

VIOLENCE IN HEALTH: A BIBLIOMETRIC ANALYSIS

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ABSTRACT

This study aims to reveal the current situation of the articles written on violence in health by using the bibliometric analysis method, which has become a common problem of all societies. Although there are many studies on various subjects using the bibliometric analysis method, there is no study conducted using Web of Science (WoS) data on violence in health. The data set of the study consists of 13,130 research articles published between 2017-2021 by scanning in WoS on February 3, 2021, using the themes of violence in health, violence and health, violence in healthcare organizations, and violence in health institutions by including titles, abstracts, and keywords. The data were analyzed using the VOSviewer software (version 1.6.17). The analysis indicated that the United States is the first with 7226 research articles among 165 countries in 5 years, while Turkey is 24th with 145. According to the number of institution-based studies, Columbia University, which ranks first, published 323 research articles, the studies published in the USA received the highest citations (52,093), and Turkey received 527 citations in 5 years. It was found that the most-cited author was Richard Lowry with 1334 citations. It was found that the most frequently used keywords in studies on violence in health were intimate partner violence, violence, violence in health, violence and health, mental health, and violence and domestic violence. This study also revealed that academic studies on violence in health tend to increase over the years.

Keywords: Bibliometric analysis, violence in health, violence, WoS

SAĞLIKTA ŞİDDET: BİBLİYOMETRİK BİR ANALİZ

ÖZET

Bu çalışmanın amacı, tüm toplumların ortak sorunu haline gelen “sağlıkta şiddet” ile ilgili yazılmış makalelerin bibliyometrik analiz yöntemi kullanılarak konuyla ilgili mevcut durumunun ortaya konulmasıdır. Bibliyometrik analiz yöntemi kullanılarak çeşitli konularda fazlaca çalışma yapılmasına karşın, sağlıkta şiddet alanı ile ilgili Web of Science (WoS) verileri kullanılarak yapılmış bir çalışma bulunmamaktadır. Çalışmanın veri seti 3 Şubat 2021 tarihinde “violence in healt, violence and health, violence in healthcare organization ve violence in health institutions” temaları kullanılarak başlık, özet ve anahtar kelimeleri içerecek bir biçimde WoS’da tarama yapılarak 2017-2021 yılları arasında yayınlanmış 13.130 araştırma makalesinden oluşmaktadır. Elde edilen veriler Vosviewer (1.6.17) yazılım programı aracılığıyla analiz edilmiştir. Yapılan analizle, 5 yıllık süreç içerisinde 165 ülke arasında Amerika’nın 7.226 araştırma makalesi ile birinci sırada yer aldığı, Türkiye’nin ise 145 çalışma ile 24. sırada yer aldığı tespit edilmiştir. Kurum bazlı çalışma sayılarına bakıldığında ise birinci sırada yer alan Columbia Üniversitesinin 323 araştırma makalesi yayımladığı, en fazla atfın (52.093) yine Amerika’da yayınlanmış çalışmalara yapıldığı, Türkiye’ye ise bu 5 yıllık süre içerisinde 527 atf yapıldığı belirlenmiştir. En çok atf alan yazar 1.334 atf ile Richard Lowry’dir. Sağlıkta şiddet ile ilgili çalışmalarda en sık kullanılan anahtar kelimelerin “intimate partner violance”, “violence” “Violence in health”, “violence and health”, “mental health and violence” ve “domestic violence” olduğu görülmektedir. Yapılan çalışma sonucunda sağlıkta şiddet konusunda üretilen akademik çalışmaların yıllar itibariyle artış eğiliminde olduğu gözlenmektedir.

Anahtar Kelimeler: Bibliyometrik analiz, sağlıkta şiddet, şiddet, WoS

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1. INTRODUCTION

Violence is a universal problem that disrupts the structure of societies and threatens the life, health, and happiness of individuals. Violence is a social phenomenon that does not and cannot disappear, which has had serious impacts on human life for thousands of years. Violence is constantly changing its form, like an actor in disguise. “Today it is shifting from the visible to the invisible, from the frontal to the viral, from brute force to mediated force, from the physical to the psychological, from the negative to the positive... creating the false impression that it has disappeared” (Chul-Han, 2012: 9). However, more than 1.6 million people die annually due to violence. Violence is the deliberate use of physical force or force against oneself, another person, a group, or community at the level of threat or activity and actions that result in or are likely to result in threats, injury, death, psychological harm, underdevelopment, or deprivation. As a result of this action, many people experience economic and social problems as well as physical, sexual, and mental health problems (Web 1).

