

ORIGINAL ARTICLE

Examination of Theses on Anatomy in the Field of Basic Medical Sciences (2016-2020)

Temel Tıp Bilimleri Alanında Yapılan Anatomi Konulu Tezlerin İncelenmesi (2016-2020)

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How to cite ?

Kundakçı YE, Ünver Doğan N. Examination of theses on anatomy in the field of basic medical sciences (2016-2020). Genel Tıp Derg. 2022; 32(2): 75-82.

ABSTRACT

Objective: The aim of this study was to reveal descriptive data about postgraduate theses on anatomy and to determine their general trends.

Material and Methods: The full text of 390 theses published in the Anatomy Department of Basic Medical Sciences in the archive of the National Thesis Center between 2016-2020 were included in the study. The theses were analysed recording their name, type, year of publication, systematic and topographic anatomy class, study design, keywords, receiving budget support, academic title of the advisor, gender of the author, undergraduate education, and universities where the theses were published. Frequency and percentage values were used for descriptive statistics and categorical variables.

Results: Of the theses, 237 (60.8%) were written by women, 242 (62.1%) were master's theses, 254 (65.1%) thesis advisor was professor, 113 (29%) received budget support, and 169 (43.3%) used radiological methods. The undergraduate educations of the authors were ranked as physiotherapy and rehabilitation (n=167, 42.8%), biology (n=64, 16.4%), nursing (n=58, 14.9%) and medicine (n=57, 14.6%). Of the thesis, 126 (32.3%) were from the head region and 174 (44.9%) were from the movement system. The most used keywords were as follows: computed tomography (n=58), morphometry (n=41), anthropometry (n=30), anatomy (n=27) and magnetic resonance imaging (n=25).

Conclusion: In this study, bibliometric data related to theses on anatomy were examined and a wide range of information was presented to researchers in the field of anatomy. In recent years, it has been seen that female researchers and physiotherapists have come to the fore in anatomy postgraduate education. It can be said that especially studies involving the movement and nervous system or the head, lower and upper extremities attract the attention of researchers. In addition, radiological, experimental animal and anthropometric methods are frequently used in study designs. It is expected that the result of the study will shed light on anatomy graduate students, clinicians and researchers who carry out or will carry out various academic studies.

Key words: Anatomy, bibliometric analysis, theses

ÖZ

Amaç: Bu çalışmada anatomi konulu lisansüstü tezlerle ilişkin tanımlayıcı verilerin ortaya konması ve genel eğilimlerinin belirlenmesi amaçlanmıştır.

Gereç ve Yöntem: Ulusal Tez Merkezi arşivinde Temel Tıp Bilimleri Anatomi Anabilim Dalı'nda 2016-2020 yılları arasında yayınlanan 390 tezin tam metni çalışmaya dahil edilmiştir. Tezler; adı, türü, yayın yılı, sistematik ve topografik anatomi sınıfı, çalışma tasarımı, anahtar kelimeler, bütçe desteği alma, danışmanın akademik unvanı, yazarın cinsiyeti, lisans eğitimi ve tezlerin yayınlandığı üniversiteler kaydedilerek analiz edilmiştir. Tanımlayıcı istatistikler ve kategorik değişkenler için frekans ve yüzde değerleri verilmiştir.

Bulgular: Tezlerden 237'sinin (%60,8) kadınlar tarafından yazıldığı, 242'sinin (%62,1) yüksek lisans tezi olduğu, 254'ünün (%65,1) danışmanın profesör unvanına sahip olduğu, 113'ünün (%29) bütçe desteği aldığı ve 169'unun (%43,3) radyolojik yöntemleri kullandığı görülmüştür. Tez yazarlarının lisans eğitimleri, fizyoterapi ve rehabilitasyon (n=167, 42,8%), biyoloji (n=64, %16,4), hemşirelik (n=58, %14,9) ve tıp (n=57, %14,6) olarak sıralanmıştır. Tezlerden 126'sı (%32,3) baş bölgesini, 174'ü (%44,9) ise hareket sistemini konu almıştır. En fazla kullanılan anahtar kelimeler; bilgisayarlı tomografi (n=58), morfolometri (n=41), antropometri (n=30), anatomi (n=27) ve manyetik rezonans görüntüleme (n=25) olarak tespit edilmiştir.

