impacts my mental health.	47 11.7%	94 23.4%	78 19.4%	106 26.4%	77 19.2%
7. Lack of good working conditions in private sector limits m job opportunities.	17 4.2%	41 10.2%	83 20.6%	146 36.3%	115 28.6%
8. I worry about finding a job I want because of the requirement of previous work experience in private sector.	12 3%	37 9.2%	59 14.7%	168 41.8%	126 31.3%
9. I don't think I will get adequate support from the government to start my own business.	9 2.2%	22 5.5%	92 22.9%	163 40.5%	116 28.9%
10. I don't think I will be able to find the job I want without a friend at court.	22 5.5%	49 12.2%	83 20.6%	122 30.3%	126 31.3%
11. I don't think I will be able to find a good job even if I do my personal best.	34 8.5%	109 27.1%	111 27.6%	97 24.1%	51 12.7%
12. I think the government falls short of combating unemployment.	7 1.7%	14 3.5%	34 8.5%	134 33.3%	211 52.5%
13. I don't think I will be able to find a suitable job because of my gender.	134 33.3%	142 35.5%	68 16.9%	37 9.2%	19 4.7%
14. I experience anxiety for not being able to find a suitable job because of my religious sentiments.	168 41.8%	127 31.6%	51 12.7%	38 9.5%	17 4.2%
15. Negative opinions of people in my immediate circle about my department undermine my personal efforts.	81 20.1%	113 28.1%	74 18.4%	93 23.1%	41 10.2%
16. Courses delivered rather based on theoretical knowledge and in a way that is far from practice increase my job anxiety.	34 8.5%	78 19.4%	85 21.1%	112 27.9%	90 22.4%
17. I don't experience job anxiety as I think that I will easily find the job I want after graduation.	96 23.9%	140 34.8%	101 25.1%	47 11.7%	18 4.5%
18. I don't have job anxiety because I will start my own business.	105 26.1%	131 32.6%	104 25.9%	47 11.7%	15 3.7%
19. As the level of knowledge I have acquired at the department goes up, my job anxiety goes down day by day.	72 17.9%	87 21.6%	120 29.9%	87 21.6%	36 9%

According to the results of the Kruskal Wallis test provided in Table 4, a statistically significant difference was identified between respondents' year at school ($p=0.000$), level of academic performance (0.046), family income-expenditure ratios (0.000), place of longest residence (0.034) and the Unemployment Anxiety Scale scores. Post hoc tests were conducted to determine the provenance of the significance, which indicated that students' level of unemployment anxiety increased as they approached their last year at school, that students with "very good" academic performance had lower unemployment anxiety than those with "good" academic performance. Moreover, it has also been determined that students with higher income than expenditures had lower unemployment anxiety compared to those with balanced income-expenditure ratios and those with lower income than expenditures, that students who have lived abroad experience lower level of unemployment anxiety compared to those who have lived in villages, cities, and metropolitan cities in Turkey.

Table 4. The correlation between demographic data of the students and unemployment anxiety status & results of Kruskal Wallis analysis between independent variables and unemployment anxiety scale

	n (402)	Order Average	Chi-Square (x²)	df	P
Year at School					
1. Year	82	138.59	38.193	4	0.000**
2. Year	98	202.67			
3. Year	84	200.71			
4. Year	85	236.22			
5. Year	53	242.25			
Academic Performance					
Very Good	43	156.14	8.015	3	0.046*
Good	252	205.88			
Medium	94	212,64			
Poor	13	186.00			
Family Income to Expenditures Ratio					
Income lower than expenditure	71	216.43	21.739	2	0.000**
Income equal to expenditures	258	212.05			
Income higher than expenditures	71	142.61			
Place of Longest Residence					
Village	23	219.93	8.671	3	0.034*
Urban Centre	160	193.68			
Larger City (Metropolitan Area)	212	209.09			
Abroad	7	89.93			

Mann-Whitney U test was used to determine whether there was a statistically significant difference between respondents having a plan B they considered implementing in case they failed to find a job within 1 year and having advantages they thought would help them with finding a job, and their level of unemployment anxiety. Accordingly, it has been determined that students planning to start their own business if they failed to find a job within 1 year have lower levels of unemployment anxiety compared to other students (Mann Whitney $U=11361.0$, $p=0.001$). It has been determined that students planning to do a master's if they

failed to find a job have higher levels of unemployment anxiety than other students (Mann Whitney $U=15870.5$, $p=0.010$). On the one hand, it has been determined that students who have the advantage of having done an internship have higher levels of unemployment anxiety compared to those who have not done an internship (Mann Whitney $U=15365.5$, $p=0.000$). On the other hand, students who have other advantages that have been summed up under the item 'other advantages' including studying at a second undergraduate programme or having a second undergraduate degree, currently being employed, having artistic or sports talents enabling them to make money in different fields, having effective social skills, working for civil society organizations, having engaged in youth branches of the professional organization, having the right to start up a pharmacy, have been demonstrated to have lower unemployment anxiety compared to other students (Mann Whitney $U=1258.5$, $p=0.006$).

