



Global Scientific Outputs of Psychiatric Malpractice Publications: A Bibliometric Approach From 1980 To 2022

Psikiyatrik Malpraktis Yayınlarının Küresel Bilimsel Çıktıları: 1980'den 2022'ye Bibliyometrik Bir Yaklaşım

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Abstract

Aim: Until recent years, psychiatry was a medical field that faced malpractice relatively less than other fields. However, the increase in malpractice cases worldwide and the fact that psychiatrists are on the agenda has created a need for more knowledge and experience. The aim of the study is to evaluate the scientific outputs of psychiatric malpractice as a holistic perspective.

Material and Method: Publications on psychiatric malpractice between 1980 and 2022 were analyzed. The data of the publications were accessed from the Web of Science database, and in the first stage of the research, the quantitative data in this area were examined with performance analyzes. In the second stage, visual network maps that reveal the links of the publications were created using the VOSviewer package program.

Results: A total of 426 publications, 312 of which were articles, and 8901 citations on psychiatric malpractice were reached during the specified dates. The most productive country in this field was the United States with 279 publications, and the most productive institution was Harvard University with 46 publications. The most active research area on this subject was psychiatry with 219 publications, and the journal with the highest number of publications was The Journal of the American Academy of Psychiatry and the Law with 35 publications. The most productive authors were Scott C with 11 publications and Gutheil TG with 10 publications.

Conclusion: This comprehensive bibliometric analysis study focused on publications on psychiatric malpractice and, to our knowledge, is the first bibliometric analysis in this field. We believe this study will provide a holistic perspective to the publications of psychiatric malpractice and guide the researchers interested in this field.

Keywords: Malpractice, psychiatry, forensic psychiatry, bibliometric analysis, ethics

Öz

Amaç: Psikiyatri, tıbbın diğer alanlarına göre malpraktis sorunlarıyla son yıllara kadar görece daha az yüzleşen bir tıbbi branş olarak bilinmekteydi. Fakat malpraktis davalarının tüm dünyada artış göstermesi ve günümüzde bu konunun psikiyatristler için de sıklıkla gündeme gelmesi daha fazla bilgi ve deneyim ihtiyacını doğurmuştur. Bu araştırmadaki amaç psikiyatrik malpraktis konusundaki literatür verilerini bütüncül bir bakış açısıyla ve bibliyometrik yöntemlerle değerlendirmektir.

Gereç ve Yöntem: 1980-2022 yılları arasında psikiyatrik malpraktis konusunda yapılmış yayınlar analiz edilmiştir. Yayınlar ait verilere Web of Science veri tabanından ulaşılmış olup araştırmamızın ilk aşamasında performans analizleriyle bu alandaki sayısal veriler incelenmiştir. İkinci aşamada ise VOSviewer paket programı kullanılarak yayınlar ait bağlantıları ortaya koyan görsel ağ haritaları oluşturulmuştur.

Bulgular: Belirlenen tarihler aralığında psikiyatrik malpraktis konusunda 312'si makale olmak üzere toplam 426 yayın ve 8901 atıfa ulaşılmıştır. Bu alanda en üretken ülke 279 yayın ile ABD, en üretken kurum ise 46 yayın ile Harvard Üniversitesi'dir. Bu konuda en aktif araştırma alanı 219 yayınlı psikiyatri olup, en çok yayına sahip dergi ise 35 yayın ile The Journal of the American Academy of Psychiatry and the Law'dır. Bu alanda en üretken yazarlar 11 yayınlı Scott C ve 10 yayınlı Gutheil TG'dir.

Sonuç: Bu kapsamlı bibliyometrik analiz çalışması psikiyatrik malpraktislere yönelik yayınlar odaklanmış olup, bildiğimiz kadarıyla bu alanda yapılan ilk bibliyometrik analizdir. Bu çalışmanın psikiyatrik malpraktis alanındaki yayınlar bütüncül bir bakış açısı sağlayarak bu alanla ilgilenen araştırmacılara yol gösterici olacağına inanılmaktadır.