Sonuç: Bu çalışmada, anatomi konulu tezlerle ilgili bibliyometrik veriler incelenerek, yapılan çalışmalar ilgili anatomi alanındaki araştırmacılara geniş bir bilgi sunuldu. Son yıllarda kadın araştırmacıların ve fizyoterapistlerin anatomi lisansüstü eğitiminde ön plana çıktıkları görülmektedir. Özellikle hareket ve sinir sistemini veya baş, alt ve üst ekstremité bölgelerini içeren çalışmaların, araştırmacıların ilgisini çektiği söylenebilir. Ayrıca çalışma tasarımlarında radyolojik, deneysel hayvan ve antropometrik yöntemler sık kullanılmaktadır. Çalışma sonucunun anatomi lisansüstü öğrencilerine, klinisyenlere ve akademik çalışmalarını yürüten/yürütecek araştırmacılara ışık tutması beklenmektedir.

Anahtar Kelimeler: Anatomi, bibliyometrik analiz, tezler

Introduction

Universities are higher education institutions that fulfill the functions of states such as meeting education, research, and human resource needs. In recent years, due to the transformation process in higher education, the field of higher education has been constantly expanding, and the number of state and foundation universities has been increasing (1). The increasing

number and diversity of students at universities bring along the need for academic staff. The role of graduate education is vital in providing qualified academic staff in various fields. Graduate education, scientific research, and applications are carried out at the institute units of universities. These units award master's and doctorate degrees to researchers. In addition, graduate theses

published at institutes make significant contributions to the research output of universities (1, 2). With the opening of new institutes, departments, and graduate programs; There has been an increase in the number of applicants to graduate education in order to participate in academic life and/or improve themselves. In Turkey, approximately 450,000 students are enrolled in graduate programs of institutes in the 2020-2021 academic year (3). Being significant outputs in terms of research in graduate education, theses are written to obtain an academic degree or qualification. A thesis is a written document that is a direct result of personal research. Thus, the length, depth, and research quality of it vary according to the level of academic degree one wishes to achieve (4). The preparation process of a thesis provides various benefits to the researcher in terms of developing lifelong learning and research skills (5).

There are bibliometric studies conducted in different fields for theses archived in the National Thesis Center of the Council of Higher Education (CoHE) (6, 7). The bibliometric analysis consists of the application of statistical methods to identify qualitative and quantitative changes related to a particular scientific research topic, to profile publications on related topics, and to reveal trends within a discipline (8). The development and efficiency of a scientific field or a journal in the literature can be evaluated by bibliometric studies (9). Researchers looking for information on a special topic can derive benefit from analyzes that measure scientific trends and the impact of the literature in their research area (10). By examining the bibliometric aspects of theses, the status of graduate education programs in certain fields can be determined (6, 11). The increasing use of bibliometric methods may also be efficient in evaluating the quantity and quality of scientific research outputs in the field of anatomy (9, 12-15).

Studying the morphological and morphometric features of the human body, anatomy is a fundamental discipline in the medical curriculum (12). Due to the increase in the number of medical faculties and the increasing need for academicians, graduate education in the department of anatomy has become more important recently (16). Anatomy and histology-embryology departments, which were integrated under the roof of the morphology department in Turkey, began to be separated from each other as anatomy and histology-embryology disciplines in 1988 (16). According to the latest data of CoHE, there are a total of 107 Anatomy Departments of Basic Medical Sciences; 33 of which are in foundation universities and 74 in state universities (3). Along with the development of radiological imaging and the increase in studies in the field of neuroscience, the structure and functions of the human body have begun to be more fascinating and the interest in anatomy has increased. Revealing the differences of anatomical structures radiologically, defining variations and anomalies provided benefits to clinicians in differential diagnosis and contributed to

the development of new surgical methods (12). Being closely related to surgery, clinical and other basic medical sciences, anatomy has an eminent place in the development of professional competencies in other health sciences graduates besides medical graduates (17). A good understanding of the human body, having sufficient information about its structure and functions, and determining the most harmless and most beneficial interventions for the patient constitute the basic requirements in health disciplines. Therefore, the information provided by research in the field of anatomy is crucial (18).