3. DISCUSSION

This study examines the levels of unemployment anxiety and related factors among undergraduate students attending the Faculty of Pharmacy at Ege University.

Our study concluded that students were most anxious about reduced job opportunities, with departments producing too many graduates; seeing that the graduates are unable to work at jobs they wanted; number of placements to public institutions falling far behind the number of graduates; high unemployment rates in our country; and inadequacy of the government in combating unemployment. Another study conducted with healthcare students reached similar conclusions as our research, with 86.4% of the students reporting their concern about the increased number of student placements in their department. 95.5% reported that they thought the number of graduates was higher than needed, and 95.5% found the number of vocational employment inadequate. It has been determined that the group with the highest anxiety related to these items is students at the faculty of pharmacy [12]. The council of deans of faculties of pharmacy issued a statement based on the reports of the Ministry of Health, which also overlapped with students' concerns. The statement pointed out that there would be a surplus of 9000 pharmacy graduates by the end of 2023 [13]. Meanwhile, the number pharmacy faculties and placements are constantly rising. According to 2021 ÖSYM (Student Selection and Placement Centre) placement guide, total number of placements into 42 faculties of pharmacy reached 4220 [14].

According to the conclusions of the research, those students whose families have a "higher income than expenditure ratio" have lower unemployment anxiety compared to those with "balanced income-expenditure ratio" and those with "lower income than expenditure ratio". Studies carried out by Şanlı Kula, Saraç [15] and Korkmazer [16] reached similar conclusions on the subject. This may be because the students with low-income families wish to have a job as soon as possible so as not to create an economic burden for their family and feel that they will not receive adequate financial support from their families to find a job or start a business.

Our research has determined that students who have lived abroad experience a lower level of unemployment anxiety compared to students who have lived in villages, cities, and metropolitan cities in Turkey. The highest level of anxiety was observed among students who lived in villages. The study conducted by Etcı et al. among vocational school students has observed that students with families living in villages experienced a higher level of anxiety compared to other students [17].

According to the conclusions of the research, students' level of unemployment anxiety increased as they approached their last year at school. The study conducted by Korkmazer reached similar conclusions [16]. A study conducted among students of biology teaching on the same subject matter concluded that 2nd- and 3rd-year students had higher level of anxiety than 1st-year students [18]. These conclusions imply that students start to experience unemployment anxiety more intensely as graduation approaches.

Our research has determined that students with "very good" academic performance had lower levels of unemployment anxiety compared to students with "good" academic performance. Studies conducted with university students in other departments reached similar conclusions on the subject matter [16,19,20]. A study conducted by Üstün et al. which addressed levels of job-related despair of students found that students with poor academic performance had significantly higher job-related despair scores compared to students considered to have "very good" and "good" academic performance [21]. In light of these conclusions, students with lower GPA are thought to experience a sense of failure and fear of not being the first choice in competitive market conditions, which causes them to be more anxious.

There is tough competition among university graduates and different skills acquired besides standard vocational education significantly set apart graduates in their chances of success in their career path. In the face of this modern-day phenomenon, students augment their skills and qualifications by doing Master's,

participating in vocational courses, and preparing for exams; thus, going for options that prolong their educational activities and investing in their human capital. This may allow them to become more competitive and get ahead of other university graduates [9]. As a matter of fact, our research has also determined that students of the faculty of pharmacy have lower levels of unemployment anxiety when they had advantages such as doing a second major or having a second undergraduate degree, currently being employed, having artistic or sports skills enabling them to make money in other fields, having effective social skills, working for civil society organizations, having engaged in youth branches of the professional organization, being able to open a pharmacy (having the financial means to take over one) compared to other students. A PhD thesis done with the participation of last-year students at the faculty of pharmacy has determined that students with no previous work experience had higher general unemployment anxiety scores than those with previous work experience [22]. Study carried out by Menevşe and Şeker reached similar conclusions [23]. However, our research has determined that students who did internships had higher levels of unemployment anxiety compared to other students. Given that internship programmes start as of the 2nd year and one half-semester internship is required in the last year, the above-mentioned phenomenon may be linked to increased levels of anxiety towards the last year of university.