Anahtar Kelimeler: Malpraktis, psikiyatri, adli psikiyatri, bibliyometrik analiz, etik



INTRODUCTION

Medical conditions that occur as a result of failure to provide standard treatment and care due to negligence, lack of knowledge and skills, or inattention to the patient are called malpractice.^[1] Medical errors can occur in any area where the patient and health service are present, and the patient-physician relationship and legal regulations in this area are becoming more and more important. There are many reasons for the emergence of malpractice, such as the absence of the necessary quality and number of healthcare personnel, increased patient load, negative working conditions, lack of cooperation in consultations, neglect of ethical rules and administrative problems, depending on the healthcare workers or healthcare system.^[2,3] While psychiatry is accepted as a medical specialty with a relatively low risk in terms of medical malpractice, it is known that there has been a rapid increase in malpractice lawsuits filed against psychiatrists in recent years due to medical negligence reports, malpractice and ethical violation claims.^[3-5] In a study conducted in the United States, examining 17 medical specialties, it was determined that 7.5% of physicians are exposed to malpractice lawsuits each year, and approximately 3% of these are related to the field of psychiatry.^[6] Due to the fear of exposure to malpractice lawsuits, physicians act overprotective or hesitant, use diagnostic and therapeutic medical practices unnecessarily, and avoid practices with a high risk of resulting in malpractice lawsuits. This situation, which is called defensive medical practices, has become very popular among physicians in recent years, secondary to the increasing malpractice cases. It is thought that a simultaneous change in the perspectives and behaviors of health professionals and patients is necessary to reduce defensive medical practices. In addition, the development of clinical practice guidelines specially prepared for risky clinical situations and their use in routine clinical practices can reduce both malpractice and defensive medical practices.^[7]

In areas where physicians lack sufficient data, bibliometric approaches become more important in terms of quantitative evaluation, research impact, and guiding contemporary literature investigations.^[8] Bibliometric analysis is a research method in which the publications produced by authors or institutions in a specific field and time period and the connections between these publications are revealed.^[9] Despite the increasing malpractice cases, it is seen that there is not enough research in the literature both in the field of general medical malpractice and in the field of psychiatric malpractice.^[10] Although there have been bibliometric studies on general malpractice, it appears that no such study has been performed yet on psychiatric malpractice.^[11] This situation makes it difficult for health professionals in the field of psychiatry to reach sufficient knowledge and experience on the subject. In this context, our study aims to guide clinicians and researchers who are interested in this field by providing a holistic perspective to the studies in the field of psychiatric malpractice.

MATERIAL AND METHODS

On 11.01.2023, the words “psychiatry AND malpractice OR psychiatric malpractice OR malpractice in psychiatry” were searched in the Web Of Science Core Collection database without using any exclusion criteria in all fields, and the publications in this field were accessed. No filtering was used in the search, all times (1980-2022) and all publications were included. In the first stage, the quantitative data of the publications in this field were examined with the performance analyses made on the Web of Science.

In the second stage of the study, visual network maps of the publications in the related field were obtained by using the VOSviewer package program (Version 1.6.17, Leiden University's Center for Science and Technology Studies). VOSviewer package program is one of the analysis programs that stand out with its user-friendly interface in terms of visual mapping of bibliometric data. Correlation analyses between the number of articles produced by the countries and their economic and development indicators of GDP (Gross Domestic Product), GDP PPP (Purchasing Power Parity) (data was obtained from the World Bank Group website - 2021 data),^[12] and HDI (Human Development Index) (data was obtained from the United Nations Development Programme Human Development Report 2021-2022)^[13] were analyzed using the Spearman correlation coefficient. Additionally, the “<https://app.datawrapper.de>” website was used for the world map image.

Ethics committee approval was not obtained since it was not a human or animal study and was conducted on publicly available publications.

