

Academic career awareness and academic career interest among Turkish undergraduate students

Miray Dağyar¹, Akdeniz University, Faculty of Education, Department of Educational Sciences, Antalya, Turkey,
ORCID: 0000-0002-7129-9236

Gamze Kasalak, Akdeniz University, Faculty of Education, Department of Educational Sciences, Antalya, Turkey,
ORCID: 0000-0002-5084-0054

Nermin Uğurlu, Akdeniz University, Faculty of Education, Department of Science Education, Antalya, Turkey,
ORCID: 0000-0003-1323-8010

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Abstract

This study aimed to determine to what extent undergraduate students' level of academic career awareness and demographic variables predicted their level of academic career interest. The sample consisted of 3,696 students studying at 16 faculties, who were 3rd- and 4th-year undergraduate students from Akdeniz University in the fall semester of 2019–2020, and where the necessary permissions could be obtained from the faculty deanships for the application of the scales. The Academic Career Awareness Scale and Academic Career Interest Scale were used as data collection tools. The results obtained from the study were as follows: the level of undergraduate students' academic career awareness was low and their level of academic career interest was above average. It was determined that the level of academic career interest of the undergraduate students changed according to their gender, grade level and their level of academic career awareness. When the demographic variables were measured, the level of academic career awareness explained the level of academic career interest. According to this result, it could be said that undergraduate students should have knowledge about academic career in order to be interested in an academic career.

Keywords: Academic career, academic career interest, academic career knowledge, academic career awareness, postgraduate education

¹ ADDRESS FOR CORRESPONDENCE; Miray Dağyar, Akdeniz University, Faculty of Education, Department of Educational Sciences, Akdeniz Üniversitesi, Eğitim Fakültesi, 4. Kat Blok/424 07058 Konyaaltı/Antalya, TÜRKİYE
E-mail: mdagyar@akdeniz.edu.tr Tel: 0090-242-227-4400 / 4671

1. Introduction

With the assistance of universities, it is being intended to bring up individuals equipped with skills who would be able to meet the requirements of the information age and information societies without making differentiation among the countries in the world (Council of Higher Education (CHE), 2019). For this purpose, the inclusion of individuals of postgraduate education and their career plans is also being deemed important (Buyukgoze & Gelbal, 2016). In both academic and different study fields, career planning is the planning of an individual's progress and rise in her/his profession as the result of improvement of knowledge, abilities, skills and motives s/he has (Tuz, 2003). Academic career planning starts with postgraduate education, which is built upon undergraduate education. According to the postgraduate education regulation (RPE) of CHE, postgraduate education covers the teaching–learning process required by competency in art and by specialty in medicine through master's degree and doctorate, and it is being defined as education requiring the performance of scientific research. Postgraduate education is the education process in which individuals actualise their academic career objectives and experience scientific activities and research studies (Karakul & Karakutuk, 2014). Besides bringing up the scientists, it intends to equip the individuals in the professional domain, and to provide skilled labour in lines of business (Koksalan, Ilter & Gormez, 2010).

Examining the current number of scientists in the country, besides their qualification, may be one of the indicators as to why it is required to attach importance to postgraduate education. At the beginning of the 21st century, the increase in the number of universities in Turkey has brought about the issue of the shortage of instructors. In the report, in which the higher education system of Turkey was examined in 2014, it was specified that Turkey required 45,000 instructors, as 20,000 of them have doctoral degrees according to the average of OECD (16 students per each instructor). In this report, it was stated that 18,500 instructors should be included in the system every year until 2020, in order to achieve this goal (Cetinsaya, 2014). Based on this point of view, considering the state and foundation universities in Turkey by 2020 and excluding the open education programmes, the number of students per each lecturer was 69 and the number of students per each instructor was 34 (CHE, 2020). The current figures indicate that the intended number of faculty members could not be attained.

1.1. Relationship between academic career awareness and academic career interest

With regard to academic career, having a postgraduate education is being deemed important as it improves the diverse academic experience peculiar to the fields of specialisation of the individuals, ensuring progress in the track of academic career (Artess & Hooley, 2017; Cragg & Andrusyszyn, 2004) and improving individuals, intellectual and cultural wealth, and ensuring lifelong learning opportunities (Aitken, Currey, Marshall & Elliott, 2008). In addition, postgraduate education significantly diversifies the academic and social lives of individuals by bringing in high competency regarding knowledge and technical skills in a specific field of specialisation, and by providing professional development opportunities (Battie & Steelman, 2014; Ng, 2016; Van Bragt, Bakx, Teune, Bergen & Croon, 2011). Moreover, it is being emphasised in the literature that postgraduate education increases job satisfaction and improves leadership skills and self-sufficiency (Armstrong & Adam, 2002; Cotterill-Walker, 2012).

The notion that it is being involved in postgraduate education only for being an instructor at the universities is one of the significant fallacies with respect to postgraduate education (Oren, Yilmaz & Guclu, 2012). In the study carried out by Er and Unal (2017), it was concluded that prospective teachers generally consider postgraduate education in the professional aspect as a career. Based on these fallacies, it can be concluded that students, who think that they may be assigned after graduation or who think that there are different business opportunities, do not show much interest in postgraduate education or that the skilled students do not consider the academic profession as they have different alternatives. In addition, the responsibility of making scientific publications has been completely undertaken by the universities in Turkey (Ak & Gulmez, 2006; Unal & Secilmis, 2013). A significant number of researchers in Turkey are officiating higher education institutions (TUBITAK, 2018). In this sense, the consideration of postgraduate education only as a step for academic career planning and of the academic profession as an alternative

business opportunity may hinder the bringing up of skilled scientists and also the development of the country.