In recent years, the number of studies in the field of anatomy has been increasing rapidly in Turkey and it has been observed that the published publications are of higher quality (19). Conducting descriptive studies on research in the field of anatomy contributes to the evaluation of anatomy's / anatomists' research topics and development processes (12, 19). For this reason, it is thought that examining the theses published in the Anatomy Department of Basic Medical Sciences can provide noteworthy information, especially about graduate anatomy education. However, no study has been found in the literature in which theses on anatomy have been analyzed by bibliometric methods. In this descriptive study, it is aimed to reveal the data related to the theses conducted in the Anatomy Department of Basic Medical Sciences and to observe common general tendencies.

Material and Method

Ethics committee approval numbered 2021/372 was obtained from Selçuk University Local Ethics Committee for this study. In this descriptive study, the single scanning method used in similar studies in the literature was used, and the document analysis technique was also employed (7). The data of the study were obtained from the theses published by the Anatomy Department of Basic Medical Sciences between the years of 2016 and 2020 at CoHE National Thesis Center. Inclusion criteria for the study were determined as being able to reach the full text of the thesis, covering between the years of 2016 and 2020, and being published in the field of Basic Medical Sciences. A total of 516 theses, which were reached by choosing anatomy as the subject in the thesis search section, were examined in detail. 120 theses published outside the field of Basic Medical Sciences and 6 theses whose full texts could not be reached were excluded from the study. The full texts of 390 theses that met the inclusion criteria were analyzed recording their name, type, year of publication, systematic and topographic anatomy class, study design, keywords, receiving budget support, academic title of the advisor, gender of the author, undergraduate education, and universities where the theses were published. For some descriptive parameters that could not be reached from the content of the thesis, CoHE academic database and institutional sites of the universities were applied.

After accessing the theses in the database, the details of the theses were transferred to Excel and then analyzed in SPSS 25.0 (SPSS Inc., Chicago, IL, USA). Frequency and percentage values were given for descriptive statistics and categorical variables.

Results

In the study, a total of 390 theses published between 2016-2020 and categorized in the field of anatomy were examined. It was observed that 237 (60.8%) of the theses were written by women, 242 (62.1%) were master's theses, and 254 (65.1%) had an advisor with the title of professor. It was identified that 113 (29%) of the theses were supported by research units of universities or The Scientific and Technological Research Council of Turkey (TÜBİTAK), and the experimental animal studies (n=53, 46.9%) had the highest number among supported studies. The undergraduate education of the thesis authors were listed as physiotherapy and rehabilitation (PTR) (n=167, 42.8%), biology (n=64, 16.4%), nursing (n=58, 14.9%) and medicine (n=57, 14.6%). The highest number of theses were published in 2019 (n=122, 31.3%) (Table 1).

Table 1. Some information about the publication years, authors and advisors of the theses.

Parameters	Number of theses	Percent (%)
Year		
2016	66	16.9
2017	58	14.9
2018	71	18.2
2019	122	31.3
2020	73	18.7
Degree		
Master's Degree	242	62.1
Doctorate Degree	126	32.3
Medical Residents	22	5.5
Project support		
Yes	113	29.0
No	277	71.0
Academic title of the advisor		
Professor	254	65.1
Associate Professor	65	16.7
Assistant Professor	71	18.2
Gender of the thesis authors		
Female	237	60.8
Male	153	39.2
Undergraduate education of the thesis authors		
Physiotherapy and Rehabilitation	167	42.8
Biology	64	16.4

Nursing	58	14.9
Medicine	57	14.6
Veterinary Medicine	24	6.2
Physical Education and Sports	4	1.0
Other	16	4.1

In the evaluation of the methods used in the design of the thesis studies, it was determined that radiological methods were used in 169 (43.3%) thesis studies. Radiological studies were followed by experimental animal studies (n=70, 18%) and anthropometric studies (46, 11.8%), respectively. It was also observed that radiological studies were published most frequently in 2019 (n=55, 32.5%) and 2020 (n=41, 24.3%) (Figure 1).