Violence is a phenomenon that occurs at every stage of human life, and it is seen sometimes within the family, sometimes between individuals, sometimes at school, and sometimes at the workplace. Considering the place where the violence occurs, workplace violence appears as a major problem. Workplace violence is any act of physical violence, harassment, intimidation, or other threatening, destructive behavior that occurs in the workplace. It can range from threats and verbal abuse to physical attacks and murders (Web 1). Violence and harassment in the workplace are a significant and ongoing threat to employee safety and health, corporate productivity, and reputation (Web 2). The World Health Organization divides workplace violence into three categories (Web 1). In type 1 violence, the perpetrator has no legitimate relationship to the business or its employees and is usually committing a crime in conjunction with the violence. Robbery is the clearest example of this which is also called external violence. In type 2 violence, the perpetrator is the person who is the recipient of a service provided by the workplace or worker, such as verbal threats or attacks on healthcare professionals by patients or their relatives. It is considered client-initiated violence. In type 3 violence, the perpetrator is another employee or manager in the workplace. For example, violent behavior such as bullying, intimidation, and harassment is shown as an example of this type of violence.

Although workplace violence is seen intensely in all sectors, it is especially more common in the health sector. Violence in health refers to the physical force against health workers such as physicians, nurses, or patients, relatives, visitors, etc., in various public or private health institutions, organizations, and service areas such as hospitals, emergency services, private practice, home care services with all kinds of physical, psychological, sexual, and economic attacks against service recipients, as well as physical attacks against institution buildings and equipment. Victims of violence in health can be individuals who provide health services such as physicians, nurses, health technicians, or service recipients such as visitors, patients, or patient relatives. The perpetrator may be the patient, patient relatives, healthcare workers, or someone from out of the workplace (Bulut, 2019: 114-115).

Violence against healthcare workers brings about many negative consequences, particularly physical, psychological, and economic problems (Shi et al., 2017; Cebrino & Cruz, 2020). After the violence, undesirable situations such as decreased work motivation (Jaradat et al., 2016), professional

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burnout (Zafar et al., 2016), depression (Tang et al., 2019), and quitting the job (Alameddine et al., 2015) may occur in healthcare workers. These affect the quality of health services and put health care delivery at risk (WHO, 2020). It also causes absenteeism and increased costs in the workplace (Schmidt & Diestel, 2014). For example, the use of metal detectors by security guards to prevent violence in health institutions and organizations is one of the cost increases caused by violence (Sumner et al., 2015).

Today, workplace violence against healthcare professionals is a global problem targeting people who play a key role in making the healthcare system work, providing healthcare services to the community, and improving health outcomes (Pınar et al., 2017; Ali Jadoo et al., 2018). According to the study conducted by the International Committee of the Red Cross (ICRC) in 2020, more than 600 incidents of violence against healthcare workers in 40 countries took place between February and July. According to this study, in 2020, the highest rate of violence in health in the last 20 years took place. The ICRC wanted to draw attention to violence in health and launched a campaign named *Health Care in Danger* (Web 3).

According to the violence in health report prepared by the Safeguarding Health in Conflict Coalition in 2020, while the COVID-19 pandemic was still ongoing, 1172 incidents of violence occurred worldwide against healthcare professionals and healthcare institutions. Approximately 412 of the 1172 cases that occurred were directly related to response measures such as arson of COVID-19 testing centers, targeting of healthcare workers on the way home from clinics, and violent reactions to mask measures (Web 4).

According to the report by the Union of Health Care and Social Services (Sağlık-Sen), 183 acts of violence took place against health institutions and organizations, and health workers in 2021. The forms of violence were 153 physical and verbal violence, 25 verbal violence, 4 mobbings, and 1 harassment. In the violence that took place, 341 perpetrators were involved, and 306 health workers in various fields were victims. Perpetrators of violence mostly consisted of patients and their relatives (Web 6). As in the whole world, the numbers do not fully reflect the reality in Turkey. It is known that the officially recorded events are much lower than the facts due to reasons such as the lack of studies in this field and the lack of methods to measure violence (Bowie, 2000; Brady & Dickson, 1999; Beech & Leather, 2006; Pınar et al., 2017).

Violence against employees in healthcare institutions has recently become the most discussed issue in the literature. Violence in the health sector is generally psychological in nature, and it is the field importance of which is not sufficiently understood since it is not recorded in many countries (Adib et al., 2022). However, studies reveal that health workers are at 16 times more risk than other sector workers (Elliott, 1997). The number of studies on violence in health has increased significantly in recent years (Bowie, 2000; Brady & Dickson, 1999; Beech & Leather, 2006; Pınar et al., 2017; Shi et al., 2017; Cebrino & Cruz, 2020; Phillips; 2016).

Although the number of publications on violence in health has increased, the number of articles published using the bibliometric analysis method is negligible. Bibliometric analysis studies on violence are generally related to *domestic violence*, *violence against women*, *peer bullying*, *sexual violence*, and *partner violence* (Brilhante et al., 2016; López-Cepero and FJ, 2009; Martins and

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Nascimento, 2017; Moura et al., 2020; Wu et al., 2020), and there is only one study addressing violence in health (Cebrino & Cruz, 2020).