For extending postgraduate education, for increasing the number of faculty members and for directing skilled students to postgraduate education and academic profession, raising students' awareness regarding academic career should be among the main duties of the universities that have aspired to bring up lifelong learning individuals (CHE, 2019). In the current study, postgraduate education and the process of becoming an academician are addressed together under the concept of academic career, and it is anticipated that by determining the interest and awareness level of undergraduate students, with respect to academic career and the relationship in between them, would support the universities' endeavours for raising awareness of the students regarding academic career. In this study, academic career is explained as an individuals' postgraduate education, followed-up by their undergraduate education, their assignment as instructors at universities, if it is the preferred profession, their actualisation of scientific research studies and publications and briefly their process of becoming a scientist. In this context, it can be said that academic career is a route that can be taken by individuals who have adopted lifelong learning, which allows continuous development in both personal and professional aspects, increases the qualities of people and labour and the development level of the country. Undergraduate students should be encouraged, in terms of being more interested and eager regarding academic career, by increasing their level of knowledge and awareness.

1.2. The purpose and significance of the research

In Turkey, individuals are expected to meet various criteria to proceed in the route of academic career. In order to enrol in a postgraduate education programme of a university and take office as academic personnel, individuals, who are in the position of being able to graduate from an undergraduate programme and/or who have graduated, are required to take a standard exam consisting of two different subjects, which are social studies exam and scientific studies exam (Academic Personnel and Postgraduate Education Entrance Exam, ALES). According to the Student Selection and Placement Centre (SSPC), the minimum scores anticipated for being able to attend postgraduate education are valid for 5 years. This initial criterion is valid in both academic personnel and postgraduate education processes (SSPC, 2020). Moreover, the criterion of getting a specific score in foreign language exams is being deemed necessary for applying to the doctoral programmes and for becoming academic personnel. In addition to the two criteria, the higher education institutions also assess the graduation grade point average and the result of the written scientific evaluation and/or interview for the postgraduate education programme and academic personnel application (RPE, 2016). In brief, whether the individuals will be included in the process of academic career or not will be being determined based on the central exam(s) and academic success in Turkey.

In recent years, an increase in the demand for postgraduate education is being observed in Turkey as in many developed countries. In the academic year of 2019–2020, the number of new enrolments for master's degree was 128,127 and the total number of master's degree students was 297,001, and the number of new enrolments for doctorate was 20,894 and the total number of doctorate students was 101,242 (CHE, 2020). In the academic year of 2013–2014, the number of new enrolments for master's degree was 56,193 and the total number of master's degree students was 265,895, and the number of new enrolments for doctorate was 9397 and the total number of doctorate students was 67,157 (CHE, 2014). As it is also understood from these data, especially the number of new enrolments has shown an increase by about three times at the master's degree level and by about two times at the doctorate level. In addition, the SSPC (2020) had informed that about half a million individuals had attended ALES in each of the recent five years. There may be several reasons for the increase in the number of individuals attending ALES for their academic careers and in the demand for postgraduate education. The first one may be specified as a continuous increase in the number of bachelors along with the increase in the number of newly established universities in the recent five years. The second one may be relevant to professional prestige. In the Social Structure Research Programme (SSRP), where the work-life and

professional prestige in Turkey were examined, the professional prestige scores of especially the professors and associate professors, from among the faculty members of universities, were ranked as top three (SSRP, 2014). When taking into consideration that social perception regarding the academic profession is highly positive, the importance of academic career awareness of undergraduate students and their interest levels regarding academic career comes into view.

In 2016, according to the educational level, while the rate of master's degree graduates between the age of 25 and 64 years was 12% in OECD countries, it was 2% in Turkey. While the rate of doctorate graduates was 1% in OECD countries, it was determined with a value close to 0% in Turkey. According to the data of 2017, the number of doctorate graduates had increased and had reached to about 6000 in Turkey, but it had been observed that this figure was low (Gur, Celik & Yurdakul, 2018).

When the literature was reviewed, there were research studies on the decisions of undergraduate students pursuing postgraduate education within the scope of their academic career (Alabas, Kamer & Polat, 2012; Aydemir & Cam, 2015; Coruk, Cagatay & Ozturk, 2016; Karadas, Duran & Kaynak, 2017; Unal & Ilter, 2010), on their awareness regarding postgraduate education and on their intentions for having postgraduate education (Ilter, 2020). In these research studies, he focusses had been especially on postgraduate education within the scope of academic career. In addition, there were also research studies examining the perception of undergraduate students regarding the academic profession and academic personnel (Basarir & Sari, 2015; Ehtiyar, Solmaz & Cagla, 2019; Polat, Apak & Akdag, 2013), and their will for and interest in being an academician (Katipoglu & Katipoglu, 2016; Yalcin & Demirekin, 2013). But when we consider the academic career as a whole, consisting of postgraduate education and academic profession, it can be determined that there is no study examining the relationship between academic career awareness and academic career interests of undergraduate students. Among the reasons for this circumstance, lack of psychometric assessment tools assessing the awareness levels and interests of undergraduate students regarding academic career (becoming academician and having postgraduate education) can be indicated. In the direction of this requirement, by the use of assessment tools developed by researchers for this study, the effect of undergraduate students' level of academic career awareness on their academic career interest following graduation had been examined via hierarchical regression analysis, and thus it had been intended to fill the gap in the literature.

