

Bibliometric Analysis of the Turkish Doctoral Dissertations: A Case Study of Economy, Law, Psychology, Political Science, and International Relations Disciplines

Türkiye'deki Doktora Tezlerinin Bibliyometrik Değerlendirilmesi: Ekonomi, Hukuk, Psikoloji, Siyaset Bilimi ve Uluslararası İlişkiler Disiplinlerine İlişkin Bir Durum Çalışması

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Özet

Bu çalışmada ekonomi, hukuk, psikoloji, siyaset bilimi ve uluslararası ilişkiler disiplinlerinde tamamlanan doktora tezlerinin; alanyazına ve uygulamaya katkılarının, bu tezlerden üretilen makaleler ve bu makalelere yapılan atıflarla bibliyometri analizi kullanılarak değerlendirilmesi amaçlanmıştır. Söz konusu disiplinler Yükseköğretim Kurulu (YÖK) Başkanlığı tarafından insan kaynağının yetişmesinde öncelikli disiplin alanları olarak belirlediği için mevcut çalışmaya dâhil edilmiştir. 2018 yılında söz konusu disiplinlerde tamamlanmış 88 teze YÖK Ulusal Tez Merkezi veri tabanından doküman analiziyle ulaşılmıştır. İlgili tezlerden üretilen bilimsel çalışmalar öncelikli olarak tez sahiplerinin web sayfalarında, YÖK Akademik, Web of Science, ScienceDirect, Education Resources Information Center, ResearchGate ve Google Scholar'da araştırılmıştır. Bu çalışmada 88 tezden 61'ine ilişkin herhangi bir veri ulaşılmıştır. 17 tezden yapılan makaleler ve bu makalelere yapılan atıflar Google Scholar, ResearchGate, SCOPUS, SOBIAD ve Web of Science veri tabanlarında araştırılmış olup bibliyometri ile analiz edilmiştir. Atıf yapılan tez sayısının sadece 9 olduğu anlaşılmıştır. Psikoloji tezlerinde birincil kaynak veri kullanılırken diğer tezlerde çoğunlukla ikincil kaynak veri kullanılmıştır. Bu sonuçlar, doktora tezlerinin alanyazına ve uygulamaya katkılarının oldukça sınırlı olduğunu göstermektedir. Bu disiplinlerde tamamlanmış doktora tezlerinin katkılarının çalışılmasıyla araştırmacının dikkati, sosyal bilimler alanında diğer disiplinlerde gerçekleştirilmiş doktora tezlerinin katkılarında çekilmiştir. Doktora tezlerinin alanyazına ve uygulamaya katkılarını artırmak için araştırmacılara ve politika yapıcılara, araştırmacıların araştırma becerilerinin geliştirilmesi ve özellikle Türkiye bağlamında öncelikli alanların çalışılması gibi çeşitli önerilerde bulunulmuştur.

Anahtar sözcükler: Atıf analizi, bibliyometri analizi, doktora tez yayını, öncelikli alanlar.

Abstract

This study aims to analyze the contributions of the doctoral dissertations completed in the disciplines of economy, law, psychology, political science, and international relations to the literature and practice through the citations to the articles extracted from these dissertations using bibliometric analysis. These disciplines were included in the present study as they were determined as the priority ones in the training of the human resources by the Turkish Council of Higher Education (CoHE). 88 dissertations were reached in the National Thesis Center database of CoHE in 2018 and subjected to document analysis. The published scientific studies based on these dissertations were primarily searched within authors' websites, CoHE Academic, Web of Science, ScienceDirect, Education Resources Information Center, ResearchGate and Google Scholar. No data could be found for 61 dissertations out of 88 ones. The citations to the articles derived from 17 dissertations, which were searched in Google Scholar, ResearchGate, SCOPUS, SOBIAD and Web of Science databases were bibliometrically analyzed. Only 9 dissertations were cited. While the primary data were used in the dissertations completed in the discipline of psychology, the secondary data were mostly used in the other dissertations. These results indicate that the contribution of the dissertations to the literature and practice is quite limited. Thus, the researchers turned their attention to the contribution of the dissertations produced in other disciplines in the field of social sciences. Several suggestions (e.g. developing researchers' research skills, studying priority research topics in the Turkish context) were also made to increase the contribution of the dissertations to the literature and practice.