RESULTS

As a result of the search in the Web Of Science Core Collection database, a total of 426 publications covering the years 1980-2022 were reached. The three research area with the greatest number of products on psychiatric malpractice were psychiatry (n=219, 51.4%), government law (n=73, 17.1%), and psychology (n=53, 12.4%). The authors with the largest number of publications in the field were Scott C. (n=11, 2.5%) and Gutheil TG. (n=10, 2.3%), with 11 and 10, respectively. The most frequent type of publications in this field were articles with 312 (73.2%) records and reviews with 39 (9.1%) records.

The United States was the most productive country in this field with 279 (65.4%) publications. The United States is followed by England (4.4%) and Germany (4.4%) with 19 publications each. In **Figure 1**, there was a world map colored reflecting the number of publications of the countries. There was a statistically significant correlation between the number of publications produced by the countries about psychiatric malpractice and their GDP, GDP PPP, and HDI indicators ($r=0.670$, $p<0.001$; $r=0.521$, $p=0.004$, $r=0.489$, $p=0.003$ respectively).

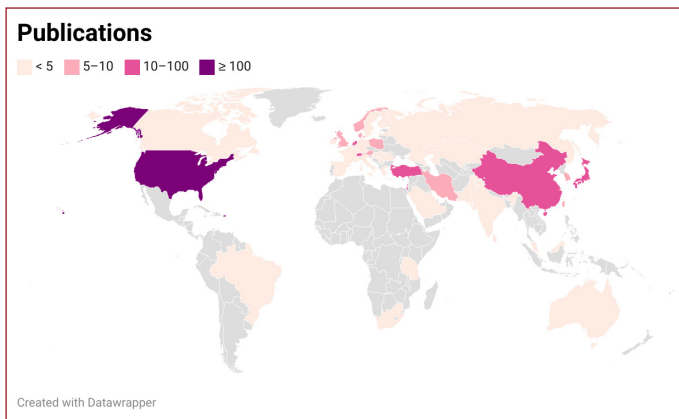


Figure-1: The world map of publications

The institutions with the highest number of publications on psychiatric malpractice are Harvard University (n=46, 10.7%) and Harvard Medical School (n=33, 7.7%) (Table 1).

Table 1. The most productive institutions by the number of publications

Affiliations	Record Count	% of 426
Harvard University	46	10.7
Harvard Medical School	33	7.7
The University of California System	27	6.3
Us Department of Veterans Affairs	24	5.6
Veterans Health Administration Vha	24	5.6
The University of Texas System	16	3.7
Yale University	15	3.3
The University of California Los Angeles	14	3.2
The University of Illinois Chicago	13	3.0
The University of Illinois System	13	3.0

*Showing 10 out of 69 institutions.

The journals with the highest number of publications in this field were The Journal of the American Academy of Psychiatry and the Law (n=36, 8.2%) and The American Journal of Psychiatry (n=19, 4.4%).

There were 8,901 citations to a total of 426 publications, including 8,596 (96.5%) non-self citations. When the publications and citations were sorted by year, it was seen that the year with the highest number of publications and citations was 2021 with 21 (4.9%) publications and 1158 (13.0%) citations. With 18 (4.2%) publications each, 2009 and 2011 were the other productive years and these years had 180 (2.01%) and 220 (2.4%) citations, respectively (Figure 2).

The most cited authors were Adler NE, Moore PJ, and Robertson PA with 115 citations each. Authors with at least 1 publication were included in the citation network layer analysis. It was determined that there were 14 linked authors and a citation network layer map was created. The colors of the circles indicate the authors' publications' timeliness, while the lines reflect the connections between the authors (Figure 3). In the resulting network map, the authors were divided into 5 clusters and the authors with the highest total link strength were Meyer DJ, Reich J, Shatzberg A and Slawson PF.

