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ORIGINAL ARTICLE / ARAŞTIRMA YAZISI

Internal Diseases/İç Hastalıkları

Bibliometric Analysis of Postgraduate Theses on Obesity Research in Turkey: Series 2019–2024

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ABSTRACT

Purpose: This study aims to reveal the bibliometric characteristics of postgraduate theses conducted in the field of obesity in Türkiye.

Methods: This descriptive and cross-sectional study examined a total of 630 theses recorded under the heading "obesity" between 2019 and 2024 using the National Thesis Center database. The theses were evaluated in terms of publication year, institution and department distribution, thesis type, academic title of the advisor, language of writing, conversion to scientific publication, journal index, and citation characteristics. SPSS 24.0 software was used for data analysis, and descriptive statistics including frequency and percentage distributions were utilized.

Results: It was determined that theses were most frequently conducted at the University of Health Sciences and were concentrated primarily in the departments of Nutrition and Dietetics, Family Medicine, and Public Health. Thesis production reached its highest level in 2023. Of the 630 theses examined, 106 (16.8%) were converted into scientific publications. Among these publications, 69 had available citation-count data, with a total of 714 citations. To account for differences in citation exposure time, annualized citation rates were also evaluated. The median annualized citation rate was 1.00 citations per publication-year (IQR, 0.67–3.71). Most theses were written in Turkish, and master's-level studies were predominant.

Conclusion: This study demonstrates substantial academic research activity in the field of obesity in Türkiye. However, the relatively low rate of conversion of theses into scientific publications highlights the need for greater support for publication-oriented research and international dissemination of postgraduate research.

Keywords: Obesity; postgraduate theses; bibliometric analysis; scientometrics; research trends; National Thesis Center

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ÖZET

Amaç: Bu çalışmanın amacı, Türkiye'de obezite alanında gerçekleştirilen lisansüstü tezlerin bibliyometrik özelliklerini ortaya koymaktır.

Yöntem: Tanımlayıcı ve kesitsel nitelikteki bu çalışmada, Ulusal Tez Merkezi veri tabanında 2019–2024 yılları arasında "obezite" başlığı altında kayıtlı toplam 630 tez incelendi. Tezler; yayın yılı, kurum ve bölüm dağılımı, tez türü, danışmanın akademik unvanı, yazım dili, bilimsel yayına dönüşme durumu, dergi indeks bilgisi ve atıf özellikleri açısından değerlendirildi. Verilerin analizinde SPSS 24.0 programı kullanıldı ve frekans ile yüzde dağılımlarını içeren tanımlayıcı istatistiklerden yararlanıldı.

Bulgular: Tezlerin en sık Sağlık Bilimleri Üniversitesi'nde yürütüldüğü ve özellikle Beslenme ve Diyetetik, Aile Hekimliği ve Halk Sağlığı alanlarında yoğunlaştığı belirlendi. Tez üretiminin en yüksek düzeye 2023 yılında ulaştığı görüldü. İncelenen 630 tezin 106›sının (%16,8) bilimsel yayına dönüştüğü belirlendi. Bu yayınların 69›unda atıf sayısına ilişkin veri mevcut olup toplam 714 atıf saptandı. Atıf süresindeki farklılıkları dikkate almak amacıyla yıllıklandırılmış atıf oranları da değerlendirildi. Yıllıklandırılmış atıf oranının medyanı 1,00 atıf/yayın-yıl (IQR, 0,67–3,71) olarak bulundu. Tezlerin büyük çoğunluğunun Türkçe yazıldığı ve yüksek lisans tezlerinin çoğunlukta olduğu belirlendi.

Sonuç: Bu çalışma, Türkiye'de obezite alanında önemli düzeyde akademik araştırma faaliyeti yürütüldüğünü göstermektedir. Bununla birlikte, tezlerin bilimsel yayına dönüşme oranının görece düşük olması, lisansüstü araştırmaların yayına dönüştürülmesi ve uluslararası düzeyde yaygınlaştırılmasına yönelik daha fazla desteğe ihtiyaç olduğunu göstermektedir.