Keywords: Bibliometric analysis, citation analysis, doctoral dissertation publication, priority disciplines.

Great transformations profoundly affecting individuals' lives, cultures and communal living (e.g. digitalization and globalization) have come true in the

knowledge-based society (OECD, 2019). On the one hand, these transformations provide societies with opportunities. For instance, communication technology and digitalization enabled

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people to access to and disseminate knowledge easily. On the other hand, great transformations have caused a series of challenges to occur, such as environmental (e.g., climate change and depletion of natural resources), economic (e.g., unpredictable innovations in science and technology, interdependent financial systems) and social challenges (e.g., population increase, immigration, urbanization, conflict and social inequality) (OECD, 2018). Therefore, modern societies which benefit from the above-mentioned great transformation are obliged to deal with a series of great challenges that mainly stem from the very same transformation.

Doctoral programs have a significant role in training the human resources the modern societies need to overcome the environmental, economic and social challenges. Through its main components including courses, research and dissertations, it aims to train human resource with regard to knowledge, skill and competence dimensions. Writing a dissertation is regarded as the highest step in the academic genre (Swales & Feak, 2000). The dissertation is a noteworthy and objective output of a doctoral program and is considered as one of the basic academic publications. It plays a significant role in generating empirical data because its holders are supposed to bring innovation to science or develop a new scientific method or apply a known method to a new field (Turkish Graduate Training Regulation, 2016). According to the European Qualifications Framework (EQF, 2015) and the Turkish Qualifications Framework (VQA, 2015), new ideas and processes in the literature and practice are envisaged to be developed in a doctoral dissertation. It indicates its owners' knowledge in their fields, their skills to come up with an original solution to their research problems and to conduct research independently (Sadlak, 2004). They are expected to bring an innovative and creative solution to their research problems, reveal their intellectual knowledge using their interface knowledge, and show their competency to develop new ideas or processes in their fields, use their native or foreign language competently and employ their higher cognitive skills such as analysis, synthesis and evaluation in their dissertations.

Doctoral dissertations are envisioned to enable decision makers and researchers to make decisions based on empirical data to overcome the geographical, environmental, economic, and social matters Turkey has encountered. In this study, the outputs of the Turkish doctoral dissertations completed in the disciplines of economy, law, psychology, political science, and international relations were measured and assessed to understand the extent to which they make contributions to the literature and practice. The extent researchers and decision makers consider them through the outputs of the scientific publications produced from the dissertations was also investigated.

Aim of the Study

Universities progressively value publications as a criterion to achieve academic promotion and competitive research funding in addition to measuring personal and institutional performance (Kamler, 2008). In this regard, doctoral dissertations are the most significant outcome of doctoral education, and therefore, they should contribute to the literature and practice. In this study, the contributions of the dissertations to the literature and practice were evaluated considering scientific impact value, which is one of the indicators to determine the quality of research output. It is generally measured with the number of scientific publications and citation counts to and from these publications (Aslan, Açıkgöz, & Günay, 2021). The number of citations for the publications extracted from dissertations can be used as an indicator to measure their scientific impact (Lariviere, 2012). Scientific impact of the dissertations certifies their authors' contribution to knowledge production.