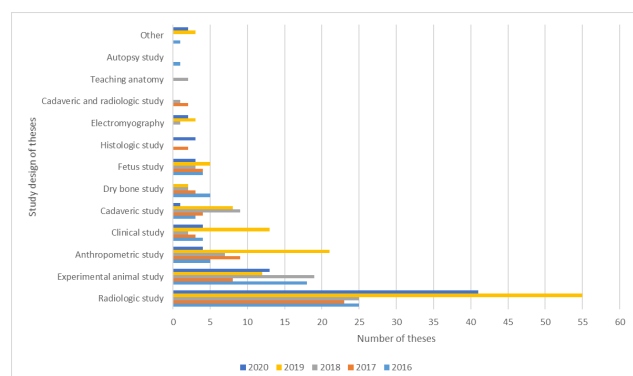


Figure 1. Distribution of the study design of the theses by years.

When the theses published in the Anatomy Department of Basic Medical Sciences were evaluated according to universities, it was seen that Erciyes University (n=28), Selcuk University (n=25) and Ege University (n=20) were at the top three. The highest number of doctoral theses were published at Hacettepe University (n=11), and the highest number of master's theses were published at Erciyes University (n=18) and Selcuk University (n=18) (Table 2).

When the anatomical regions studied in the theses were divided into subcategories depending on topographic anatomy, it was determined that the head topography was examined in 126 (32.3%) thesis studies. Then, there were lower extremity (n=65, 16.7%) and upper extremity studies (n=47, 12.1%), respectively (Figure 2A). When the structures examined in the thesis studies were systematically divided into categories, it was determined that there were studies on the movement system with a maximum of 174 (44.9%) studies, followed by the nervous system with 79 (20.3%) studies, and the circulatory system with 33 (8.5%) studies (Figure 2B).

The distribution of thesis topics categorized in terms of systematic anatomy according to undergraduate education is presented in Figure 3A. It was found out that all department graduates published more theses on movement and nervous system than other systems,

Table 2. The number of theses on anatomy in the field of basic medical sciences of universities.