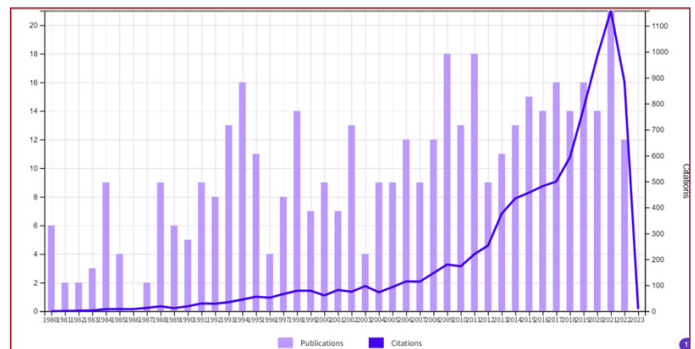


Figure-2: Number of publications and citations by year

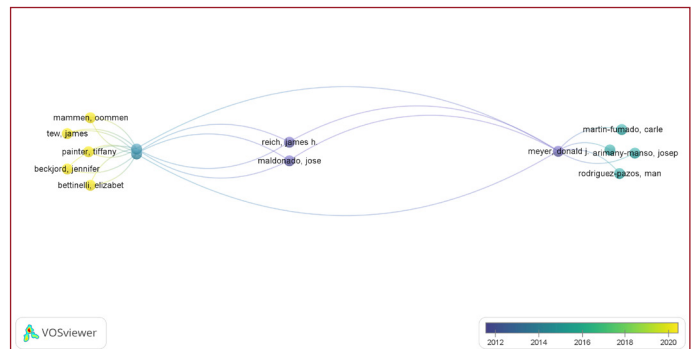


Figure-3: Citation analysis network layer map in the context of authors

The most frequently used keywords according to the keyword network map created by including 78 keywords used at least once were; “malpractice”, “psychiatry” and “forensic psychiatry” respectively. The circle widths are directly proportional to the usage amount of the keywords, and the circle colors and the lines between the circles show the relationship status between the keywords (Figure 4).

While the institution citation network analysis was being conducted, 11 linked institutions from total 55 institutions that had at least 1 publication and cited at least once were included. The links between institutions are shown in Figure 5, and the width of the circles is proportional to the number of publications of the institutions. As a result of its numerous connections with other institutions, Harvard University appears to be at the top of the list in this field.

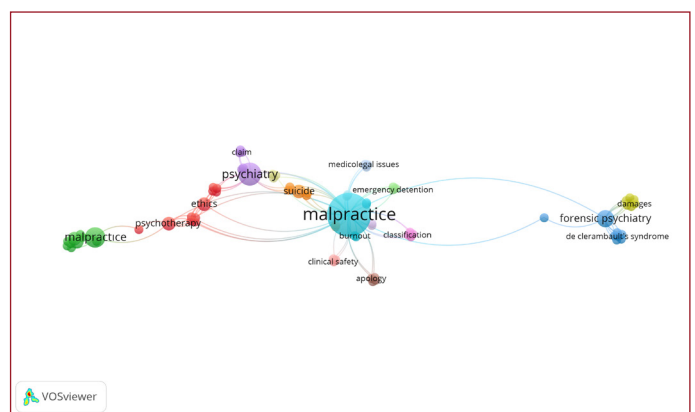


Figure-4: Keyword analysis network map

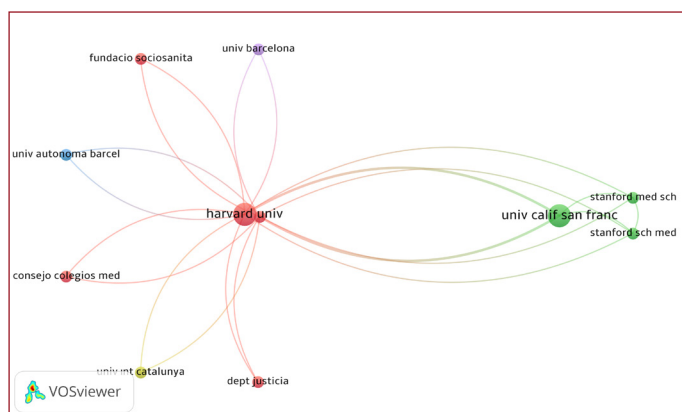


Figure-5: Institution citation analysis network map

Appelbaum PS and Gutheil TG were the most co-cited authors, according to the co-citation analysis in the context of authors. It was determined a total of 22 author clusters, and the authors with the strongest links were Black D, Gunderson JG, and Paris J.