It is important to examine the academic career awareness of undergraduate students, which is one of the possible variables affecting undergraduate students' interest in becoming an academician and in attending a postgraduate education programme. Because, as a result of researching the academic career awareness of undergraduate students, it ensures that youth have sufficient knowledge and consciousness regarding their personal competencies allowing them to make selections in educational and professional aspects for their future. Moreover, it is being considered that examining the variables, such as academic career awareness and academic career interest, will be important in conceptualising the academic career. Along with collectively addressing, in a study, the variables of academic career awareness and academic career interest, the determination of their explanatory and predictor relationships may assist in better understanding the undergraduate students' educational, career and professional objectives following undergraduate education and also in better understanding the processes shaping these objectives. In this sense, carrying out a research based on examining the relationships between academic career awareness and academic career interest will contribute to both theoretical field and field of application. The purpose of the research carried out in the direction of all these opinions is to determine how much the level of

academic career interest of undergraduate students is being predicted by the level of their academic career awareness when demographic variables are taken into consideration.

2. Method

2.1. Research model

The descriptive relational model was used in the present study. The model was developed in order to determine to what extent undergraduate students' level of academic career awareness and demographic variables predicted their level of academic career interest.

2.2. Population and Sample

The target population of the study was 3rd- and 4th-year undergraduate students studying at 24 faculties affiliated to Akdeniz University. In order to apply the data collection tools, permission was requested from the faculty deans' offices. Some faculties did not allow the application of the scales, citing the intensity of educational activities. For this reason, the study universe of the research is composed of 3rd- and 4th-year undergraduate students studying in 16 faculties of Akdeniz University. The sample of the study was determined by an appropriate sampling method due to the difficulty of reaching all students studying in the faculties. As a result, in this study, a scale was applied to 4,208 students, but the scales with high data loss and extreme values were excluded from the analysis. Accordingly, the sample of the research consisted of 3,696 students who were studying at 16 faculties of Akdeniz University and who were undergraduate students of the 3rd and 4th year of the fall term of the academic year of 2019–2020, and for which the required permits could be obtained from the dean's office for the application of scale. The faculties where the scales were applied are as follows: Faculty of Literature, Faculty of Education, Faculty of Science, Faculty of Arts, Faculty of Nursing, Faculty of Law, Faculty of Economics and Administrative Sciences, Faculty of Theology, Faculty of Communication, Faculty of Architecture, Faculty of Engineering, Faculty of Sports Sciences, Faculty of Aquaculture, Faculty of Tourism, Faculty of Applied Sciences and Faculty of Agriculture.

54.2% of 3,696 students of the sample were female and 44.4% of them were male. 50.4% of these students were studying in the 3rd year and 48.3% of them were studying in the 4th year. The average age of students ranged from 20 to 30 years, with the mean age of 22 years. The number of students from each of the 16 faculties included in the sample was different from each other. Thus, data were collected from the students who could be reached at the faculties. Based on this, students from the Faculty of Education (19.4%) and Faculty of Economics and Administrative Sciences (18.3%) were included in the sample the most, and students from the Faculty of Nursing (1.5%) were included in the sample the least.

Moreover, the questions of whether the undergraduate students had information or not regarding the postgraduate education and the process of becoming an instructor, and if they did, from where did they obtain such information were included in the personal information form. The students were told that if they have any information, they could mark the option of 'source of information' more than once. Based on this, the frequency and percentage distribution of the students' answers are given in Table 1.

Table 1. Frequency and percentage distribution of data indicating from where the information was obtained with respect to academic career

	Postgraduate education		Being an instructor	
	<i>f</i>	%	<i>f</i>	%
1. I do not have any information	660	17.9	989	26.8
2. I have information ^a	3,036	82.1	2,707	73.2
from internet	1,902	51.5	1,563	42.3
from instructors	1,370	37.1	1,265	34.2
from visual/written media	313	8.5	235	6.4
from friends	1,416	38.3	1,166	31.5
from family/relatives	407	11.0	279	7.5
other	51	1.4	33	0.9

^aUndergraduate students were allowed to answer more than one option.

When the frequency distributions in Table 1 were examined, the undergraduate students had specified that they had information regarding academic career, which is defined as the postgraduate education process and the process of becoming an instructor, and that they had obtained such information mainly from the internet and from their instructors and friends. Moreover, it was concluded that they had obtained information at least from written and visual media, and from their families/relatives.