Bibliometric analysis was firstly used by Pritchard (1960) and proposed instead of the bibliography. This analysis “has the potential to provide a systematic, transparent and reproducible review process based on comprehensive measurement of scientific activity” (Aria and Cuccurullo, 2017: 959). Thanks to bibliometrics, studies made in various periods were analyzed within the framework of the criteria (Köse et al., 2020). It is an essential analysis method to reach holistic results and obtain information about the orientation of the studies carried out in a particular field. “Bibliometric analyzes are reliable and informative analyzes that focus on the numerical analysis of scientific publications (Wilsdon et al., 2015: 5) and “evaluate the performance of publications and follow authors and institutions” (Özsoy and Demir, 2018: 2340). Thanks to these analyzes, “it is possible to statistically examine data such as author, subject, cited author, cited sources, and to reveal the general structure of the field in the light of the statistical results” (Yeşiltaş and Yılmaz, 2021: 4905-4906).

The bibliometric analysis study on violence in health was carried out only by Cebrino & Cruz (2020). In their study, Cebrino & Cruz analyzed 1791 articles indexed in the Scopus database between 1992 and 2019. Apart from this study, there was no related study in the literature review. Therefore, this study will fill this gap in the literature. Another importance is that it may help guide researchers who want to work on this issue by revealing the contribution of Turkey to the international academic community regarding violence in health.

2. METHOD

In this study, the studies published in the Web of Science (WoS) database on violence in health between the years 2017-2021 were examined using the bibliometric analysis method. The study data was limited to the Social Social Sciences Citation Index (SSCI) category from the Web of Science Core Collection (WOS) database and obtained by Boolean scanning with the code (TS=(Violence in Health) OR TS=(Violence and Health) OR TS=(Violence in Healthcare Organizations) OR TS=(Violence in Health Institutions)).

The data scanning was carried out, covering five years between 2017-2021 to reach a holistic interpretation by including keywords, titles, and abstracts. The Social Sciences Citation Index (SSCI) category written in English was scanned, and 15,099 studies were found, but when filtered as research articles, 13,130 articles were found. The data were analyzed using VOSviewer software (version 1.6.17).

In line with the purpose of the study, answers to the following questions were sought:

- What is the numerical distribution of the articles published on violence in health by years?
- What is the numerical distribution of the articles published on violence in health by countries?
- What is the numerical distribution of citations of the articles published on violence in health by countries?
- What is the numerical distribution of citations by the authors of the articles published on violence in health?
- What is the co-authorship numerical distribution of the articles published on violence in health by countries?
- What is the numerical distribution of the articles published on violence in health by journals?
- What is the numerical distribution of the articles published on violence in health by institutions?
- What are the most frequently used keywords in the articles published on violence in health?

3. RESULTS

The distribution of academic studies scanned in the Social Sciences Citation Index (SSCI) on violence in health published in WoS between 2017 and 2021 is given in Figure 1. Accordingly, it shows a gradual increase in the number of scientific studies on violence in health. A total of 13,130 studies were published in 5 years. According to Figure 1, 1960 studies in 2017, 2171 studies in 2018, 2627 studies in 2019, 3194 studies in 2020, and 3178 studies in 2021 on violence in health were conducted. These studies indicate a slight increase between 2017-2018 and a significant increase since 2019.

Scientific studies are carried out for the needs existing in societies and cannot be considered separately from their problems. Therefore, the increase in the number of publications is only an indication of the increase in violence in the social structure. The data given in Figure 1 is an indicator of the extent of violence in general, and violence in the health sector in particular. Surprisingly, the violence has increased at the same rate, especially in the current pandemic conditions, despite the great need for health professionals and the services they provide.



Figure 1: Number of publications between 2017 and 2021

In Table 1, the numerical distribution of the articles published in SSCI between 2017 and 2021 is shown by the top ten countries. Since there are 165 countries in this category, the top 10 countries in terms of the number of publications are discussed. Considering the first ten countries with the

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highest number of publications, the USA is the first with 7210 publications, followed by the UK with 1347, Canada is the third with 1146, Australia is the fourth with 1021, South Africa is fifth with 607, and followed by Brazil with 433 publications, China with 404, Spain with 399, Sweden with 347, and Germany with 287 publications. Turkey ranks 24th with 145 publications out of 165 countries. These numbers reveal the place of Turkey in the international academic community in terms of studies on violence in health.

Table 1 shows that the number of studies increased significantly between 2017 and 2021. For example, there was a gradual increase in the number of publications almost every year in the USA. The most remarkable data in the table is in Spain, the number of studies of which was 89 in 2020, reached 130 in 2021 with an increase of approximately 50%. It is possible to say that the pandemic in Spain under very severe conditions had an impact on academic studies.