All countries with at least 1 publication and at least 1 citation were included in the citation analysis in the context of countries, and it was determined that the country with the highest number of publications and citations was the United States, as seen in **Figure 6**. According to the number of citations and publications, other countries are Sweden, Spain, Italy, England, Turkey, and Romania respectively.

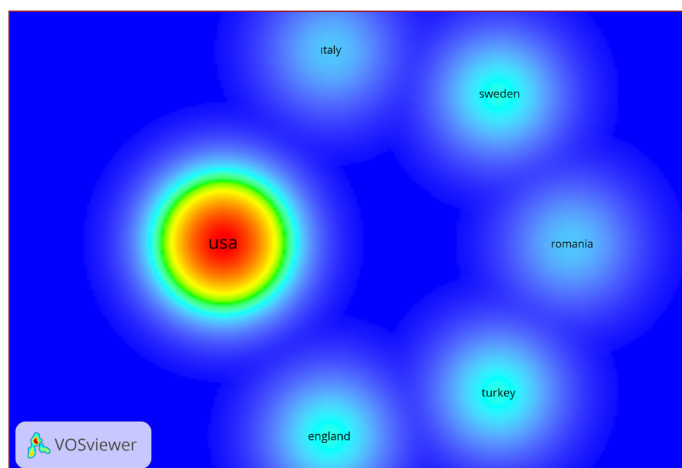


Figure-6: Citation analysis density image in the context of countries

DISCUSSION

In recent years, the increasing commercialization of the health system in almost all over the world has brought with it some negativities in terms of physicians and patients. In this respect, the subject of malpractice has become visible in all fields of medicine, but the boundaries of malpractice laws in many countries have not been clearly defined yet.^[3] The topic of malpractice is on the research agenda for medical studies, yet there is not sufficient knowledge available, based on the literature data.^[14] In the field of psychiatry, like other fields, there is not enough data on malpractice and clear legal

regulations in most countries. While the society is protected by the rules on patient rights, legal regulations for physicians and other healthcare professionals are insufficient.^[15] As a result of uncertainties in legal regulations and increased responsibilities, it is more and more common for physicians to face criminal liability.^[14] It is known that the most common psychiatric malpractice cases are related to the patient's suicidal attempts, harming another person, misdiagnosis and wrong treatment practices, attempts to escape from the hospital, not obtaining informed consent, compulsory hospitalizations, and failure to protect confidentiality.^[5]

In the results of our study, a total of 426 publications in the field of malpractice in psychiatry covering the years 1980-2022 were reached. It was observed that the number of publications was higher in the 2000s compared to the 1900s. The reason for this may be the commercialization of the healthcare system in recent years, the fact that patients have more information about their rights, they receive more healthcare services, and healthcare policies act to protect patients' rights rather than physicians.^[16] The publications were mostly in the fields of psychiatry, government law, and psychology can be explained by the fact that the health professionals who are most interested in the subject work in these fields. The authors with the highest number of publications on psychiatry and malpractice are Scott C (2.5%) and Gutheil TG (2.3%) with 11 and 10 publications, respectively. It is possible to say that these authors are among the active authors interested in this field.

It was determined that the year with the highest number of publications on psychiatric malpractice was 2021. This can be explained by the fact that the COVID-19 pandemic has disrupted healthcare services and the issue has become more visible as patients resort to legal remedies. The relatively low number of publications in 2022 does not match the pandemic statement. Considering the number of publications in other years, it is seen that there is no regular increase or decrease. It has been determined that the number of publications is proportional to the number of citations, which is expected. Although the most common type of publication in this area is articles and reviews, the relatively low numbers explain the need for more studies in this area.