No.	University	Master's Degree	Doctorate Degree	Medical Residents	Total
		N	N	N	N (%)
1.	Erciyes Uni.	18	10	-	28 (7.18)
2.	Selcuk Uni.	18	6	1	25 (6.41)
3.	Ege Uni.	11	7	2	20 (5.13)
4.	Karadeniz Technical Uni.	15	4	-	19 (4.87)
5.	Necmettin Erbakan Uni.	15	3	1	19 (4.87)
6.	İstanbul Medipol Uni.	16	2	-	18 (4.62)
7.	Akdeniz Uni.	10	5	2	17 (4.36)
8.	İnönü Uni.	7	9	-	16 (4.10)
9.	Eskisehir Osmangazi Uni.	5	8	2	15 (3.85)
10.	Gaziantep Uni.	12	2	-	14 (3.59)
11.	Kocaeli Uni.	9	5	-	14 (3.59)
12.	Hacettepe Uni.	2	11	-	13 (3.33)
13.	Cukurova Uni.	3	6	2	11 (2.82)
14.	Trakya Uni.	7	3	1	11 (2.82)
15.	Tokat Gaziosmanpaşa Uni.	11	-	-	11 (2.82)
16.	Ondokuz Mayıs Uni.	9	1	-	10 (2.57)
17.	Karabuk Uni.	4	4	1	9 (2.31)
18.	Suleyman Demirel Uni.	4	5	-	9 (2.31)
19.	Ankara Uni.	-	6	2	8 (2.05)
20.	İstanbul Uni.-Cerrahpaşa	1	3	3	7 (1.79)
21.	Afyonkarahisar Health Sciences Uni.	5	2	-	7 (1.79)
22.	Adnan Menderes Uni.	6	-	1	7 (1.79)
23.	Bursa Uludağ Uni.	4	2	1	7 (1.79)
24.	Marmara Uni.	5	1	-	6 (1.54)
25.	Mersin Uni.	3	3	-	6 (1.54)
26.	Fırat Üniversitesi	3	3	-	6 (1.54)
27.	Balıkesir Uni.	5	1	-	6 (1.54)
28.	Pamukkale Uni.	4	-	1	5 (1.28)
29.	Manisa Celal Bayar Uni.	5	-	-	5 (1.28)
30.	Başkent Uni.	4	-	-	4 (1.03)
31.	İstanbul Uni.	3	1	-	4 (1.03)
32.	Yüzüncü Yıl Uni.	4	-	-	4 (1.03)
33.	Aydın Adnan Menderes Uni.	3	1	-	4 (1.03)
34.	Gazi Uni.	-	6	-	3 (0.77)
35.	Dokuz Eylül Uni.	-	2	1	3 (0.77)
36.	Sakarya Uni.	3	-	-	3 (0.77)
37.	Dicle Uni.	-	3	-	3 (0.77)
38.	Sivas Cumhuriyet Uni.	-	2	-	2 (0.51)
39.	Zonguldak Bülent Ecevit Uni.	2	-	-	2 (0.51)
40.	Kahramanmaraş Sutcu Imam Uni.	2	-	-	2 (0.51)
41.	Cumhuriyet Uni.	2	-	-	2 (0.51)
42.	Recep Tayyip Erdoğan Uni.	-	-	1	1 (0.26)
43.	Düzce Uni.	1	-	-	1 (0.26)
44.	Bolu Abant İzzet Baysal Uni.	-	1	-	1 (0.26)
45.	Kafkas Uni.	1	-	-	1 (0.26)
46.	Atatürk Uni.	-	1	-	1 (0.26)

Uni: University, N: Number of theses, %: Percent.

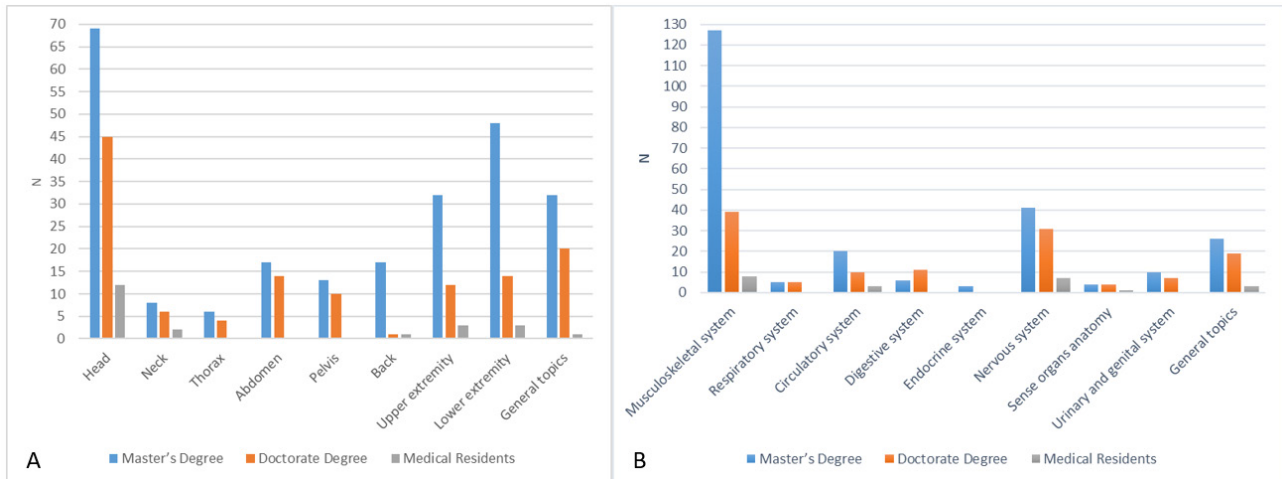


Figure 2. Distribution of the topics researched in the theses. **A.** Topographic anatomy categories **B.** Systemic anatomy categories. N: Number of theses.