Anahtar Kelimeler: Obezite; lisansüstü tezler; bibliyometrik analiz; bilimetrik; araştırma eğilimleri; Ulusal Tez Merkezi

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Obesity is a chronic disease characterized by the accumulation of fat in the body to an extent that compromises health, leading to serious health consequences at both the individual and societal levels.[1] According to the World Health Organization (WHO) 2023 report, the global adult obesity prevalence was reported to be 13.1% in 2016; this rate has shown a significant increase since 2000.[2]

Obesity not only increases the risk of type 2 diabetes, cardiovascular diseases, osteoarthritis, obstructive sleep apnea, and various cancers (endometrial, colorectal, postmenopausal breast cancer, etc.), but also negatively affects an individual's lifespan and quality of life.[3]

The prevalence of obesity in the adult population in Turkey has exceeded 30%. While obesity is more common in women, the recent rapid increase in male obesity is also noteworthy.[4] This increase in obesity prevalence, when compared to data from previous periods, shows that obesity has become one of the priority public health issues in Turkey. Academic research encompasses a wide range of fields related to obesity, from basic sciences to epidemiology, and from clinical studies to public health policies. [5] In this context, master's and doctoral theses are of great importance in reflecting the country's scientific output, trends, and research priorities in the relevant field. Although various bibliometric studies on obesity have been conducted [6], a quantitative and qualitative analysis of the thesis-level literature, particularly to determine trends over time, subject distribution, and methodological preferences, has not been previously performed.

Bibliometric analyses aim to reveal the current state of the relevant literature by examining scientific studies conducted in any field.[7]

From this perspective, the bibliometric evaluation of theses on obesity, especially those obtained over the last six years, will provide a valuable contribution in revealing the current status, gaps, and trends in obesity research in Turkey.

This study aims to examine postgraduate theses directly related to "obesity" that have been registered to archive at the Databases of National Thesis Center of the Council of Higher Education in Turkey over the past six years using bibliometric methods. The study examines variables such as the numerical distribution of theses by year, university/institution distribution, advisor titles, thesis type (master's/doctorate), publication status of the thesis, index of the journal in which the publication appeared, and whether or not it was cited. These analyses aim to reveal trends in the academic literature and guide future research.

The study is expected to map scientific production in the field of obesity in Turkey, identify existing research gaps, thematic focuses, and methodological preferences, and thus serve as a guide for both academics and policymakers.

Materials and Methods

This research is a descriptive cross-sectional study conducted using the National Thesis Center database affiliated with the Council of Higher Education of Turkey. The search term "Obesity" was entered in the database, and the search field was set to "thesis title," yielding a total of 630 thesis records related to obesity between 2019 and 2024.

The theses were evaluated in terms of author name, year of publication, thesis title, affiliated institution, thesis language, thesis type, department/field of study, academic title of the advisor, publication status in the literature, year of publication, database in which the publication was indexed, and number of citations received. The publication status of each thesis was determined by systematically searching Google Scholar, TRDizin, and Web of Science. Searches were conducted using the thesis author's name, the exact thesis title, and Turkish and English versions or equivalent meanings of the thesis title. Where available, additional combinations of the author's name with relevant title terms were used to identify publications derived from the thesis. A thesis was considered to have been converted into a scientific publication when a publication with a sufficiently consistent title and/or author list could be identified and the content was judged to correspond to the thesis. When more than one publication was identified, the publication most clearly corresponding to the thesis was recorded. Publications identified through this process were also evaluated for publication year, journal indexing status, and citation count. The thesis search was restricted to records registered between 2019 and 2024; however,

publications derived from these theses were not restricted by publication year. Therefore, publications identified as resulting from the included theses could have been published after 2024, including in 2025.

To account for differences in citation exposure time, an annualized citation rate was calculated for publications with available citation data by dividing the total citation count by the number of years since publication. The publication age was calculated as the difference between 2026, the year of data collection, and the publication year.

The SPSS 24.0 program was used to analyze the data. Descriptive statistics included the median, minimum–maximum values, frequency, and percentage distribution. The study was approved by the Harran University Clinical Research Ethics Committee (Decision No: 25.19.24, Date: 01.12.2025).

Results

When examining obesity-related theses in Türkiye, all theses registered between 2019 and 2024 were retrieved from the National Thesis Center database, covering a six-year period. Table 1 presents the distribution of theses according to demographic and institutional characteristics. Regarding institutional distribution, the highest number of theses were conducted at the University of Health Sciences (n = 103, 16.3%), followed by Istanbul Medeniyet University (n = 19, 3.0%), Erciyes University (n = 17, 2.7%), Istanbul Okan University and Marmara University (n = 16, 2.5% each), Hacettepe University and Yeditepe University (n = 15, 2.4% each), and Istanbul University-Cerrahpaşa (n = 14, 2.2%) (Figure 1).