2.3. Data collection tools

2.3.1. Academic Career Interest Scale (ACIS)

ACIS, developed by the researchers of this study, is a 5-point Likert-type scale (I strongly agree ... I strongly disagree), consisting of 11 items and 2 sub-dimensions. In the study group, 279 4th year students studying at Akdeniz University's Faculty of Education in the 2018–2019 academic year were included. As a result of the exploratory factor analysis, the Kaiser–Meyer–Olkin (KMO) coefficient was 0.927 and Bartlett's sphericity test ($\chi^2 = 2,372.560$; $df = 55$) was found to be significant ($p < 0.000$). The factor loading values of the items in the scale varied between 0.800 and 0.620. It was determined that the declared total variance rate of the scale was 61%, the affective interest sub-dimension was 29% and the cognitive interest sub-dimension was 43%. Cronbach's alpha internal consistency coefficient was calculated as 0.940 for the whole scale. The reliability coefficient for the sub-dimension of cognitive interest was determined as 0.879 and the reliability coefficient for the sub-dimension of affective interest was determined as 0.784. The obtained reliability coefficients indicate that the scale was reliable. Moreover, confirmatory factor analysis (CFA) was also carried out in the study, and as the result, it was determined that the structure revealed in the exploratory factor analysis was verified. Based on this, the fit indices of the study were determined as $\chi^2 = 98.76$, $df = 43$, $p = 0.000$, $\chi^2/df = 2.29$, NNFI (Nonnormed Fit Index) = 0.99, CFI (Comparative Fit Index) = 0.99, RMSEA (Root Mean Square Error of Approximation) = 0.06 and SRMR (Standardized Root Mean Square Residual) = 0.04. According to the obtained fit indices, it was observed that the scale indicated a valid structure (Kline, 2011) and the correlation value among the factors of the scale indicated that there was a positive and significant relationship among the factors. The two sub-dimensions of the scale are named as (1) affective interest and (2) cognitive interest.

The validity of the scale, which consists of 31 items and 4 sub-dimensions, was confirmed as a result of the CFA conducted in the sample of this study. The fit indices show that the scale has perfect fit indices [NFI (Normed Fit Index) = 0.96, NNFI = 0.95; CFI = 0.96; IFI (Incremental Fit Index) = 0.96, RMSEA=0.05] (Kline, 2011). Cronbach's alpha coefficient was calculated as 0.910 for the whole scale. Also, the reliability

coefficient values of the two sub-dimensions (0.805 and 0.812) showed that the scale has high reliability (Buyukozturk, 2019).

2.3.2. *Academic Career Awareness Scale (ACAS)*

ACAS, developed by the researchers of this study, is a 4-point Likert-type scale (I have no information, I heard but I don't know the details, I know something about it, but I can only explain it as general information, I know I can explain in detail), consisting of 31 items and 4 sub-dimensions. The validity and reliability study of the scale was conducted on 470, 4th-year undergraduate students studying at Akdeniz University in the academic year of 2018–2019. As a result of the exploratory factor analysis, KMO (0.938) and Bartlett's test were calculated as 8,202.806 and $p = 0.000$ ($p < 0.01$), respectively. The factor loading values of the items in the scale varied between 0.817 and 0.528. Cronbach's alpha internal consistency coefficient was calculated as 0.971 for the whole scale. The ratio of the declared total variance of the scale was 61%, and the variances for the sub-dimensions were determined as 21%, 14%, 14% and 12%, respectively. Moreover, the reliability coefficients of the sub-dimensions were determined as 0.951, 0.825, 0.861 and 0.854, respectively. The reliability values obtained for the whole test and for the sub-dimensions were at an acceptable level. Moreover, CFA was also carried out in the study, and as the result, it was determined that the structure revealed in the exploratory factor analysis was verified. Based on this, the fit indices of the study were $\chi^2 = 4,226.51$, $df = 845$, $p = 0.000$, $\chi^2/df = 5.00$, $NFI = 0.95$, $NNFI = 0.94$; $CFI = 0.96$, $IFI = 0.96$ and $RMSEA = 0.08$, and it is being observed that the scale is indicating a valid structure (Brown, 2006; Kline, 2011). The determined sub-dimensions were named as (1) awareness regarding becoming an instructor and working conditions; (2) awareness regarding postgraduate education and the purpose of education; (3) awareness regarding the conditions of graduating from postgraduate education and (4) awareness regarding conditions for applying to postgraduate education.

CFA and reliability analysis were also carried out for this study. The validity of the scale, which consists of 31 items and 4 sub-dimensions, was confirmed as a result of the CFA conducted in the sample of this study. Since multivariate normality assumption could not be achieved in CFA, DWLS (Robust Weighted Least Squares) estimation method was used (Yildirim, Sarac & Buyukozturk, 2018). The Satorra–Bentler (SB) χ^2/df fit index, which is preferred in the DWLS estimation method, was not considered because it was affected by the size of the sample (Brown, 2006). In addition, although the RMSEA value was calculated as 0.09, it was higher than the critical value (0.08); however, the SRMR value was at an acceptable level with 0.05, so it was used instead of the RMSEA fit index (Kline, 2011). Other fit indices showed that the scale had perfect fit indices [GFI (Goodness of Fit Index)= 0.98; $AGFI$ (Adjusted Goodness of Fit Index) = 0.98; $NFI = 0.96$, $NNFI = 0.95$; $CFI = 0.96$; $IFI = 0.96$] (Kline, 2011; Schermelleh-Engel, Moosbrugger & Müller, 2003). Cronbach's alpha coefficient was calculated as 0.955 for the whole scale and the reliability coefficients of the sub-dimensions were determined as 0.935, 0.840, 0.878 and 0.897, respectively. These values are proof that the scale has high reliability (Buyukozturk, 2019).