The performance of the Turkish higher education institutions regarding the field of social sciences is quite low compared with those of the OECD member countries. 5191 social sciences articles from Turkey have been published in the SCOPUS database. The citation per Turkish article is 5.82 and H-index value is 56. 111,917 social sciences articles from the USA have been published. The citation per American article is 18.50 and H-index value is 375. On the other hand, 18,185 articles have been published in the field of engineering in Turkey, and the citation per the article is 11.31 and H-index is 155. In this field in the USA, 393,078 articles have been published, and the citation per American article is 11.93 and H-index is 517 (Scimago Journal Rank, 2021). These values indicate that the Turkish researchers have a particular difficulty in publishing social science studies and getting citations to these studies from other researchers in the SCOPUS database, which is the most extensive abstract and citation database in peer-reviewed literature. For that reason, this study focused on the contribution of the dissertations to the literature and practice concerning the citations to and from the articles produced from the dissertations in the abovementioned disciplines.

Our review of the literature revealed that other researchers examined the dissertations in the field of social sciences either with a specific focus (Çelik, 2016; Yiğit, 2018) or included all the dissertations in their research (Sevinç, 2013; Şahin, Karaaslanoğlu, & Akın, 2019). Çelik (2016) examined, through content analysis, 100 dissertations conducted on innovation with regard to original language, year, university, institute, department, issue, application and method. Yiğit (2018) analyzed the content of 25 dissertations implemented on mobbing in terms of university, institute, department, year, sector, supervisors'



titles, the authors' gender of the dissertations and sample size. In another study, the content of 61 dissertations in the field of Turkish higher education was examined by issue, method and data analysis (Aydın, Selvitopu, & Kaya, 2018). Gülmez, Yalçıntaş, Kurtulgan and Özbay, (2019) examined 227 dissertations in the field of marketing with regard to university types, research methods and types of data, with content analysis. In another study, the master's theses and dissertations on psychology of religion in Turkey were examined by theme (Sevinç, 2013). Diaz-Kope, Miller-Stevens and Henley (2018) examined the dissertations in the field of public administration, policy and public affairs with regard to the relationship between gender, methodological approach and research design. Kousha and Thelwall (2019) investigated the impacts of 77,884 American dissertations through the citation counts derived from Google Scholar and Mendeley databases. Likewise, the contribution of the PhD students' dissertations completed in the fields of arts and humanities, health sciences, natural sciences and engineering and social sciences was examined through the citation measures by Lariviere (2012). Osman, Alema and Kumah (2018) analyzed the citation patterns of 35 doctoral dissertations in their study.

Apart from the last three studies, mostly similar methods were used to examine master's theses and dissertations in the former studies. While these studies can help researchers determine their future studies, they do not give any information about the contributions of the dissertations. So, it seems vital to research the contributions of the dissertations completed in the abovementioned disciplines and to what extent these contributions are considered in the scientific communities in the light of the empirical data. In this regard, this study is expected to contribute the particularly to the national and generally to the international literature by revealing the young and possibly independent researchers' roles to produce knowledge.

Only the articles produced from these dissertations were taken into account because the editorials, book reviews, letters to the editors or proceeding abstracts produced from dissertations are mostly not regarded as original contributions to the scholarly knowledge (Moed, 1996). In this regard, bibliometric analysis was used to determine the contributions of the dissertations to the literature and practice. Bibliometric analysis involves the analysis of the publications produced in a certain period and region and relations among these publications quantitatively (TÜBİTAK, 2021). So, the citations to the articles produced the dissertations were quantitatively measured. Besides, the method of each dissertation was presented to enable readers and researchers to figure out their contributions to the expansion of the knowledge. The research methods, data

collection tools, and data analysis techniques were given to show how the articles differ in peer-reviewed indexed journals.

In the evaluation of the contributions of the doctoral dissertations to the literature and practice, the disciplines of economy, law, psychology, political science, and international relations were considered. These have been identified as the priority research disciplines by the Turkish Council of Higher Education (CoHE) for scholarship students. These students are sent abroad by the Turkish government to train the human resource demanded by various institutions. The Turkish higher education institutions need well-qualified academics to meet their needs in these disciplines. So, in this study, the dissertations completed in these disciplines in Turkey were included to reveal the extent of contribution made by the PhD holders to the knowledge base in these fields.