Table 1: Distribution of top 10 publishing countries by years

Year Country	2017	2018	2019	2020	2021	Total
USA	1148	1232	1462	1713	1671	7226
England	206	207	298	340	305	1356
Canada	161	200	219	291	285	1156
Australia	178	158	188	238	265	1027
South Africa	109	125	120	140	118	612
Brazil	73	77	79	100	104	433
China	51	59	64	114	116	404
Spain	46	60	74	89	130	399
Sweden	52	51	73	89	82	347
Germany	28	45	59	76	79	287
Turkey	15	17	29	42	42	145

According to Table 2, Columbia University-The USA (323 articles) comes first among the institutions where researchers, who publish academic studies on violence in health, study or are supported. The University of Michigan (310 studies) is in second place, again from the USA. In third place is the University of Toronto-Canada with 289 studies. The data given in Table 2 support Table 1.

Table 2 : Institutions of authors publishing on violence in health (top 10 institutions)

Institution	Article
Columbia University	323
The University of Michigan	310
The University of Toronto	289
Johns Hopkins University	247
The University of North Carolina	233
The London School of Hygiene & Tropical Medicine	227
Johns Hopkins Bloomberg School of Public Health	225
The University of Melbourne	214
University of Washington	208
The University of California San Francisco	205

When the number of country-based citations is examined in Table 3, it is seen that there is a similar situation to the number of publications. The studies belonging to the top ten countries published between 2017 and 2021 received 96,269 citations. The United States received the most

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citations (52,093), England ranks second with 10,905 citations, Australia is third with 7532, Canada is fourth with 7420, and South Africa with 5217, China is sixth with 3166, followed by Spain with 2582 citations, Brazil with 2547, and Italy with 2433 citations, while the Netherlands, which is in the tenth place, received 2374 citations. Turkey is again in 39th place in the citation ranking, and the number of citations received by the studies is significantly low (527 citations).

Table 3: Most-cited top 10 countries between 2017 and 2021

Year	2017-2021
Country	
USA	52093
England	10905
Australia	7532
Canada	7420
South Africa	5217
China	3166
Spain	2582
Brazil	2547
Italy	2433
Netherlands	2374
Turkey	527

Below are the top 10 most-cited authors and the number of publications by these authors in Table 4. Richard Lowry is the most-cited author (1334) with 14 publications, followed by Rachel Jewkes with 57 publications with 658 citations. Michele R. Decker is the third with 46 studies and 532 citations. When the number of citations and articles are evaluated together, Lowry ranks first with an average of 95 citations per publication, Merrick takes the second most citations with a small number of articles, who is ranked 7th in the table with 65 citations, and Ports ranks third with an average of 56 citations. The data in Table 4 indicate how important quality is in terms of quality and quantity.

Table 4: Distribution of citations by authors between 2017 and 2021

Author	Publication	Citation
Lowry, Richard	14	1334
Jewkes, Rachel	57	658
Decker, Michele	46	532
Finkelhor, David	13	461
Ports, Katie A.	8	448
Gibbs, Andrew	40	406
Merrick, Melissa	6	395
Patel, Vikram	9	381
Shannon, Kate	41	372
Hamby, Sherry	13	372

According to the data in Table 4, Lowry's most cited (936 citations) study, which is in the first rank according to the number of citations, is the study titled *Youth Risk Behavior Surveillance-United States-2017* published in 2018, while the second most cited (191 citations) study is *Transgender Identity and Experiences of Violence Victimization, Substance Use, Suicide Risk, and Sexual Risk Behaviors Among High School Students-19 States and Large Urban School Districts, 2017* published

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in 2019. Ranked second in the citation, the first study of Jewkes with the most citations (87 citations) was published in 2017 titled *Pathways between childhood trauma, intimate partner violence, and harsh parenting: findings from the UN Multi-country Study on Men and Violence in Asia and the Pacific*. Another most-cited (52 citations) study by Jewkes is *Intersections of Sex Work, Mental Ill-Health, IPV and Other Violence Experienced by Female Sex Workers: Findings from a Cross-Sectional Community-Centric National Study in South Africa*.

The citation networks between countries are given in Figure 2. It shows that the most cited is (52.093) the US (red cluster), which has citation networks with 26 countries. The United States is followed by the United Kingdom (green cluster) with 21 networks. While Canada, which is in the same cluster as the United States, has 20 citation networks with other countries, Turkey, which is in the blue cluster, has 19 citation networks with other countries. France, which is given in the yellow cluster, has 13 networks. On the other hand, Australia, which has the third-highest citation ranking, is in the purple cluster, and the number of countries with which it has only 3 networks. The only country that does not have a network is Mongolia.