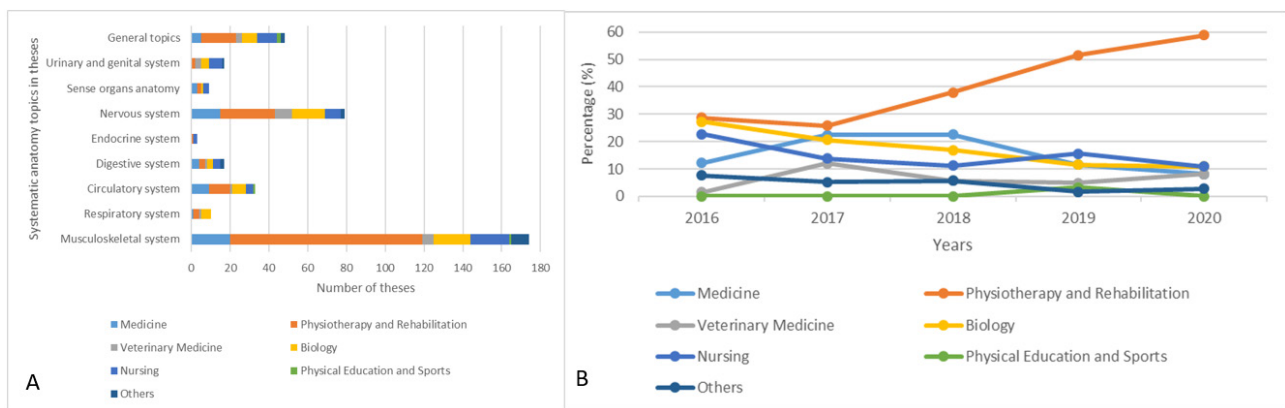


Figure 3. **A.** The distribution of thesis topics categorized in terms of systematic anatomy according to undergraduate education **B.** The year-based distribution of theses according to undergraduate education.

and only PTR and nursing undergraduate graduates published theses on endocrine system (Figure 3A). Considering the year-based distribution of theses according to undergraduate education, researchers who graduated from PTR undergraduate department published more theses between the years of 2016 and 2020 compared to other undergraduate departments. It was observed that researchers who graduated from PTR undergraduate programs published 63 (51.6%) and 43 (58.9%) theses in 2019 and 2020, respectively (Figure 3B).

The 25 most frequently used keywords in theses are listed in Table 3. Keywords in anatomical terminology were evaluated by combining them with their Turkish synonyms. In addition, since the keywords could not be reached in two theses, they were not included in the analyzes made in this section. Frequently used keywords provide information about the topics or contents of the theses. Among the keywords, computed tomography (n=58), morphometry (n=41),

anthropometry (n=30), anatomy (n=27) and magnetic resonance imaging (n=25) were at the top five.

Table 3. The most common keywords in anatomy theses.

No.	Keywords	Frequency	Percent (%)
1.	Computed Tomography	58	3,3
2.	Morphometry	41	2,4
3.	Anthropometry	30	1,7
4.	Anatomy	27	1,6
5.	Magnetic Resonance Imaging	25	1,4
6.	Variation	22	1,3
7.	Stereology	17	1,0
8.	Mouse	16	0,9
9.	Fetus	14	0,8
10.	Morphology	12	0,7