The study seeks the answers for the following questions:

- What is the number of the articles produced from the doctoral dissertations in the disciplines of economy, law, psychology, political science, and international relations in peer-reviewed indexed journals?
- What is the number of citations to the articles produced from the doctoral dissertations in the disciplines of economy, law, psychology, political science, and international relations in peer-reviewed indexed journals?
- Which research methods, data collection tools, and data analysis techniques were used in the doctoral dissertations in the disciplines of economy, law, psychology, political science, and international relations?

Method

Data Collection and Analysis

To answer the research questions, document analysis was applied on the doctoral dissertations published in the disciplines of economy, law, psychology, political science, and international relations in the National Thesis Center database of CoHE in 2018. The dissertations were examined by means of bibliometric analysis to understand their contributions to the literature and practice. A study file was created in Microsoft Excel spreadsheet program. In the first column, the university type (ie. state or private), discipline and its order saved in the study was indicated. To illustrate, F_LAW_1 indicates that the dissertation was conducted in the discipline of law at a private university, and it was saved first in the study file. The PhD holders' names, dissertation titles, keywords, the publications of the academic studies generated from the dissertations, the citation counts to the articles produced from the dissertations, their research methods, data collection tools, and data analysis tech-

niques were included in the other columns. To determine whether any scientific publication was produced from the dissertations, the authors' web sites, CoHE academic, Education Resources Information Center, Google Scholar, ResearchGate, ScienceDirect, and Web of Science databases were searched. Then, the index information for the published studies was noted. Excluding self-citations, the citation counts for the articles were searched in Google Scholar, ResearchGate, SCOPUS, SOBIAD, and Web of Science databases.

Study Group

The researchers accessed all the dissertations published in the related disciplines in 2018 regardless of the university type in Turkey via the National Thesis Center database of CoHE, and came up with 88 dissertations.

As seen in ■ Table 1, the majority of the dissertations were conducted in the state universities. They were predominantly completed in the disciplines of political science and international relations and psychology, respectively. Besides, 39, 21, 7, 6, 4, 2, 2 people with a PhD degree work as an academic member, research assistant, lecturer, psychologist/therapist, lawyer, analyst, consecutively. The others work as bank employee, teacher, journalist, and administrator in a state organization. Most of the PhD holders work in the academia.

Validity and Reliability

The accessibility of the examined dissertations in the present study in the National Thesis Center database of CoHE increases its reliability. Besides, the perceptions of an independent expert in the field of social sciences concerning all the processes involved in the preparation of this study starting from its research design to the reporting of the findings were taken into account to increase its trustworthiness (Creswell, 2014). Criterion sampling, which is a type of purposeful sampling, was used in the determination of the disciplines. This type of sampling provides a comprehensive understanding of the studies to meet the definite pre-determined criteria (Suri, 2011). Criterion validity was considered to ensure the validity of the study. In this validity type, the relations between a determined criterion and points derived from a scale are taken into account (Erçan & Kan, 2004). So, the relation between the number of the articles produced from the dissertations in peer-reviewed indexed journals and their citation counts were considered in the analysis.

Results

In this part, the articles produced from the dissertations in peer-reviewed indexed journals are presented. Secondly, the number of the citations to these articles is indicated. Lastly, the

■ Table 1. The universities and disciplines included in the study.

		<i>n</i>
University	State university	64
	Private university	24
<i>Total</i>		88
Disciplines	Political science and international relations	34
	Psychology	31
	Law	15
	Economy	8
<i>Total</i>		88

research methods, data collection tools, and data analysis techniques of the dissertations are given.