The institutions with the highest number of publications on psychiatric malpractice were Harvard University and Harvard Medical School. This can be explained by the presence of prominent and contemporary authors who deal with malpractice in these institutions. Journal of the American Academy of Psychiatry and the Law and American Journal of Psychiatry has the highest number of publications in this field may be related to the fact that this issue is more on the agenda in the United States.^[17] When we evaluate the citation analyzes of the authors, the most cited authors were Adler NE, Moore PJ and Robertson PA, and it can be said that these authors made significant contributions to the related field. Another reason why these authors were cited in large numbers may be the fact

that the publications were made in a relatively old date, that is, the time advantage. The authors who have current publications on psychiatric malpractice are; Bekjord J, Bettinelli E, Mammen O, Painter T, and Tew J. When we examine the co-authorship analysis, the number of authors and the few connections are striking, and it can be said that the cooperation between researchers working on this subject is less than in other fields of medicine. The reason for this may be that the authors have different agendas in terms of malpractice, there is no possibility of cooperation and the number of researchers working on this subject is insufficient. Harvard University is seen to be at the forefront due to its multiple connections with other institutions can be explained by the tendency of the researchers working in this institution to cooperate with other institutions, the relatively high number of them and their strong communicative connections. The most frequently used keywords in research are malpractice, psychiatry and forensic psychiatry, respectively. This might be due to choosing the keywords for searches in this subject, those are the first words that come to mind. In the co-citation analysis, it was determined that the most co-cited authors were Appelbaum PS and Gutheil TG. This could be a result of that, these authors collaborate frequently and are some of the best-known authors in the area of psychiatric malpractice in terms of quantity and quality of publications. It is known that the book named *Clinical Handbook of Psychiatry and the Law* by these two authors is a guide for professionals working in this research area.^[18]

In our study, a significant positive correlation was determined between the productivity of countries, their economic power and their level of development. As an expected result, this situation reveals once again that the issue of malpractice is more on the agenda in countries with high economic power and a high level of development. The United States is the most cited country in the citation analysis made in the context of countries can be explained by the high number of publications and their high quality. According to the number of citations and publications, other productive countries are Sweden, Spain, Italy, England, Turkey, and Romania. These findings show that the issue of psychiatric malpractice is also on the agenda in these countries and the authors' interest in this subject.^[18-23] Other countries have limited number of publications compared to the United States. This may be related to the legal regulations in these countries, the lower number of malpractice cases, and the presence of fewer authors and institutions on this subject.^[18,24,25]

Finally, some limitations of our research should be mentioned. Our analysis includes only the publications available from the Web of Science Core Collection database. Publications from other databases such as Scopus and PubMed are not included. Since our research is a bibliometric analysis study, it does not include detailed information on the contents of the publications and focuses mostly on quantitative data for the relevant research area.

CONCLUSION

In this study, it was seen that the publications in the field of psychiatry and malpractice were quite inadequate, the number of researchers working in this field and the connections between these researchers were weak. We believe that this results are important in terms of creating a research effect for the authors. With further investigations conducted on psychiatric malpractice, we hope that psychiatrists will be more informed on the subject so that errors resulting in legal consequences in this area would be decreased.

ETHICAL DECLARATIONS

Ethics Committee Approval: Since our research article is a bibliometric study, there is no need for an ethics committee approval.

Informed Consent: Since our research article is a bibliometric study, there is no need for an informed consent.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