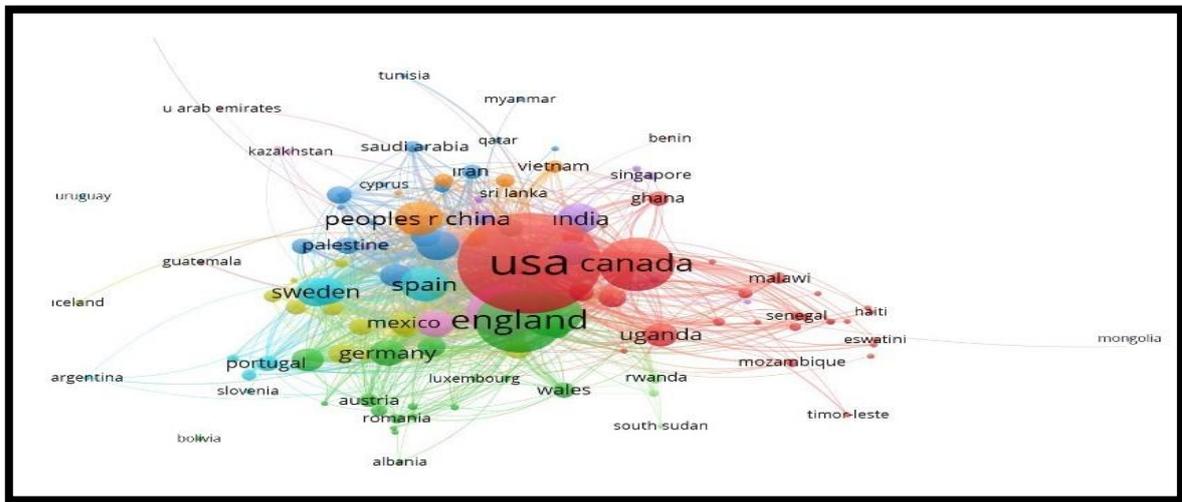


Figure 2: Citation networks by countries

The analysis of the community showing the distribution of keywords used in academic studies on violence in health is given in Figure 3. As a result of the analysis of the community, it is seen that the most frequently used keywords in the field are *intimate partner violence*, *violence*, *violence in health*, *violence and health*, *mental health and violence*, and *domestic violence*.

As of the second half of 2019, the words *intimate partner violence*, *workplace violence*, and *domestic violence* were used more intensely, while during and after 2020, *mental health and violence*, *covid-19*, *alcohol and drugs*, and *battered women* were frequently used in academic studies.

Table 5: Top 10 sources publishing the most articles on violence in health (journals)

Source	Document
Journal of Interpersonal Violence	1175
Plos One	307
International Journal of Environment	303
Child Abuse & Neglect	257
BMC Public Health	193
Violence Against Women	191
Journal of Family Violence	167
BMJ Open	152
Social Science & Medicine	134
Children and Youth Services Review	134

In Table 6, the citation analysis of the journals that published articles on violence in health is given. According to the table, it is seen that *the Journal of Interpersonal Violence*, which has 1175 articles, has the highest number of citations (5284), *The Lancet* is the second with 12 documents and 4383 citations, and *Child Abuse & Neglect* is the third with 3054 citations. When the number of publications and citations are compared, however, *The Lancet* ranks first, and *Morbidity and Mortality Weekly Report: Surveillance Summaries* ranks second.

Table 6: Citation analysis by top 10 sources publishing the most articles on violence in health

Source	Citation	Document
Journal of Interpersonal Violence	5284	1175
The Lancet	4383	12
Child Abuse & Neglect	3054	257
Plos One	2550	307
BMC Public Health	1343	193
International Journal of Environment	1272	303
Social Science & Medicine	1231	134
BMJ Open	1042	152
MMWR Surveillance Summaries	1032	6
Journal of Family Violence	855	167

4. DISCUSSION AND CONCLUSION

Violence in health has become a common problem of all societies. Numerous academic studies in this field should be seen as an indicator of the situation. The decrease or increase in the number of scientific publications indicates the situation of the problem in the social structure. This study reveals the increase in the number of articles on violence in health worldwide between 2017 and 2021. Likewise, the increasing citation trend in this field illustrates how violence against healthcare workers by patients or visitors has become a global issue. 8-38% of healthcare workers were reported to experience some form of violence at some point in their careers (WHO, 2020). In addition, according to a recent systematic review and meta-analysis study, 61.9% of healthcare workers have reported that they have been exposed to violence; nurses (59.2%) and doctors (56.8%) were the targets of violence more frequently than other healthcare workers (44.4%) (Liu et al., 2019).

By using the bibliometric method, this study aims to analyze the academic articles scanned in the WoS database on violence in health between 2017 and 2021 in five years period. 13,130 of the 15,099 studies obtained as a result of the research constitute the data set of the research. The results suggest

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that the numbers increase significantly every year according to the year-based distribution of the studies conducted in the field of health and violence. This situation is the most concrete example of violence level in health regarding societies. The increase in the number of published articles is in parallel with the increase in cases of violence in health (WHO, 2020; Liu et al., 2019; Edvard et al., 2016; Talas et al., 2011).