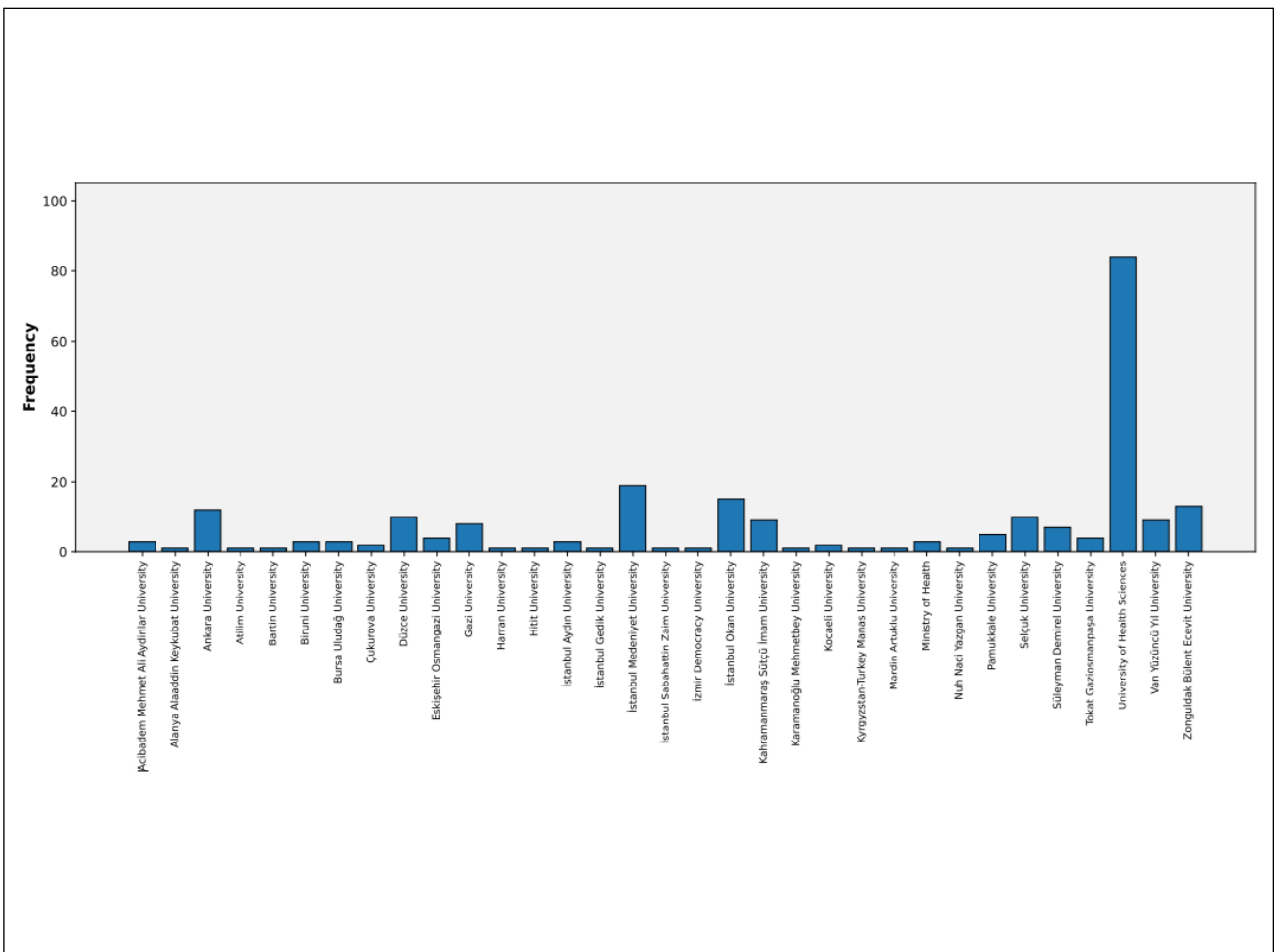

Figure 1. Distribution of Postgraduate Theses by Institution (2019–2024)