2.3.3. *Personal information form*

In this study, the questions that could be addressed as demographic variables were included in the personal information form (gender, grade level, age and faculty). Categorical answers were prepared for the questions.

In addition, the question of 'If you have information regarding postgraduate education and conditions of becoming an instructor, where did you learn it from?' was also directed to the relevant students in the personal information form. The questions and answers included in the personal information form were formed considering the student interviews conducted in the process of development of relevant scales

and considering the literature review; and their conformity to the scale was checked by resorting to experts' opinions.

2.4. Data analysis

In this study, hierarchical regression analysis, from among multiple linear regression analyses, was carried out. Moreover, Pearson's correlation coefficients among the variables were calculated, and frequency distributions and descriptive statistics regarding the variables were evaluated. SPSS 23.0 Statistics was used to carry out the analyses in the study. Moreover, the CFAs of the scales used were carried out by using the LISREL 8.7 statistics programme.

3. Findings

In this research, the relationships among the variables with respect to the level of academic career interest, level of academic career awareness and demographic characteristics were determined by calculating Pearson's correlation coefficients. In order to examine the effect of the variables of gender and grade level on the dependent variable, the categorical variables were turned into two-level dummy variables (Buyukozturk, 2019). Regarding gender, females were coded as 1 and males as 0; and regarding grade level, 3rd year was coded as 1 and 4th year as 0. Descriptive statistics of the variables and correlation values among the variables are seen in Table 2.

Table 2. Correlation values among the variables

Variables	M	df	1	2	3	4	5	6	7	8
1. Interest (whole scale)	3.490	0.926	1	.152**	0.045**	0.241**	0.206**	0.109**	0.232**	0.261**
2. Gender	0.549	0.497		1	-0.006	0.037*	0.033*	-0.037*	0.086**	0.046**
3. Grade level	0.510	0.499			1	-0.132**	-0.090**	-0.081**	-0.113**	-0.155**
4. Awareness (whole scale)	2.134	0.577				1	0.866**	0.804**	0.782**	0.891**
5. Sub-dim1	2.047	0.653					1	0.603**	0.584**	0.727**
6. Sub-dim2	1.664	0.701						1	0.458**	0.618**
7. Sub-dim3	2.684	0.620							1	0.625**
8. Sub-dim4	2.140	0.775								1

* $p < 0.05$; ** $p < 0.01$

(Sub-dim1: Becoming an instructor and working conditions; Sub-dim2: Postgraduate education and the purpose of education; Sub-dim3: The conditions of graduating from postgraduate education; Sub-dim4: The conditions for applying to postgraduate education.)

As seen in Table 2, the undergraduate students' scores for the level of academic career interest were above 3, which is the midpoint of the 5-point Likert-type scale ($M = 3.490$). Also, when the students' level of academic career awareness was considered, it can be said that it was interpreted according to 2.50, which is the midpoint of the scale, and that all the levels of awareness, except the level of awareness

regarding postgraduate education and purpose of education, were below the average. In this sense, it was observed that students' awareness regarding sub-dimensions of academic career was low.

According to the findings in Table 2, a positive low-level significant relationship was found between the undergraduate students' level of academic career interest, undergraduate students' gender ($r = 0.152, p < 0.01$) and grade level ($r = 0.045, p < 0.01$). Accordingly, it can be said that the level of academic career interest of female students was higher compared to male students. Moreover, in terms of grade level, as 3rd years were assigned as the reference group, it can be said that the level of academic career interest of 3rd-year students was higher compared to 4th-year students.

It was determined that there was a positive low-level significant relationship between undergraduate students' level of academic career interest and sub-dimensions of the ACAS. [Awareness regarding becoming an instructor and working conditions ($r = -0.206, p < 0.01$), respectively; awareness regarding the conditions of graduating from postgraduate education ($r = -0.109, p < 0.01$), respectively; awareness regarding postgraduate education, and the purpose of education ($r = -0.232, p < 0.01$), respectively; awareness regarding conditions of applying to postgraduate education ($r = -0.261, p < 0.01$), respectively]. According to the findings obtained, it can be said that as the undergraduate students' level of academic career awareness increases, their academic career interest also increases.

In this study, the level of academic career interest was determined as a predicted variable and the other variables were determined as predictor variables, which were the control variables of each other as per their priority orders in the model. The variables of gender and grade level, having a significant correlation with the level of academic career interest, were assigned to the model as the 1st block. After taking out the contribution of demographic characteristics, it was intended to determine the effect of the level of academic career awareness on the level of academic career interest. For this reason, sub-dimensions, measuring the level of academic career awareness, were assigned to the model as the 2nd block.