Number of the Articles Produced from the Dissertations

The publication of the articles generated from the dissertations was investigated in the related databases. The results of this investigation are displayed in ■ Table 2. According to the data in this table, 7 articles generated from the dissertations were published in SSCI, SCI, SCI-Expanded, ACHI and ESCI indexed journals, 5 articles in ERIC, EBSCO, DOAJ, Index Copernicus indexed journals, and 10 articles in ULAKBIM, SOBIAD, and Turkish Education Index. 23 articles were generated from the doctoral dissertations. Apart from the articles, 9 authors converted their dissertations to a book ($n=5$), book chapter ($n=3$), and conference proceeding ($n=1$). The most noteworthy finding of this study is that no data could be found on 61 dissertations at all.

Citation Counts to the Articles Produced from the Dissertations

To determine the number of the citations to the articles produced from the dissertations, the articles were searched in the

■ Table 2. The number of the articles published in in peer-reviewed indexed journals.

Indexed publications	<i>n</i>
SSCI, SCI, SCI-Expanded, ACHI, ESCI	7
ERIC, EBSCO, DOAJ, Index Copernicus	5
ULAKBIM, SOBIAD, Turkish Education Index	10
Google Scholar	1
<i>Total</i>	23
No data found	61



related databases. The results of this search are displayed in ■ Table 3. The data in this table indicates that the articles published in SSCI indexed journals are cited more than the other scientific studies. Particularly F_PSY_3 and F_PSY_13 coded dissertations have received more citations. Out of 88 dissertations, only 9 dissertations have been cited and their citation count is 37.

Methods in the Dissertations

To understand the contributions of the dissertations to the literature and practice profoundly and comprehensively, their methods with regard to research method, data collection tool and data analysis techniques are separately provided for each discipline. As indicated in ■ Table 4, four quantitative and four qualitative research methods were used in the dissertations in the discipline of economy. In terms of the data collection tools, secondary data were used in all the dissertations. The document analysis was the most frequently used technique in the dissertations. The dissertation coded F_ECO_6, used multiplier analysis, which accounts for the article produced from this dissertation to be published in a SSCI indexed peer-reviewed journal and get citations from the other scientific studies.

When the methods used in the dissertations in the discipline of law are examined in ■ Table 5, it is observed that the qualitative research method was used in all these dissertations. The most noteworthy characteristics of these dissertations is that they all use secondary data and the same type of analysis.

In ■ Table 6, the methods used in the dissertations in the discipline of political science and international relations reveal that the quantitative research method was used in only one dissertation out of 34 ones. Mostly secondary data were used in the dissertations. Interview was implemented in five dissertations as the primary data collection tool. However, how these interviews were analyzed was not explained in four dissertations.

■ **Table 3.** The number of citations to the articles.

Dissertation number	The indexed journals	Citation counts
F_LAW_5	Turkish ULAKBIM	1
P_LAW_8	SOBIAD	1
P_LAW_10	Turkish ULAKBIM	1
F_PSY_3	SSCI (2)	5
F_PSY_13	SSCI	21
P_PSY_18	SSCI	1
F_ECO_6	SSCI	2
P_PO_4	Turkish ULAKBIM	1
P_PO_18	GOOGLE SCHOLAR	4
<i>Total</i>		37

The data in ■ Table 7 indicate that 18 of the psychology dissertations used the quantitative, 9 used the qualitative, and 4 used the mixed method. These dissertations mostly collected primary data. Surveying was the most-frequently applied data collection tool, followed by the interviewing. Different data analysis techniques were preferred in these dissertations. ANOVA, descriptive analysis, regression and correlation analyses were the most preferred techniques in the data analysis. The articles generated from these dissertations were published in 4 SSCI indexed peer-reviewed journals and received 27 citations from other scientific studies.

Discussion

Focusing on the citations to the articles produced from 88 doctoral dissertations completed in the disciplines of economy, law, psychology, political science, and international relations, their contributions to the literature and practice were analyzed by using bibliometric analysis.

■ **Table 4.** Methods used in the dissertations conducted in the discipline of economy.