Table 1. Demographic and Publication Characteristics of Postgraduate Theses on Obesity in Türkiye (2019–2024)

Variable	n	%
Type of Thesis		
Medical specialty / subspecialty thesis	250	39.7
Master's thesis	308	48.9
Doctoral (PhD) thesis	68	10.8
Dentistry specialty thesis	4	0.6
Language of Thesis		
Turkish	588	93.3
English	41	6.5
Kyrgyz	1	0.2
Supervisor's Academic Title		
Professor	267	42.4
Associate Professor	200	31.7
Assistant Professor / Specialist Physician	163	25.9
Publication Status		
Published	**106**	**16.8**
Not published	**524**	**83.2**
Citation Status of Published Theses*		
Cited	**69**	**10.9**
Not cited	**37**	**5.9**
Indexing Status of Journals (Published Theses)*		
National index	**36**	**5.7**
SCI / SCI-E	**38**	**6.0**
ESCI	**4**	**0.6**
Other international indexes	**26**	**4.1**
Indexing status unavailable	**2**	**0.3**

** Citation status and journal indexing were calculated based on the theses that were converted into scientific publications (n = 106).*
** Indexing status was unavailable for two publications.*

The distribution of theses according to their main scientific disciplines and the "subject" category defined in the National Thesis Center database was also evaluated. Regarding the distribution of obesity-related theses by subject, the highest number were conducted in Nutrition and Dietetics (n = 124, 19.7%), followed by Family Medicine (n = 96, 15.3%), Public Health (n = 48, 7.7%), Pediatrics (n = 45, 7.1%), Psychiatry (n = 25, 4.0%), and Internal Medicine (n = 22, 3.5%) (Figure 2).

Regarding the distribution by year, the highest number of obesity-related theses were completed in 2023 (n = 157, 24.9%), followed by 2024 (n = 127, 20.2%), 2019 (n = 122, 19.4%), 2021 (n = 97, 15.4%), 2020 (n = 92, 14.6%), and 2022 (n = 35, 5.6%) (Figure 3).