11.	Cavalieri Method	10	0,6
12.	Volume	10	0,6
13.	Parkinson's Disease	9	0,5
14.	Gender	8	0,5
15.	Hippocampus	8	0,5
16.	Three-Dimensional Imaging	8	0,5
17.	Foot	6	0,3
18.	Kidney	6	0,3
19.	Corpus Callosum	6	0,3
20.	Ehrlich Ascites Tumor	6	0,3
21.	Hand	6	0,3
22.	Sacrum	6	0,3
23.	Rat	6	0,3
24.	Scoliosis	6	0,3
25.	Age	6	0,3
26.	Other	1369	79

Discussion

Theses, which are documents prepared to share the results of research, have been written for centuries in varying formats. The structure of a scientific thesis is similar for most universities and institutions, as most universities in the twentieth century have adopted a standard structure known as introduction, methods, results, and discussion (4). In recent years, important steps have been taken in Turkey in terms of bibliographic control of academic theses, transferring them to digital media and providing access, and thus, studies on the bibliometric features of theses have started to take place in the literature (2, 6, 7, 11). The use of bibliometric studies in the field of anatomy provides significant information about existing publications (18). In the present study, it is aimed to detect the trends of graduate anatomy theses in recent years by examining theses conducted in the Department of Anatomy, one of the Basic Medical Sciences.

The main findings obtained in this study showed that especially PTR undergraduate graduates and female researchers came to the fore in graduate theses published at the Anatomy Department of Basic Medical Sciences. It is known that physiotherapists' interest in graduate education in the field of anatomy is not new. In a previous study, it was revealed that candidates who graduated from nursing and PTR undergraduate departments were in the first place in applying to anatomy graduate programs (16). While applying to graduate programs, some conditions announced by the institutes must be fulfilled by the candidates. One of these conditions is the graduation criteria in the fields related to the graduate and doctoral programs of the departments. It has been observed that especially in recent years, PTR undergraduate graduates have been given priority in the graduate application criteria of the Department of Anatomy of the Institute of Health Sciences and that only

physiotherapists can apply to some departments (20). It is thought that this situation may also have an effect on the findings of the present study. On the other hand, it is thought that the importance given to anatomy during and after PTR undergraduate education in terms of providing professional competencies and the increasing number of physiotherapists have an impact on our current findings. As a matter of fact, great value is given to anatomy and neuroanatomy courses in the curriculum of PTR departments in Turkey (21). In addition, anatomy has an important role in the content of some elective and vocational courses such as anatomical palpation, biomechanics, and kinesiology. Comprehensive knowledge of human anatomy is one of the main elements of physical therapy practice and is a requirement for physiotherapists to be competent during patient evaluations and treatment practices (22). It should also be considered that basically, most of the information learned in the anatomy class during undergraduate education (and in fact, that students can remember at the end of that lesson) cannot be kept in mind throughout undergraduate education, and even most of the detailed information that is not used after graduation can be forgotten (23). On the other hand, graduate education in anatomy can be seen as a promising opportunity for physiotherapists who want to improve their clinical competence and participate in scientific research and although the number of schools training physiotherapists is quite high, the number of schools offering graduate education in this field is quite low in Turkey (24). Employment and work opportunities may have an effect on the choice of graduate education in anatomy (16). It is known that newly graduated physiotherapists have been facing serious employment problems since 2015 (25). Therefore, in our current study, it is believed that physiotherapists are ahead of other health sciences departments in choosing graduate education in anatomy, depending on factors such as employment problems, prerequisites determined by institutes, lifelong learning, and academic development. Besides, the reason behind the fact that the theses published in recent years more frequently cover the subjects of movement and nervous systems, as well as the head, lower and upper extremities may be that a significant part of the researchers are physiotherapists.

No significant differences were found in previous years in terms of gender distribution in applications to anatomy graduate programs (16). However, in our study, it is observed that women have published more theses than men in recent years. Also, the presence of women in academia in Turkey has been increasing proportionally and they appear to be more oriented towards graduate education (26). In parallel with the results of this study, women's interest in graduate education in the field of anatomy is also clearly seen.