Author Contributions: All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

REFERENCES

- Kornhauser LA. Danzon's Medical Malpractice: Theory, Evidence, and Public Policy. *The RAND Journal of Economics* 1986;17(2):287-92.
- Türkmen HÖ. Malpraktis kavramı neleri çağrıştırıyor. *Türkiye Biyoetik Derneği e-Bülteni* 2009;19:5-16.
- Bulut M, Mercan N, Yüksel Ç. Malpractice in Psychiatry. *Curr Approach Psychiatry* 2020;12(2):195-204.
- İlnem C, İlnem M. Psikiyatri pratiğinde hatalı uygulamalar. *Dusunen Adam* 1999;12:4-15.
- Cesur E, Taşdemir İ, Büyükkakıncak E, Asliyüksel H, Turan Ş. Clinical characteristics and forensic psychiatric examination of cases evaluated due to alleged psychiatric medical malpractice. *J Clin Psy* 2022;25(4):395-403.
- Bennett RG, O'Sullivan J, DeVito EM, Remsburg R. The increasing medical malpractice risk related to pressure ulcers in the United States. *J Am Geriatr Soc* 2000;48(1):73-81.
- Studdert DM, Mello MM, Sage WM, et al. Defensive medicine among high-risk specialist physicians in a volatile malpractice environment. *JAMA*. 2005;293(21):2609-17.
- Tutan D, Bürkük S. A Bibliometric Analysis of Malnutrition in the Geriatric Population. *J Med Palliat Care* 2023;4(2):151-157.
- Donthu N, Kumar S, Mukherjee D, Pandey N, Lim WM. How to conduct a bibliometric analysis: An overview and guidelines. *J Business Res* 2021;133:285-96.
- Ash P, Frierson RL, Friedman SH. *Malpractice and Liability in Psychiatry* 1st ed. New York: Springer;2022.
- Soteriades ES, Falagas ME. A bibliometric analysis in the fields of preventive medicine, occupational and environmental medicine, epidemiology, and public health. *BMC Public Health* 2006;6:301-9.

12. World Bank. International Comparison Program database [cited 01.04.2023]. Available from:<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>.
13. United Nations Development Programme. Human Development Report 2021-2022 [cited 01.04.2023]. Available from:<https://hdr.undp.org/data-center/country-insights#/ranks>.
14. Ersoy LV. Tibbi Malpraktis. *Bull Thoracic Surg* 2014;5(1):29-32.
15. Değdaş UC. Hatalı tıbbi uygulamadan (malpraktis) doğan hukuki ve cezai sorumluluk. *Anadolu Üniversitesi Hukuk Fakültesi Derg* 2018;4(6):41-65.
16. Özçetin E. Sağlık Alanında Malpraktis. Yüksek Lisans Tezi. Beykent Üniversitesi Sosyal Bilimler Enstitüsü 2016.
17. Recupero PR, Harms SE. Outpatient Psychiatrists' Practices for Requesting Prior Treatment Records. *J Am Acad Psychiatry Law* 2015;43(4):444-450.
18. Appelbaum PS, Gutheil TG. *Clinical handbook of psychiatry & the law* 4th ed. Philadelphia: Lippincott Williams & Wilkins;2007.
19. Harpwood V. *Medicine, Malpractice and Misapprehensions* 1st ed. Abingdon: Taylor & Francis;2007.
20. Bogdan J. Medical malpractice in Sweden and New Zealand. *Center for Justice Democracy* 2011;11(21):1-9.
21. Pinchi V, Varvara G, Pradella F, Focardi M, Donati MD, Norelli G. Analysis of professional malpractice claims in implant dentistry in Italy from insurance company technical reports, 2006 to 2010. *Int J Oral Maxillofac Implants* 2014;29(5):1177-84.
22. Hanganu B, Iorga M, Pop LM, Ioan BG. Socio-Demographic, Professional and Institutional Characteristics That Make Romanian Doctors More Prone to Malpractice Complaints. *Medicina (Kaunas)*. 2022;58(2):287-302.
23. Erdoğan Kaya A, Erdoğan Aktürk B, Aslan E. Factors predicting the motivation to study abroad in Turkish medical students: a causal investigation into the problem of brain drain. *J Health Sci* 2023;6(2):526-31.
24. Olcay A, Güler G, Güler E. An alternative malpractice system suggestion for Turkey: Patient compensation system. *Anatol J Cardiol* 2015;15(9):775-6.
25. Palaniappan A, Sellke F. A review of medical malpractice cases in congenital cardiac surgery in the Westlaw database in the United States from 1994 to 2019. *J Card Surg* 2021;36(1):134-42.