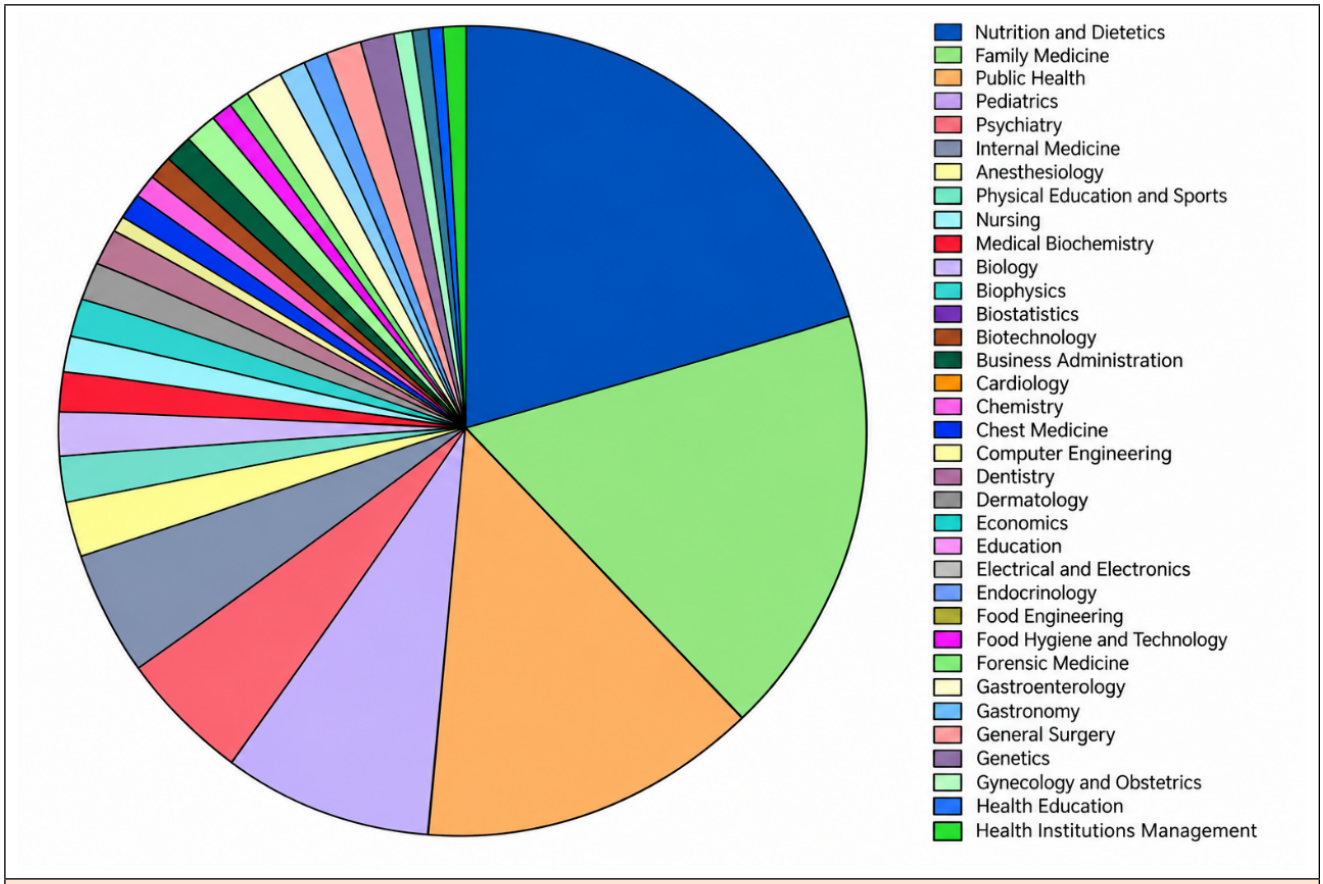

Figure 2. Percentage Distribution of Postgraduate Theses by Department (2019–2024)

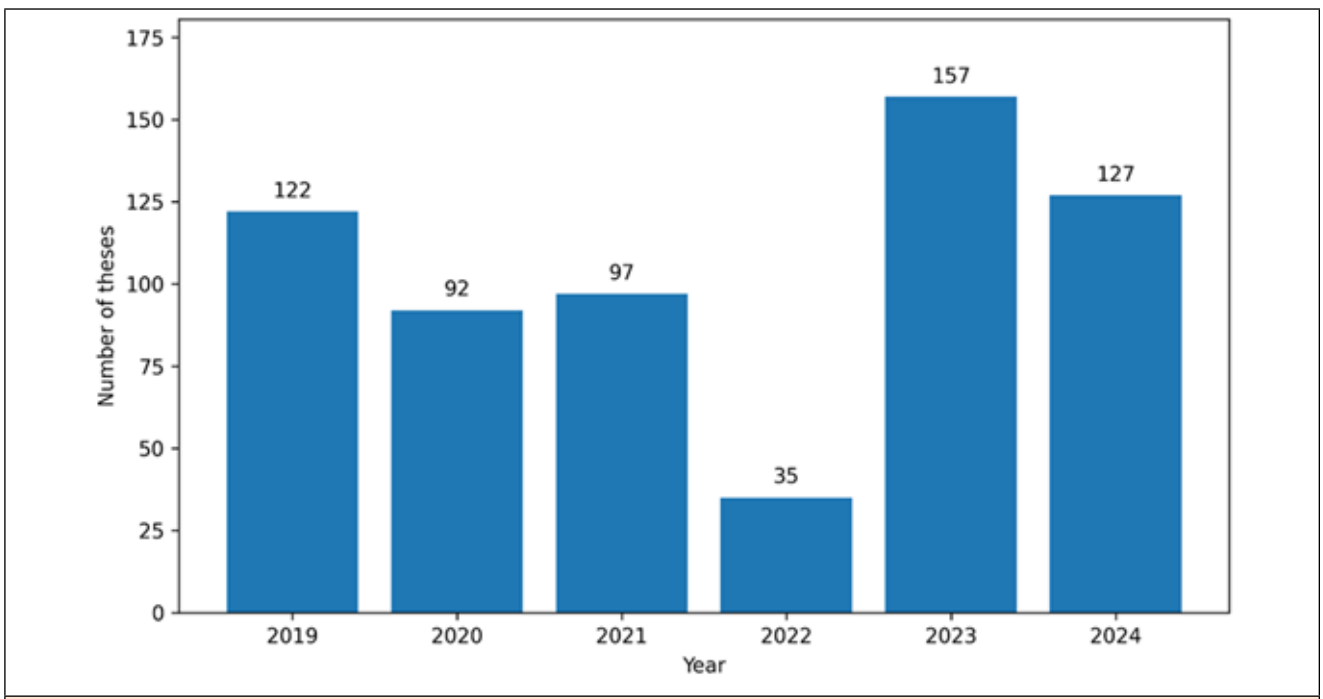

Figure 3. Number of Postgraduate Theses on Obesity by Year (2019–2024)