Additionally, it is stated that medical faculty students do not show sufficient interest in institute programs compared to other undergraduate graduates (27). It has been reported that most of the research assistants

who started their residency training did not complete their residency training and generally tended to clinical branches after leaving the anatomy department (16). It can be thought that these current results have an effect on the fact that in our study the number of theses in medical specialization programs was less than in master's and doctoral programs.

The categories in which publications in the field of anatomy are frequent in Turkey are surgical anatomy, morphology, neuroscience, clinical neurology, radiology, and nuclear medicine (12, 19). The universities that publish the most are Ankara University, Hacettepe University, Istanbul University, Ege University, and Akdeniz University (12, 19). In addition, it has been stated that the majority of the original articles published in the *Anatomy Journal of the Turkish Society of Anatomy and Clinical Anatomy* between 2007 and 2018 included experimental animal (29.9%), radiological (22.7%), and clinical (13.4%) studies (9). In our current findings, graduate theses, which are likely to turn into academic publications, were examined by looking at the primary materials and keywords used in obtaining the research data. It was seen that especially radiological, experimental animal, anthropometric and clinical studies were at the forefront in the design of graduate theses; and related to this, it was seen that the keywords mostly included computerized tomography, morphometry, anthropometry, anatomy, variation, magnetic resonance imaging, stereology, rat, etc. It can be said that the findings have emerged mainly due to the increasing morphometric studies thanks to the radiological developments in recent years. In addition, being of great importance in the diagnosis, follow-up and treatment planning of the diseases, computed tomography and magnetic resonance imaging are frequently used methods in the clinic. VolBrain, MRICloud, and ImageJ programs provide researchers with reliable information and save time. It has been reported that they have been widely used in clinical neuromorphometric studies in recent years (28). Regarding cadaver studies; it is guessed that it is not preferred by researchers because of the difficulties in cadaver supply (29) and the demand for more labor and financial resources than other research methods (30). In other respects, financial support is of great importance for scientific studies, and with the increase in university budgets, more qualified publications in the field of anatomy have begun to be published (19). In our study, it was observed that approximately one out of every three theses received financial support, and an important part of these theses were experimental animal studies. It is thought that the researchers' interest in these studies may be related to the increased budgetary support of universities.

Limitations of the Study

This study can provide fast, objective and important information about the trends of theses in the Anatomy Department of Basic Medical Sciences, which is increasing dynamically, with researchers interested in the subject. Nevertheless, it has some limitations. While

the information of the theses that are open to access is easily accessible during the research process, it has been assumed that the theses that received support within the scope of scientific research projects stated this situation in the thesis text. For this reason, there may be studies that did not state this in the full text of the thesis, although they received budget support. In addition, a detailed classification was not made while examining the systematic and topographic anatomy categories. For example, upper extremity studies were not analyzed separately as arm, forearm and hand. On the other hand, in some theses where the CVs of the authors were not specified, the information about the researcher was obtained from the CoHE academic search and the institutional sites of the universities. Finally, we should emphasize that since the theses on anatomy can be published in many different disciplines, the present results do not cover the general anatomy researches and only include the results about the theses published in the Anatomy Department of Basic Medical Sciences.

Conclusion

It was found that researchers from the physiotherapist profession group published a significant portion of graduate theses, and women published more theses. The most studied areas were the movement and nervous systems systematically, and the head, lower and upper extremities topographically. It was identified that a significant part of the theses received budget support. It was observed that radiological, experimental animal and anthropometric methods were frequently used in theses. In this study, which includes the bibliometric analysis of the thesis studies published by anatomy graduate students in Turkey between the years of 2016 and 2020, important data related to the theses were revealed, and a wide range of information was presented to the leading academicians and young researchers in the field of anatomy. Regarding the field of anatomy, by adding the current findings of the theses evaluated in this study to the data of the bibliometric studies in the literature, an idea can be obtained about the categories of future research and publications. It is expected that the result of the study will shed light on anatomy graduate students, clinicians and researchers who carry out or will carry out various academic studies.

Financial Disclosure: No financial support was received by the authors for this study.

Conflict of Interest: There is no conflict of interest stated by the authors in this study.

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