When asked about the plan B they were thinking of implementing in case they failed to find a job within 1 year, 147 respondents (36.6%) reported that they were considering doing a Master's. Doing a master's degree was the most popular plan B as determined by the studies carried out by Tekin Tayfun and Korkmaz, Erikli and Sarıcı [9, 24]. By seeking to continue their education in this case, students are in fact delaying starting their career, effectively delaying unemployment. As a matter of fact, our research has determined that students who were planning to do a master's if they failed to find a job have higher levels unemployment anxiety compared to other students.

4. CONCLUSION

The research has concluded the average unemployment anxiety score to be at 67.1 ± 12.2 . Issues about which students were most concerned seem to be reduced job opportunities due to pharmacy faculties producing too many graduates, graduates not being able to get jobs they desired, too few appointments to public institutions, high unemployment rates in our country, and failure of the government in fighting unemployment. It has been determined that as the level of income of students' families dropped and as students neared their last year at the university, their level of unemployment anxiety increased. Nevertheless, students with certain advantages such as a "very good" academic performance, having lived abroad for a long period of time, planning to start their own business, studying at a second undergraduate programme other than that of the faculty of pharmacy and currently being in employment have been found to have lower levels of unemployment anxiety. It has also been determined that their main plan B was to get into a master's programme to postpone the unemployment problem unless they could find a job within 1 year of graduation.

Findings and conclusions of the research indicate that students should be supported about the factors impacting their level of unemployment anxiety throughout their education and job opportunities after their graduation should be furthered. Therefore, it may be necessary to develop employment programmes for students at the faculty of pharmacy with a focus on their profession, to provide guidance and counselling on job-seeking, placement, psychological impact of and coping methods for unemployment, and it may be important to determine the number of and placements in faculties of pharmacy based on the labor market supply to effectively tackle unemployment. In this context, it may be important for the public authority to take swift steps to engage with all the stakeholders of the pharmaceutical industry in an effort to do planning on and to regulate the pharmacist workforce in a way that is aligned with the realities of the country.

5. MATERIALS AND METHODS

5.1. Research Sample

This is a cross-sectional research study. Research population comprises 691 undergraduate students studying at the Faculty of Pharmacy of Ege University during the 2018-2019 academic year. Selected data collection tool was a questionnaire. The questionnaire was sent out to all undergraduate students at the Faculty of Pharmacy of Ege University without sampling and on a voluntary basis and responded by 402 students through self-reporting. In this context, the research represents 58.2% of the undergraduate students at the Faculty of Pharmacy of Ege University.

5.2. Data Collection Tool

The questionnaire used for the research consists of two parts. There are 13 questions in part one, making up the independent variables of the research, aiming to identify students' age, gender, academic performance level, year at school, deliberate preference for the faculty of pharmacy, family's income-expenditure ratio, place of longest residence, parents' educational attainment and employment status, parental attitude, advantages helping them find jobs outside of the university education, their plan B in case they were unable to find a job.

In part two, the "Job Anxiety Scale", which constitutes the dependent variable of the research, and which was developed by Demir B., was used [25]. Response options to the items under the scale are "1= Strongly Disagree", "2= Disagree", "3= Not Sure", "4= Agree" and "5= Strongly Agree". Therefore, response points of the items under the scale vary from 1.00 to 5.00. As the response comes closer to 5.00 points, a student is demonstrated to agree more with the relevant item, and alternately, as the response comes closer to 1.00 point, a student is demonstrated to agree less with the relevant item [25]. Minimum and maximum total points to be obtained from the scale are 19 and 95, respectively. This research measures a negative phenomenon that is anxiety; hence affirmative statements in the scale were reversed while scoring.

5.3. Data Analysis

Data obtained from the study were assessed using the IBM SPSS 22 package programme. Descriptive data were shown in frequency and percentage distributions, and Mann-Whitney U, Kruskal-Wallis and post-hoc tests were conducted to determine the correlation among categorical data. $P < 0.05$ was adopted as the level of significance.

5.4. Ethical No-Objection

A declaration of no-objection was obtained from the Ege University, Healthcare Sciences, Ethical Board of Scientific Research and Publication (EGEBAYEK) for the study (Date: 14.02.2019, Meeting / Decision No: 02 / 11, Protocol No: 145).

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