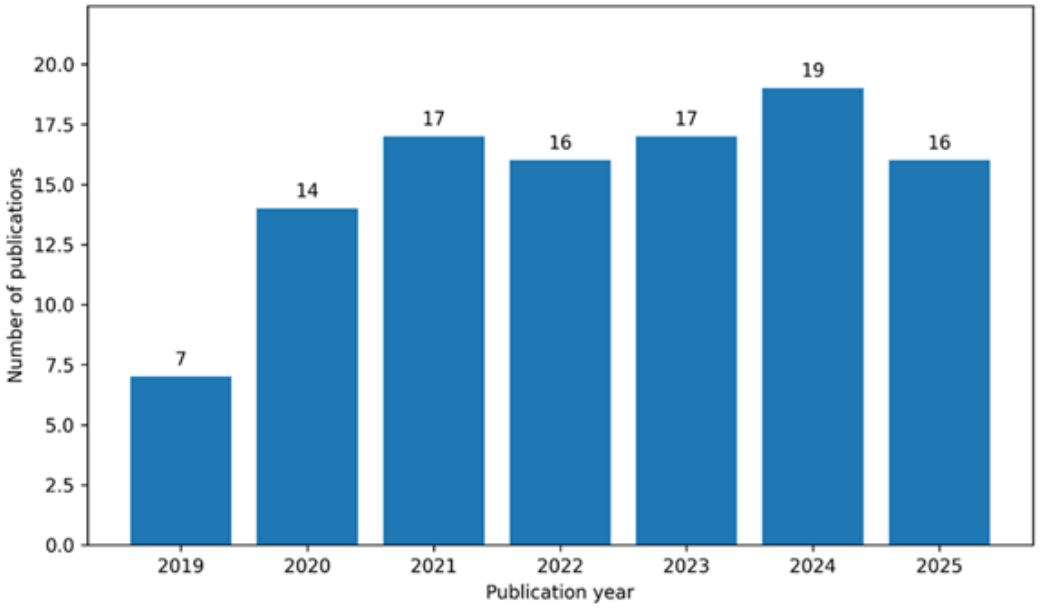

Figure 4. Distribution of Theses Converted into Scientific Publications by Publication Year (2019–2025)

Regarding publication status, 106 of the 630 theses (16.8%) were converted into scientific publications. Although the thesis search covered the 2019–2024 period, some theses were subsequently published in 2025. The distribution of publications by publication year was as follows: 2024 (n = 19, 17.9%), 2023 (n = 17, 16.0%), 2021 (n = 17, 16.0%), 2022 (n = 16, 15.1%), 2025 (n = 16, 15.1%), 2020 (n = 14, 13.2%), and 2019 (n = 7, 6.6%) (Figure 4).

Among the 106 publications, 69 had available citation-count data, with a total of 714 citations. The distribution of citations according to publication year was 50 citations for publications from 2019, 286 for 2020, 116 for 2021, 104 for 2022, 90 for 2023, 46 for 2024, and 22 for 2025.

To account for differences in citation exposure time, an annualized citation rate was calculated for each publication with available citation data by dividing the total citation count by the number of years since publication. Among the 69 publications with available citation data, the median annualized citation rate was 1.00 citations per publication-year (IQR, 0.67–3.71; range, 0.14–14.67). The median annualized citation rate was 0.71 for publications from 2019, 1.00 for 2020, 1.00 for 2021, 1.50 for 2022, 1.33 for 2023, 2.50 for 2024, and 3.00 for 2025.

Regarding the language of the theses, 588 (93.3%) of the 630 theses were written in Turkish, 41 (6.5%) in English, and 1 (0.2%) in Kyrgyz.

Regarding thesis type, 308 (48.9%) of the 630 theses were master's theses, 250 (39.7%) were medical specialization theses, 68 (10.8%) were doctoral theses, and 4 (0.6%) were dental specialization theses.