When we look at the distribution of publications among countries, there are 164 countries producing publications in this field, and America is the most productive among these countries and ranks first with 7,226 articles, followed by England, Canada, Australia, South Africa, Brazil, Spain, and Sweden in terms of productivity. The results, Australia (70.9%), North America (67.3%), Asia (64.9%), Africa (59.2%), and Europe (48.1%), are consistent with the prevalence of violence against healthcare professionals (Liu et al., 2019; Cebrino & Cruz, 2020). In addition, considering the institutions supporting the studies in this field, Columbia University should be stated as the most productive institution with 323 articles. Columbia University is followed by the University of Michigan, the University of Toronto, Johns Hopkins University, and the University of North Carolina, respectively. The fact that the first 5 institutions have the highest number of publications in these countries gives information about the cases of violence in health in these countries.

Citations to publications also give clues about the level of violence in health. Publications from the US received the highest number of citations (52,093), followed by England, Australia, Canada, South Africa, China, Spain, Brazil, Italy, and the Netherlands. On the other hand, Turkey is 39th, and it received 527 citations in 5 years. The increasing citation trend for publications on violence in health is an indicator of the globalization of violence (Liu et al., 2019; Cebrino & Cruz, 2020). Considering the citations based on the authors, Richard Lowry is the most cited one (1334) with 14 articles. Lowry's work titled *Youth Risk Behavior Surveillance-United States* received 936 citations in total. When analyzed according to the journals, it was found that *the Journal of Interpersonal Violence*, which published 1175 articles, received the highest number of citations (5284). It should also be emphasized that the increase in the number of citations in parallel with the increase in the number of publications is another significant point.

Violence in health is a multidimensional and global problem and producing scientific publications with co-authors by many countries may be the solution. In the co-authorship analysis conducted on violence in health in WoS, it was determined that there were 13 clusters among countries. Accordingly, the country with the highest degree of cooperation is Turkey with 27 networks. It is followed by China, Brazil, Denmark, and Japan. Ranking first in publication and citation categories, the US has cooperation with 5 countries. While the studies carried out by co-authors in different countries and institutions contribute to the development of scientific communication (Yeşiltaş and Yılmaz, 2021), they also provide a holistic contribution to the solution. Additionally, thanks to co-authorship, both awareness and the number of citations to publications are increased.

When the results of the co-existence analysis are evaluated, it was found that the most recurring words in the search results within the framework of the title, summary, and keywords related to violence in health are *intimate partner violence*, *violence*, *violence in health*, *violence and health*, *mental health and violence*, and *domestic violence*. The result of this study is compatible with the data of the only bibliometric study on violence in health conducted by Cebrino and Cruz (2020), carried out using the Scopus database.

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In short, this study analyzed 13,130 academic articles indexed in the SSCI only in the WoS database, covering the 5 years between 2017-2021, by using the bibliometric analysis method. Bibliometric analysis is an essential analysis method in determining the trends in the scientific field. This study revealed the frequency of discussion of violence in health by countries and institutions, the intensity of scientific publications by authors, and the inclusion of these publications by journals. In addition, it should be emphasized that the number of publications related to violence in health remains at a significantly low level compared to the increasing cases of violence in health in Turkey.

On the other hand, there are many limitations to the study. One of the most notable limitations is that the data were only taken from the WoS database. Also, it only covers the articles scanned in the SSCI index, which is the social science index. Another limitation is that only research articles were included as the document type. The last limitation of the study is the only inclusion of English studies, which is the universal language of publication, into the analysis.