Primarily, extreme value analysis and missing value analysis were carried out for meeting the assumptions of the hierarchical regression analysis. The data falling outside the range of ± 3 , calculated over the z-scores, by extreme value analysis and missing value data were eliminated, and ultimately the model was tested over 3,696 students. In multiple regression analyses, as the number of samples increased over 1,000, the goodness of fit results of the models formed also increased (Yenipinar, Koc, Canga & Kaya, 2019). In this sense, it was observed that the sample size of the study was suitable. The other assumption was determined by graphs, regarding that the relationship among the variables was linear and that the scores indicated a normal distribution. In the graphs formed, the histogram curve was not too sharp or flat and gathering of all the values around a line on the normal distribution curve may be deemed as the indicators of a distribution close to normal. The tendency of the points gathering around an axis in each scatter graph examined defines a linear relationship among the variables (Buyukozturk, 2019).

Moreover, the multicollinearity values of the study's independent variables were examined. For each variable, the tolerance value was higher than 0.2 (between 0.984 and 0.370 values), the VIF values were lower than 10 (between 2.433 and 1.016 values) and the CI values were lower than 30 (between 17.148 and 3.434 values), which may be deemed as an indicator of the lack of multicollinearity problem among the variables of the study (Buyukozturk, 2019). Moreover, the correlation values among the independent variables were also examined and high correlation values ($r < 0.90$) were not found among the variables as an indicator of the lack of multicollinearity problem (Cokluk, 2010).

After meeting the assumptions of the hierarchical regression analysis, it was searched at which level each variable group was being affected when undergraduate students' level of academic career interest, demographic characteristics and level of academic career awareness were included in the analysis in a specific order as being based upon logical bases, literature and correlation values among the variables (Can, 2019). The coefficient values obtained as a result of the hierarchical regression analysis was carried out in accordance with the problem formed and is seen in Table 3.

Table 3. Results of the hierarchical regression analysis

	Unstandardise		Std. coefficients	Beta	t	p	95% Confidence Interval for		R	R ²	Adj. R ²	Std. error
	B	Std. error					Lower	Upper				
1	Constant	3.291	0.028		118.959	0.000	3.237	3.346	0.160	0.026	0.025	0.917
	Gender	0.287	0.031	0.153	9.337	0.000	0.226	0.347				
	Grade level	0.084	0.031	0.045	2.750	0.006	0.024	0.144				
2	Constant	2.350	0.071		33.313	0.000	2.212	2.489	0.328	0.108	0.106	0.878
	Gender	0.242	0.030	0.129	8.158	0.000	0.184	0.300				
	Grade level	0.167	0.030	0.090	5.636	0.000	0.109	0.225				
	Sub-dim1	0.040	0.035	0.028	1.139	0.255	-0.029	0.108				
	Sub-dim2	-0.120	0.028	-0.091	-4.355	0.000	-0.175	-0.066				
	Sub-dim3	0.159	0.031	0.106	5.093	0.000	0.098	0.220				
	Sub-dim4	0.288	0.031	0.241	9.315	0.000	0.227	0.348				

(Sub-dim1: Becoming an instructor and working conditions; Sub-dim2: Postgraduate education and the purpose of education; Sub-dim3: The conditions of graduating from postgraduate education; Sub-dim4: The conditions for applying to postgraduate education.)

According to the findings seen in Table 3, it can be said that gender and grade level have a significant effect in a positive direction on the level of academic career interest. As the positive effect is being interpreted in favour of the selected reference group, it can be said that female students' level of academic career interest was higher compared to male students, and that 3rd-year students' level of academic career interest was higher compared to 4th-year students. Also, from among the sub-dimensions of the level of academic career awareness, it was determined that the levels of awareness regarding the conditions of becoming an instructor were not affecting the level of academic career interest. However, from among the sub-dimensions, while the levels of awareness regarding the conditions of graduation from postgraduate education had a significant effect in a negative direction on the level of academic career interest. It can be said that the levels of awareness regarding postgraduate education and regarding conditions for applying to postgraduate education had a positive significant effect on the level of academic career interest. Accordingly, it can be said that the levels of academic career interest of students, who knew the meaning of postgraduate education, who were aware of its purpose and who had an idea regarding the conditions of application, were higher. On the other hand, it was determined that the levels

of academic career interest of students, who had an idea regarding the conditions of graduating from postgraduate education, were lower.

According to the first model, demographic characteristics accounted for 2.6% of the variance level of academic career interest. Moreover, when the sub-dimensions of the level of academic career awareness were added to the model by taking into consideration the effect of the variables of gender and grade level, the variance was being accounted as 10.8%. According to the corrected R² values, it can be said that it would be able to account for 10.6% of the total variance if the model was generated from the universe instead of the sample (Field, 2013). When the results of the analysis of variance test are considered, it can be observed that all three models are statistically significant. For model 1, $F(2, 3606) = 47.207, p < 0.001$; and for model 2 $F(4, 3602) = 82.816, p < .001$.