The academic titles of thesis advisors were distributed as follows: 267 (42.4%) were professors, 200 (31.7%) were associate professors, and 163 (25.9%) were assistant professors/doctors.

Discussion

Within the scope of this bibliometric study, the distribution of postgraduate theses on obesity in Türkiye between 2019 and 2024 was examined, providing an overview of academic research trends in this field. The analysis of all obesity-related theses available in the National Thesis Center enabled a comprehensive assessment of research productivity, institutional and disciplinary distribution, publication patterns, and citation characteristics in Türkiye.

According to the analysis results, the highest proportion of theses were conducted at the University of Health Sciences (n = 103, 16.3%). This finding may be related to the

university's extensive clinical practice network, research infrastructure, and large academic workforce; however, these factors were not directly evaluated in the present study. Similarly, a previous bibliometric study on health literacy reported that the University of Health Sciences produced the highest number of theses.[8] The relatively high representation of Istanbul-based universities may reflect the greater concentration of academic institutions and research capacity in metropolitan areas. In contrast, the lower number of obesity-related theses from universities outside major metropolitan centers may suggest differences in research productivity across regions.

When examining the distribution of theses by department, the highest proportion was found in the Department of Nutrition and Dietetics (n = 124, 19.7%). This finding is consistent with the central role of nutrition-related approaches in obesity prevention and management. In the current literature, high-energy food consumption, consumption of processed foods, and physical inactivity are recognized as important contributors to the increasing prevalence of obesity.[9] Similarly, previous research has reported that postgraduate theses on sports nutrition are predominantly concentrated in the field of Nutrition and Dietetics.[10] The prominence of Nutrition and Dietetics among obesity-related theses may therefore reflect the multidisciplinary importance of dietary and lifestyle interventions in obesity research.

The fact that Nutrition and Dietetics was followed by Family Medicine, Public Health, and Pediatrics further supports the multidisciplinary nature of obesity research and the importance of addressing obesity as a lifelong, community-based health problem. The World Health Organization's European Obesity Report defines obesity as a "chronic, relapsing disease," emphasizing the importance of primary care-based interventions.[11] The high prevalence of obesity in Türkiye, as reported in the 2019 Turkey Nutrition and Health Survey (TBSA), may partly explain the substantial research interest in obesity within the field of public health.[12]

Although the number of theses in the field of Psychiatry was relatively limited, its presence among the leading departments suggests an emerging academic interest in the psychosocial dimensions of obesity. The literature indicates that obesity is closely associated with psychosocial factors such as emotional eating, stress, depression, and impulsivity.[13] This finding further highlights the multidisciplinary nature of obesity research and the relevance of psychological and behavioral factors in understanding and managing obesity.

The relatively low proportion of theses in the field of Internal Medicine (n = 22, 3.5%) is noteworthy. Given the strong association between obesity and clinical conditions such as diabetes, hypertension, metabolic syndrome, and fatty liver disease, the relatively limited representation of Internal Medicine in obesity-related thesis research may indicate an opportunity for greater clinical research activity in this area. Current literature emphasizes that the metabolic and endocrine mechanisms underlying obesity are not yet fully understood, highlighting the continued importance of clinical research in this field.[14]

When examining the distribution by year, thesis production varied substantially across the study period, with the highest number of theses recorded in 2023 (n = 157, 24.9%). The increase in thesis production observed after 2022 may reflect, at least in part, the growing recognition of obesity as an important risk factor for adverse outcomes during the COVID-19 pandemic. Previous studies have reported associations between obesity and increased risks of hospitalization, severe infection, and mortality during the pandemic.[15–17] The relatively low number of theses in 2022 may have been influenced by disruptions in academic activities during and following the pandemic, although this explanation cannot be directly established from the present data.