Thesis number	Research method	Data collection tool	Data analysis technique
F_ECO_1	Quantitative	Document (data set)	Quantitative analysis
F_ECO_2	Qualitative	Document	Document analysis
P_ECO_3	Quantitative	Document (data set)	Unit root test
P_ECO_4	Qualitative	Document (data set)	Document analysis
F_ECO_5	Qualitative	Document	Document analysis
F_ECO_6	Quantitative	Document (data set)	Multiplier analysis
F_ECO_7	Qualitative	Document (data set)	Document analysis, descriptive analysis
F_ECO_8	Quantitative	Document (data set)	Descriptive analysis

Table 5. Methods used in the dissertations conducted in the discipline of law.

Thesis number	Research method	Data collection tool	Data analysis technique
F_LAW_1	Qualitative	Document	Document analysis
F_LAW_2	Qualitative	Document	Document analysis
F_LAW_3	Qualitative	Document	Document analysis
P_LAW_4	Qualitative	Document	Document analysis
F_LAW_5	Qualitative	Document	Document analysis
F_LAW_6	Qualitative	Document	Document analysis
P_LAW_7	Qualitative	Document	Document analysis
P_LAW_8	Qualitative	Document	Document analysis
P_LAW_9	Qualitative	Document	Document analysis
P_LAW_10	Qualitative	Document	Document analysis
P_LAW_11	Qualitative	Document	Document analysis
P_LAW_12	Qualitative	Document	Document analysis
P_LAW_13	Qualitative	Document	Document analysis
P_LAW_14	Qualitative	Document	Document analysis
P_LAW_15	Qualitative	Document	Document analysis

First of all, publication of the dissertations in peer-reviewed indexed journals was examined, which indicated that no article was published from more than half of the dissertations. The number of the published articles from the dissertations in the SSCI, SCI, SCI-Expanded, ACHI and ESCI indexed journals is quite limited. This could be due to the fact that PhD students in the arts and humanities and social sciences are unlikely to participate in publication-related research activities during their doctoral education (Lariviere, 2012). Indeed, these activities are hardly ever involved in the Turkish doctoral programs. The programs consist of at least seven courses, seminar, qualification exam, dissertation proposal and studies (Turkish Graduate Education Regulation, 2016). So, the researchers are less likely to develop their research skills in these programs. Therefore, they are supposed to acquire research skills in their undergraduate programs. Considering their research background, there are some radical differences among them. Psychology researchers take statistics, research methods, and assessment courses in their undergraduate program (Ankara University, 2020; Boğaziçi University, 2020a, 2020b, 2020c; Koç University, 2020b, 2020c), whilst law researchers hardly ever take research method courses in their undergraduate programs (Ankara University, 2021; Koç University, 2020a), which are confirmed with the findings of the current study. The researchers who did their PhD in psychology publish more studies concerning their dissertations in the internationally-indexed journals compared with their colleagues in economy,

law, political science, and international relations disciplines. Psychology researchers produce primary data sources using new or current scales with their participants in their dissertations. So, those students who do not have an opportunity to develop their research skills in their undergraduate programs are less likely to improve the skills in their doctoral education. Therefore, students should take research courses starting from their undergraduate programs. Researchers can participate in instructive activities and workshops during their doctoral education to equip them with the competency to conduct research and share their research outputs with the scientific world (Ghent University, 2019; KU Leuven, 2018; Vrije University Brussel, 2019). The fact that they are involved in publications positively affects their degree completion and ulterior career in research (Lariviere, 2012). Researchers can develop their research skills and disseminate their research findings with the others through these sorts of activities and workshops.

Secondly, the citation counts to the articles produced from the dissertations were examined, which showed that most were not cited. This finding is confirmed by several studies in the literature (Kousha & Thelwall, 2019; Kutlar, Kabasakal, & Ekici, 2013; Scimago Journal Rank, 2021; CoHE, 2020). A fifth of 77,884 American dissertations were cited in Google Scholar database (Kousha & Thelwall, 2019). Besides, H-index value for the field of Turkish social sciences is very low (Scimago Journal Rank, 2021). So, the impact of the dissertations conducted in Turkey on the abovementioned



Table 6. Methods used in the dissertations in the discipline of political science and international relations.