4. Result and discussion

In this study, it was determined that the level of awareness (knowledge) of 3rd- and 4th-year students regarding academic career was low in general. Moreover, it can be said that their level of academic career interest was above average. Sahin, Zoraloglu and Sahin (2011) examined the educational objectives of the students in the study they had carried out regarding the undergraduate students' life purposes, educational objectives, expectations from university education and states of satisfaction. They determined that about 60% of the students were willing to have a postgraduate education and about 1% of them had no educational objective. According to the research carried out for determining the professional preferences of the undergraduate students, the will of youth in opting for the academic profession had a rate of 8% and had a priority of 3rd degree (Arslan, 2002). In a research carried out in Belgium, the ones who wanted to become academician following graduation were found at a rate of 32.2% (Abraham & De Casterle, 2010; Milisen, De Busser, Kayaert). In a study carried out in Turkey, the will of undergraduate students to become academician following graduation was at a rate of 13.7%. 39% of the students specified that they were not considering becoming an academician and 47.1% of them specified that they were indecisive (Yalcin & Demirekin, 2013). Having an academic career among the future plans of senior students studying at the Faculty of Medicine ranked second, with a rate of 30.1% (Gudüuk, Erol, Yagcibulut, Ugur, Ozvaris & Aslan, 2005). In another study carried out, the thoughts of the students for the period after their graduation from the Faculty of Agriculture had been examined, and while the idea of 'working at a public institution related to her/his profession' got the highest share with a rate of 20.38%, the ideas of 'working at private sector related to her/his profession' followed it by 19.11%, and "having academic career" followed it by 18.05% (Goktolga, Bal & Esengun, 2006). In the direction of the findings obtained from the descriptive analyses of the study, and of the literature, the effect of undergraduate students' level of academic career awareness on their level of academic career interest was searched.

As a result of the hierarchical regression analysis carried out in the study, it was determined that the variables of gender and grade level affected the undergraduate students' level of academic career interest at a rate of 2.6%. And when the variables of gender and grade level were taken into consideration, it was concluded that undergraduate students' level of academic career awareness accounted for their level of academic career interest at a rate of 10.8%. The results obtained reveal that if it is desired for the undergraduate students to have academic career interest, they are also required to have knowledge about academic career. Ilter (2020) specified in his study that the intentions of having a postgraduate education of students having high awareness regarding postgraduate education are higher. Accordingly, it was found that students with a high knowledge level regarding the postgraduate education programmes and regarding the purpose and importance of postgraduate education have higher intentions with regard to postgraduate education following undergraduate education. In the current study, it was concluded that students having more knowledge regarding postgraduate education, the purpose of postgraduate education and conditions of application to postgraduate education have a higher academic career interest. The two dimensions that interest the undergraduate students the most at the first stage of academic career are what the postgraduate education is, its importance and purpose and its conditions for application. In this sense, it is expected for the students, who could primarily obtain sufficient knowledge regarding these, to have a higher level of academic career interest. In the literature, it is emphasised that

the awareness regarding postgraduate education is positively affecting the undergraduate students' selection of academic career (Kozak & Dalkiranoglu, 2013; Neumann, 2005; Stewart & Knowles, 1999; Varhegyi & Jepsen, 2009). Accordingly, it can be said that by considering the undergraduate students' level of academic career awareness, their thoughts for tending to academic career, or for having postgraduate education following their undergraduate education, may be anticipated.

In this study, it was also determined that having knowledge regarding the conditions of becoming an instructor has no effect on undergraduate students' level of academic career interest. As the students perceive the academic career primarily as having postgraduate education, and as their priorities are not becoming an instructor, it can be said that this sub-dimension has no effect on the undergraduate students' level of academic career interest. It can be anticipated that students, who have focused on postgraduate education as a primary objective, would not concentrate on the conditions of becoming an instructor. In literature, the undergraduate students' causes of opting for postgraduate education are being expressed as ensuring personal and professional development, and as becoming an instructor (Aydemir & Cam, 2015; Calik & Gurer, 2019; Gomleksiz & Yildirim, 2013). But the studies carried out indicate that the students are aware of the fact that postgraduate education is the first step in the process of becoming an instructor (Gemme, 2005; Gemme & Gingras, 2012; Odabasi, Firat, Izmirli, Cankaya & Misirli, 2010). Moreover, it was concluded that the level of academic career interest is low in students with high awareness regarding the conditions of graduating from postgraduate education. It can be said that the students, who think that it is hard to graduate from postgraduate education, may have a low level of academic career interest.

According to other findings obtained from the research, it was determined that female students' level of academic career interest was higher compared to male students, and that 3rd-year students' level of academic career interest was higher compared to 4th-year students. In the study carried out by Yalcin and Demirelkin (2013), it had been concluded that master's degree and doctorate, and academic profession were being intended more by females compared to males. 39% of the females were aimed at master's degree, and 32.1% of them were aimed at doctorate, and 25.6% of the males were aimed at master's degree, and 23.3% of them were aimed at doctorate. Also, in terms of grade level, having differences among the undergraduate students' level of academic career interest, and this difference being in favour of 3rd-year students may arise from the fact that 4th-year students had clarified their career planning. If it is considered that students' academic career awareness is low in general, they might make their career planning beyond academic career. Moreover, this might have decreased the senior students' interest in academic career. The 3rd-year students might not have made clear career planning, and it can be said that their level of academic career interest as an alternative is higher for that reason. But this finding obtained may also be interpreted as senior students' level of academic career interest decreases. For that reason, it is required to carry out the required operations for increasing the undergraduate students' level of academic career awareness. Varhegyi and Jepsen (2009), in their study by which they had searched the factors affecting the undergraduate students' states of having postgraduate education, had specified that universities' performance of encouraging events and operations for career awareness and career attempt is directing the objectives of students regarding postgraduate education.