Our findings are broadly consistent with international bibliometric evidence demonstrating sustained growth and increasing multidisciplinarity in obesity research. Khan et al. analyzed 117,340 obesity-related publications indexed in Scopus between 1993 and 2012 and reported steady and exponential growth in publication output, with contributions from approximately 42 broad disciplines and strong interdisciplinary collaboration. Similarly, Zhao et al. analyzed 50,246 obesity-related publications indexed in the Science Citation Index Expanded between 1999 and 2017 and demonstrated a marked increase in publication output and growing international collaboration, with obesity research spanning multiple disciplines, including endocrinology, nutrition, surgery, and public health. These international findings provide a broader context for the substantial research activity observed in Turkish postgraduate theses.[18,19]

Our findings are also comparable with recent bibliometric evidence from other postgraduate research fields in Türkiye. A recent bibliometric analysis of 560 postgraduate theses on oxidative stress conducted between 2020 and 2025 reported that 146 (26.1%) theses were converted into scientific publications, and 69.9% of the resulting publications were published in SCI/SCI-E-indexed journals. The Health Sciences University was also the most productive institution in that study, with 56 theses. These findings, together with our results, suggest that the Health Sciences University has a prominent role in postgraduate research productivity across different health-related fields in Türkiye, while the conversion of postgraduate theses into scientific publications remains an area with potential for improvement.[20]

Of the 630 theses examined, 106 (16.8%) were converted into scientific publications. This publication rate is comparable to those reported in previous studies of postgraduate theses in Türkiye, but it remains relatively low and suggests room for improvement in translating postgraduate research into scientific publications.[21] The relatively low publication rate may be associated with several factors, including the predominance of master's-level theses, methodological limitations, limited support for academic writing, and insufficient academic incentives.[22]

Regarding journal indexing, the publications derived from obesity-related theses were distributed across national and international indexing systems, including SCI/SCI-E, ESCI, and other international indexes. This distribution indicates that some thesis-derived studies achieved visibility in internationally indexed journals. However, publications in national and other indexing systems also contributed to the dissemination of obesity-related research.

Citation analyses showed that publications from earlier years accumulated higher absolute numbers of citations, particularly those published in 2020. However, because older publications have had a longer period in which to accumulate citations, raw citation counts may overestimate their relative citation impact. After accounting for publication age using annualized citation rates, the median annualized citation rate was 1.00 citations per publication-year (IQR, 0.67–3.71). The median annualized citation rate was higher among publications from 2024 and 2025 (2.50 and 3.00 citations per publication-year, respectively) than among those published in earlier years. These findings highlight the importance of considering publication age when interpreting citation counts and suggest that the lower absolute citation counts observed for more recent publications should not necessarily be interpreted as lower scientific impact.

The fact that the vast majority of theses were written in Turkish (93.3%) suggests that postgraduate research in obesity is primarily disseminated within the national academic context. The limited number of English-language theses may reduce their potential international visibility and accessibility to the wider scientific community.[21,24,25] Therefore, encouraging the preparation of theses in English, particularly at the doctoral level, may contribute to broader international dissemination and visibility of obesity research from Türkiye.

Conclusion

In conclusion, postgraduate theses in the field of obesity in Türkiye demonstrate substantial research activity in terms of the number of theses and the diversity of institutions and academic disciplines involved. However, the relatively low proportion of theses converted into scientific publications (16.8%) suggests that opportunities remain to improve the dissemination of postgraduate research. The predominance of Turkish-language theses may also limit international accessibility and visibility. Supporting multidisciplinary research approaches, encouraging publication of thesis-derived studies, and promoting broader international dissemination may strengthen Türkiye's contribution to obesity research.

Based on the findings of this study, some recommended steps are as follows:

1. Universities and research units should establish multidisciplinary working groups focused on basic sciences (biology) + clinical + public health in relation to obesity.

2. Processes such as publication-oriented planning, advisor guidance, and academic writing training should be standardized in master's, doctoral, and specialist theses.

3. Theses should be written in English and targeted for international journals to increase their international visibility.

4. Financial and institutional support mechanisms (scholarships, research funds, project support) should be established, which will increase productivity in terms of both quality and quantity.

5. Bibliometric monitoring and evaluation systems should be established; thus, it should be possible to monitor which areas are highly productive and which are lacking with continuously updated data.

Declarations

Conflicts of Interest

The authors declare no conflicts of interest.

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Availability of Data and Materials

All data generated or analyzed during this study are included in this published article.

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The authors have nothing to acknowledge.

Authors' contributions

All authors have read and approved the final version of the article.

Ethics Statement

The study protocol titled " Bibliometric Analysis of Postgraduate Theses on Obesity Research in Turkey: Series 2019–2024" was reviewed and the study was approved by the Harran Clinical Research Ethics Committee (Decision No: 25.19.24, Date: 01.12.2025). The study did not involve human participants or animal subjects. The research was conducted in accordance with the principles of the Helsinki Declaration.

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