Thesis number	Research method	Data collection tool	Data analysis technique
F_PO_1	Qualitative	Document	Document analysis
F_PO_2	Qualitative	Document	Discourse analysis
F_PO_3	Qualitative	Document, interview	Document analysis
P_PO_4	Qualitative	Document	Document analysis
F_PO_5	Qualitative	Document	Constructivist analysis
P_PO_6	Qualitative	Document	Document analysis
F_PO_7	Qualitative	Document, interview	Document analysis, discourse analysis
P_PO_8	Qualitative	Document	Document analysis
P_PO_9	Qualitative	Document	Document analysis
P_PO_10	Qualitative	Document	Document analysis
P_PO_11	Qualitative	Document	Document analysis
P_PO_12	Qualitative	Document, interview	Document analysis
P_PO_13	Qualitative	Document, interview	Document analysis
P_PO_14	Qualitative	Document	Document analysis
P_PO_15	Qualitative	Document, interview	Document analysis
P_PO_16	Qualitative	Document	Document analysis
P_PO_17	Qualitative	Document	Discourse analysis
P_PO_18	Qualitative	Document	Document analysis
P_PO_19	Qualitative	Document	Document analysis
P_PO_20	Qualitative	Document	Document analysis
P_PO_21	Qualitative	Document	Document analysis
P_PO_22	Qualitative	Document	Document analysis
P_PO_23	Qualitative	Document	Document analysis
F_PO_24	Qualitative	Document	Document analysis
P_PO_25	Qualitative	Document	Discourse analysis
P_PO_26	Qualitative	Document	Document analysis, discourse analysis
P_PO_27	Quantitative	Document (data set)	Regression analysis
P_PO_28	Qualitative	Document	Comparative analysis
P_PO_29	Qualitative	Document	Document analysis
P_PO_30	Qualitative	Document	Discourse analysis
P_PO_31	Qualitative	Document	Document analysis
P_PO_32	Qualitative	Document	Document analysis
P_PO_33	Qualitative	Document	Document analysis
S_PO_34	Qualitative	Document	Document analysis

tioned disciplines is not strong enough to suggest improvement of the policies and research issues in the related fields.

Thirdly, the analysis of the methods used in the dissertations indicate that most of them used secondary data, except for those completed in the discipline of psychology. The use of secondary data also limits the data analysis techniques. As

the psychology researchers are more involved in the use of the primary data such as developing scales, applying surveys, and conducting interviews, they have more chance to apply a variety of data analysis techniques in their dissertations. Furthermore, the contributions of the secondary data use in the dissertations in the current study to the literature and

Table 7. Methods used in the dissertations in the discipline of psychology.