According to another result obtained from the study, undergraduate students had specified to a large extent that they had knowledge about academic career. Moreover, it was concluded that they had gained their current knowledge mainly from the internet and their instructors and friends. It is clear that the students, who want to obtain information regarding academic career at universities, may get information from their instructors if they wish. But when the studies carried out for determining especially the burnout levels of instructors officiating at the universities in Turkey, it is emphasised that one of the occupational groups covering intense interaction with people, and thus being exposed to burnout is instructorship (Dericiogullari, Konak, Aslan & Ozturk, 2007). Cil and Ugras (2015), in their study by which they had searched the expectations of undergraduate students from the instructors, had specified that students' expectations for having guidance from their instructors regarding academic career are low. These circumstances may prevent the instructors from providing consultancy to students at the expected level regarding academic career. Moreover, it is clear that information available on the internet, from where the students obtain information regarding academic career the most, are not accurate. This circumstance

is being observed when the forum sites, being on the top in information sharing and blogs written on the relevant subjects are examined (forum.memurlar.net; forum.donanimhaber.com; akademikpersonel.org, etc.). It is being observed that the individuals hope to get a response from ones having knowledge on the subject by writing on the forum sites the questions they are curious about, and generally, the questions being asked are giving an idea regarding the individuals' knowledge level on the subject. It can be said that responses provided for the questions on few numbers of blogs and forums opened on the relevant subject are not satisfactory and sufficient.

It was also determined that undergraduate students get information from their friends seeking to learn about academic career. But the question of whether the friends that they consulted had access to accurate information or not, and from where they had obtained such information arises. Eventually, the means by which the students gain information regarding academic career may not be competent in making them reach accurate and sufficient information. Moreover, the incorrect information obtained may negatively affect the students' level of academic career interest.

4.1. Suggestions

The following recommendations were developed in the direction of the findings obtained from the study.

As the contribution of postgraduate education is common in each field, it is deemed important to extend postgraduate education at each faculty and in each occupational group for the development of the country and for increasing the quality of labour. In this sense, it may be recommended to search the students' interest and awareness regarding academic career at different universities and to carry out operations which may increase the students' level of interest and awareness. At the universities, opening an elective course that prepares students for academic career and that is arranged in that direction is recommended. It may be recommended that the SSPC and Ministry of National Education, also operating for covering the instructor deficit in Turkey, to benefit from the data to be obtained from the studies to be made for determining the undergraduate students' level of interest and awareness regarding academic career. In this manner, relevant institutions should develop their policies for directing the undergraduate students to postgraduate education and academic career in light of the data to be obtained from the studies to be carried out. It can be considered that events that are carried out at the universities for increasing the undergraduate students' level of awareness and interest regarding academic career would assist in the increase of mutual interaction between students and instructors through forming a bridge. Moreover, it may be suggested for each university to organise seminars at specific intervals within the academic year for the specified purpose. At the seminars, the instructors of the universities should inform the students as well as the speakers from outside the universities. During the courses and seminars, students listening to their own instructors about the academic career processes may be a means for opening the way of academic career for them. It may be recommended to increase the current activities that are being practiced in Turkey that direct the students to academic career and that support the students tending to academic career to attach more importance to the publicity of such activities at the universities. In order to increase the preferability of academic career, it may be recommended that the government and universities improve the indicators, such as the quality of education being provided at higher education institutions and the satisfaction of instructors with their academic life, indicating the quality of academic life in the country rearranging the current statuses for this purpose.

4.2. Limitations

The use of self-reported measurement tools while collecting research data can be considered as a limitation in this study. The variables related to self-reporting measurement tools can only be explained within the scope of the measurement tools and the voluntary participation of the participants in the study (Ilter, 2020). Second, although the hierarchical regression analysis, which is one of the quantitative

methods, was used in this study, it may be necessary to be careful in making comments and causal orderings for the models created.

The experimental designs may also be needed to discuss the interpretations of the causal relationships between the level of academic career awareness and academic career interest of undergraduate students in future studies. In addition, it was determined that academic career awareness and identity characteristics variables are important predictors in determining academic career interest. This situation emphasises the importance of increasing the awareness of academic career of undergraduate students and determining their identity characteristics in increasing the academic career interest. The location of the selected sample of undergraduate students from Turkey is also seen as a limitation. Future research may be needed to expand the generalisability of the existing findings and to examine the research findings from other cultures. Considering the national and international literature, in general, correlational studies on academic career awareness and academic career interest are limited. In order to increase the generalisability of the findings, it may be suggested to carry out correlational studies on academic career awareness and academic career interest in different faculties, institutes and vocational schools. Due to its holistic perspective, the subject may need to be examined in-depth with qualitative research. Since this study is carried out on 3rd- and 4th-year university students who are thought to experience future anxiety intensely after graduation, it is expected to understand the social dynamics specific to this field. Therefore, the research can be repeated in the samples with students from different grade levels in universities. Finally, in the process of developing positive attitudes of undergraduate students towards academic careers in universities, practices and studies can be carried out to further promote graduate programmes and academic career conditions in order to identify their academic career awareness.

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