REFERENCES

- Adib SM, Al-Shatti AK, Kamal S, El-Gerges N, Al-Raqem M. (2002). Violence against nurses in healthcare facilities in Kuwait. *International Journal of Nursing Studies*,39(4): 469-78. PMID: 11909623 DOI: 10.1016/s0020-7489(01)00050-5
- Alameddine, M., Mourad, Y. & Dimassi, H. A. (2015). National study on nurses' exposure to occupational violence in Lebanon: prevalence, consequences and associated Factors. *PLoS One*. 10(9):e0137105. <https://doi.org/10.1371/journal.pone.0137105> PMID: 26355686
- Ali-Jadoo, S. A., Torun, P., Dastan, I. & Al-Samarrai, M. (2018). Impact of conflict related and workplace related violence on job satisfaction among physicians from Iraq—a descriptive cross-sectional multi centre study. *Journal of Ideas in Health*, 1(1):14–22. Available from: <https://www.jidhealth.com/index.php/jidhealth/article/view/4>
- Aria, M., ve Cuccurullo, C. (2017). Bibliometrix: An r-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. DOI: 10.1016/j.joi.2017.08.007
- Beech, B., & Leather, P. (2006). Workplace violence in the health care sector: A review of staff training and integration of training evaluation models. *Aggression and Violent Behavior*, 11, 27-43.
- Bowie, V. (2000). Current trends and emerging issues in workplace violence. *Security Journal*, 13(3), 7-23.
- Brady, C., & Dickson, R. (1999). Violence in health care settings. In P. Leather, C. Brady, C. Lawrence, D. Beale, & T. Cox (Eds.), *Work-related violence: Assessment and intervention* (pp. 9-10). London, England: Routledge.
- Brilhante, A. V. M., Moreira, G. A. R., Vieira, L. J. E. de S., ve Catrib, A. M. F. (2016). A bibliometric study on gender violence. *Saúde e Sociedade*, 25(3), 703–715. DOI: 10.1590/S0104-12902016148937
- Bulut, E. (2019). Sağlıkta Şiddet, Ed. Yılmaz Daşlı ve Erol Bulut (Ed.), *Sağlık Sosyolojisi*, (İç. 103-133), Ankara: Anı Yayıncılık.
- Cebrino, J. & Cruz, S. P. (2020). A worldwide bibliometric analysis of published literature on workplace violence in healthcare personnel, *PLoS ONE* 15(11): e0242781. <https://doi.org/10.1371/journal.pone.0242781>.
- Edward, K. L., Stephenson, J., Ousey, K., Lui, S., Warelow, P. & Giandinoto, J. A. (2016). A systematic review and metaanalysis of factors that relate to aggression perpetrated against nurses by patients/relatives or staff, *The Journal of Clinical Nursing*, 25(3–4):289–99. <https://doi.org/10.1111/jocn.13019> PMID: 26507792

- ... (akademik, hakemli, indexli, ululararası dergi)
- Elliott PP. (1997). Violence in health care. What nurse managers need to know. *Nursing management (Harrow)*. 28(12):38-41; quiz 42.
- Han, B. C. (2016). *Şiddetin Topolojisi*, (Çev.: Dilek Zaptçioğlu), İstanbul: Metis Yayınları.
- Jaradat, Y., Nielsen, M. B., Kristensen, P., Nijem, K., Bjertness, E., Stigum, H., Pettersen, R. B. (2016). Workplace aggression, psychological distress, and job satisfaction among Palestinian nurses: A cross-sectional study. *Applied Nursing Research*, 32:190–8. <https://doi.org/10.1016/j.apnr.2016.07.014> PMID: 27969027
- Köse, G., Kurutkan, M. N., ve Orhan, F. (2020). Kalp yetmezliği konusunda en çok atf alan ilk 100 makalenin bibliyometrik analizi. *Sağlık Akademisyenleri Dergisi*, 7(2), 92–104.
- Liu, J., Gan, Y., Jiang, H., Li, L., Dwyer, R., Lu, K., Yan, S., Sampson, O., Xu, H., Wang, C., Yang, Y., Yang, T., Chen Y., Song, F. & Lu, Z. (2019). Prevalence of workplace violence against healthcare workers: A systematic review and meta-analysis. *Occupational & Environmental Medicine*, 76:927–37. <http://doi.org/10.1136/oemed-2019-105849> PMID: 31611310
- López-Cepero, J., and FJ, R. D. (2009). Domestic violence: A Bibliographic and Bibliometric Review. *Psicothema*, 21(2), 248–254.
- Martins, A. G., ve Nascimento, A. R. A. do. (2017). Domestic violence, alcohol and other associated factors: A bibliometric analysis. *Arquivos Brasileiros de Psicologia*, 69(1), 107–121.
- Moura, L. K. B., Azevedo, U. N. de, Wingerter, D. G., Ferreira, M. A. F., Maciel, M. P. R., Moura, R. P., Silva, A. M. da, ve Alves, M. do S. C. F. (2020). Bibliometric analysis of the scientific evidence on violence perpetrated against the elderly. *Ciência and Saúde Coletiva*, 25(6), 2143–2152.
- Özsoy, Z. ve Demir, E. (2018). Which bariatric procedure is the most popular in the world? A bibliometric comparison. *Obesity Surgery*, 28, 2339-2352.
- Phillips J.P. (2016). Workplace violence against health care workers in the United States. *The New England Journal of Medicine*. 2016; 374:1661. <https://doi.org/10.1056/NEJMra1501998> PMID: 27119238
- Pinar, T., Acikel, C., Pinar, G., Karabulut, E., Saygun, M., Bariskin, E., Guidotti, T., Akdur, R., Sabuncu, H., Bodur, S., Eğri, M., Bakir, B., Açıköz, Em., Atceken, I. Ve Cengiz, M. (2017). Workplace violence in the health sector in Turkey: a national study. *Journal of Interpersonal Violence*, 32(15):2345–65, <https://doi.org/10.1177/0886260515591976> PMID: 26124224
- Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of Documentation*, 25(4), 348–349.
- Schmidt, K. H. & Diestel, S. (2014). Are emotional labour strategies by nurses associated with psychological costs? A cross-sectional survey. *International Journal of Nursing Studies*. 51(11):1450–61. <https://doi.org/10.1016/j.ijnurstu.2014.03.003> PMID: 24685111
- Shi, L., Wang, L., Jia, X., Li, Z., Mu, H., Liu, X., Peng, B., Li, A. & Fan, L. (2017). Prevalence and correlates of symptoms of post-traumatic stress disorder among Chinese healthcare workers exposed to physical violence: A cross-sectional study. *BMJ Open*, 7:e016810. <https://doi.org/10.1136/bmjopen-2017-016810> PMID: 28765135
- Sönmez, O. F. (2020). Bibliometric analysis of educational research articles published in the field of social study education based on web of science database. *Participatory Educational Research*, 7(2), 216-229.
- Sumner, S. A., Mercy, J. A., Dahlberg, L. L., Hillis, S. D., Klevens, J. & Houry, D. (2015). Violence in the United States: Status, challenges, and opportunities. *JAMA*. 314(5):478–88. doi:10.1001/jama.2015.8371. 8371 PMID: 26241599.