Thesis number	Research method	Data collection tool	Data analysis technique
F_PSY_1	Quantitative	Survey	T-test, ANOVA, multiple regression analysis, structural equation model
P_PSY_2	Quantitative	Test, survey	Descriptive analysis, correlation analysis
F_PSY_3	Qualitative		Descriptive analysis
P_PSY_4	Qualitative	Interview	Conversation analysis
F_PSY_5	Quantitative	Survey (Scale development)	Exploratory, confirmatory factor analysis, correlation analysis
F_PSY_6	Quantitative	Survey	ANOVA
P_PSY_7	Qualitative	Interview	Grounded theory
P_PSY_8	Quantitative	Survey	Regression analysis
P_PSY_9	Quantitative	Survey	Descriptive analysis, Mann-Whitney U analysis, Pearson correlation analysis
P_PSY_10	Quantitative	Survey	Structural equation model, ANOVA
P_PSY_11	Quantitative	Test, survey	T-test, Mann-Whitney U analysis, ANOVA
P_PSY_12	Qualitative	Documents	Thematic analysis
F_PSY_13	Qualitative	Qualitative	Unit analysis
P_PSY_14	Qualitative	Qualitative	Descriptive analysis
P_PSY_15	Mixed-method	Interview and survey	Phenomenological analysis, correlation analysis
P_PSY_16	Mixed-method	Interview	ANCOVA, constructivist grounded approach
P_PSY_17	Qualitative	Interview	Interpretative phenomenological analysis
P_PSY_18	Quantitative	Scale, survey	ANCOVA, correlation analysis
F_PSY_19	Quantitative	Survey	Multi-linear regression analysis
P_PSY_20	Quantitative	Survey	ANOVA
P_PSY_21	Qualitative	Interview	Interpretative phenomenological analysis
P_PSY_22	Mixed-method	Survey, interview	T-test, ANOVA, hierarchical regression analysis, descriptive analysis
P_PSY_23	Quantitative	Survey	ANOVA
P_PSY_24	Quantitative	Survey	Descriptive statistics, structural equation model
P_PSY_25	Quantitative	Survey	Hierarchical regression analysis
P_PSY_26	Quantitative	Survey	Correlational analysis, descriptive analysis
P_PSY_27	Quantitative	Survey	Multivariate analysis
P_PSY_28	Quantitative	Survey	Correlational analysis, descriptive analysis
P_PSY_29	Mixed-method	Survey, interview	Descriptive analysis, thematic analysis, MANCOVA
P_PSY_30	Quantitative	Survey	Descriptive analysis, variance analysis
P_PSY_31	Qualitative	Qualitative	Descriptive analysis

practive was found to be quite limited. The researchers should be encouraged to use the primary data sources to expand the knowledge in their fields.

Last but not the least, two of three PhD holders in the current study work as faculty members. The number of the academics working at universities without a scientific publica-

tion from their dissertations is quite high. This finding is supported by the general report on Turkish universities prepared by CoHE (2020), revealing that the publication ratio per academic is 0.055 and 0.314 in nationally and internationally indexed journals, respectively. This finding is also supported by Kutlar, and others (2013), who found that the publication



per Turkish academic is far behind the modern academic world. These findings indicate that the researchers planning to work in the academia at the very beginning of their career should be competent to produce and disseminate theoretical and applied knowledge in their fields. Some Turkish universities require publishing at least one article generated from their doctoral dissertations to be able to graduate from their doctoral program. As suggested by Aslan and others (2021), all PhD students must publish at least one article in a scientific journal with a high impact factor as a graduation requirement. Another noteworthy finding is that the high-quality publication requirement should be taken into account in the appointment and promotion arrangements for researchers with PhD who want to pursue an academic career.

Limitations

This study is limited with the PhD dissertations completed in economy, law, psychology, political science, and international relations disciplines. Researchers could examine dissertations conducted in various other disciplines such as sociology and history. They could examine the dissertations completed in social sciences through other scales and rubrics. The mixed-method research method could be used to increase generalizability.

Conclusion

Studying the contributions of the dissertations completed in the abovementioned disciplines, the researchers' attention was directed to the contributions of the dissertations conducted in other disciplines in the field of social sciences. The human resources with a PhD holder who has knowledge, skills, and competency to conduct research are expected to undertake a significant responsibility to solve the economic and social matters Turkey has encountered in the 21st Century in which digitalization, globalization and population exchange profoundly influence societies. In the current study it was understood that the researchers with a PhD degree are not sufficiently competent to extend the available knowledge borders or to make original contribution to the literature. They should be encouraged to use primary data sources and analyze them through a variety of data analysis techniques. It seems necessary to offer students effective research and method courses in every stage of the higher education. To be able to graduate, PhD students should conduct field research and have high scientific impact publications based on their dissertations. Besides, clear, concise and empirical criteria should be included in the Turkish Graduate Education Regulation (2016) to allow doctoral committee members to evaluate dissertations in line with the qualifications specified in the TQR and TGER.

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