... (akademik, hakemli, indexli, uluslararası dergi)

- Talas, M. S. Kocagöz S. & Akgüç, S. (2011). A survey of violence against staff working in the emergency department in Ankara, Turkey. *Asian Nursing Research*, 5(4):197–203. <https://doi.org/10.1016/j.anr.2011.11.001> PMID: 25030520
- Tang, N, & Thomson, L. E. (2019). Workplace violence in Chinese hospitals: the effects of healthcare disturbance on the psychological well-being of Chinese healthcare workers. *International Journal of Environmental Research and Public Health*. 16(19):3687. <https://doi.org/10.3390/ijerph16193687> PMID: 31575019
- Web1. https://www.who.int/violence_injury_prevention/violence/world_report/en/summary_en.pdf (Erişim: 25.01.2022)
- Web2. https://www.ilo.org/global/topics/safety-and-health-at-work/resources/library/publications/WCMS_751832/lang--en/index.htm (Erişim: 27.01.2022).
- Web3. <https://library.icrc.org/library/docs/DOC/icrc-annual-report-2020-1.pdf> (Erişim: 25.01.2022)
- Web4. <https://www.safeguardinghealth.org/new-map-depicts-412-acts-pandemic-related-violence-and-threats-health-workers-and-services-around> (Erişim: 25.01.2022)
- Web5. <http://www.sagliksen.org.tr/haber/10418/saglik-sen-saglikta-siddet-raporu-2021> (Erişim: 25.01.2022)
- Wilsdon, J., Allen, L., Belfiore, E., Campbell, P., Curry, S., Hill, S. and Johnson, B. (2015). *The metric tide report of the independent review of the role of metrics in research assessment and management*. Hefce.
- World Health Organization (2020). Violence and Injury Prevention 2018: Violence against health workers [Internet]. World Health Organization, Available from: http://www.who.int/violence_injury_prevention/violence/workplace/en/
- Wu, Y., Chen, J., Fang, H., and Wan, Y. (2020). Intimate partner violence: A bibliometric review of literature. *International Journal of Environmental Research and Public Health*, 17(15), 5607. DOI: 10.3390/ijerph17155607
- Yeşiltaş, E. ve Yılmaz, A. (2021). Eğitimde Medya Okuryazarlığı ile ilgili Araştırmalara Yönelik Bibliyometrik Bir Analiz, *Uluslararası Toplum Araştırmaları Dergisi*, 11(18), 4903-4929.
- Zafar, W., Khan, U. R., Siddiqui, S.A., Jamali, S. & Razzak, J. A. (2016). Workplace violence and self-reported psychological health: coping with post-traumatic stress, mental distress, and burnout among physicians working in the emergency departments compared to other specialties in Pakistan. *The Journal of Emergency Medicine*, (1):167–77. <https://doi.org/10.1016/j.jemermed.2015.02.049> PMID: 26412103
- Çatışma Beyanı:** Bu çalışma ile ilgili taraf olabilecek herhangi bir kişi ya da finansal ilişki bulunmamakta, dolayısıyla herhangi bir çıkar çatışması olmamaktadır.

Destek ve Teşekkür: Çalışmada herhangi bir kurum ya da kuruluştan destek alınmamıştır.

Etik Kurul Kararı: Çalışma Etik kurul onayı gerektirmemektedir.

Katkı Oranı: Çalışmaya yazarlar eşit oranlarda katkı sağlamıştır.