



A Bibliometric Analysis of Cyberbullying Research in Turkey

Abdullah MANAP^{a*}

a* Assist. Prof. Dr., Batman University, Batman, Turkey, (<https://orcid.org/0000-0001-5531-5745>) * abdullahmanap@gmail.com

Review Article

Received: 24.03.2022

Revised: 30.05.2022

Accepted: 30.05.2022

ABSTRACT

This study aims to analyze cyberbullying research in Turkey through bibliometric analysis. To this end, the study dealt with six research questions which included the most frequently used keywords and co-occurrences of these keywords, Turkey's collaboration with other countries, the frequency distribution of articles and citations by year, the most cited articles, the most productive journals, and authors. The bibliometric data were limited to the Web of Science (WoS) database. The first search yielded a total of 3974 publications. However, excluding the publications which did not comply with the aim of the study resulted in 105 articles to be analyzed. The findings suggested that there were 268 keywords used at least once. The keywords occurring at least five times other than "cyberbullying" were "cyber victimization," "adolescent," "bullying," "reliability," "validity," and "internet addiction.". Turkey had at least one collaboration with 21 countries. The top five countries with at least two collaborations were England, the U.S.A., Australia, Hungary, Czech Republic, and Germany. The most productive year was 2021. The most cited article was published in 2010, and the most influential journal was "Education and Science." It was also revealed that the fifteen most productive authors had 57 publications. Considering the increasing interaction among people in virtual environments, cyberbullying research which has a nearly quarter-century history, should take more attention from Turkish scholars. Additionally, a gap was observed in the literature regarding studies conducted on parents. Thus, further studies may attempt to fill this gap.

Keywords: cyberbullying, Turkey, bibliometric analysis.

Türkiye’de Yapılan Siber Zorbalık Çalışmalarının Bibliyometrik Analizi

ÖZ

Bu araştırmanın amacı, Türkiye’deki siber zorbalık çalışmalarının bibliyometrik profillerini ortaya koymaktır. Bu amaç doğrultusunda altı alt amaç belirlenmiştir. Bu alt amaçlar; en sık kullanılan anahtar kelimeler ve bu anahtar kelimelerin ilişki ağlarını, Türkiye’nin diğer ülkelerle ilişki ağlarını, makale ve atıf sayısının yıllara göre dağılımını, en çok atıf alan makaleleri, en çok yayın yapan dergileri ve en üretken yazarları içermektedir. Araştırmada bibliyometrik yöntem kullanılmıştır. Veriler Web of Science (WoS) ile sınırlandırılarak sadece bu veritabanı üzerinden elde edilmiştir. İlk taramada 3974 yayın olduğu ortaya çıkarken, çalışmanın kriterlerine uymayan araştırmalar hariç tutulmuş ve analizler 105 yayın ile gerçekleştirilmiştir. Elde edilen bulgulara göre; 105 makale içerisinde en az bir kez kullanılan 268 anahtar kelimenin olduğu tespit edilmiştir. "Cyberbullying" dışında en az beş kez kullanılan anahtar kelimelerin; cyber victimization, adolescent, bullying, reliability, validity and internet addiction olduğu belirlenmiştir. 105 makale içerisinde Türkiye’nin 21 farklı ülke ile en az bir ilişki ağının olduğu ve en az iki ilişki ağına sahip beş ülkenin sırasıyla; England, USA, Australia, Hungary, Czech Republic and Germany olduğu tespit edilmiştir. En fazla çalışmanın 2021 yılında gerçekleştirildiği gözlenmiştir. En fazla atıf alan makalenin 2010 yılında yayınlandığı, en fazla makale yayını olan derginin "Education and Science" olduğu tespit edilmiştir. En üretken ilk 15 yazarın toplam 57 çalışmasının olduğu da son bulgu olarak ortaya konmuştur. Sonuç olarak insanlar arası etkileşimin sanal dünyada her geçen arttığı düşünüldüğünde; yaklaşık çeyrek asırlık bir geçmişi olan siber zorbalık araştırmalarının Türkiye’de daha fazla çalışılması gerektiği söylenebilir. Ayrıca aileler ile yapılan çalışmaların da yeterli düzeyde olmadığı ve ailelerle ilgili çalışmalara ağırlık verilmesi gerektiği düşünülmektedir.

Anahtar kelimeler: siber zorbalık, Türkiye, bibliyometrik analiz

To cite this article in APA Style:

Manap, A. (2022). A bibliometric analysis of cyberbullying research in Turkey. *Bartın University Journal of Faculty of Education*, 11(2), 461-472. <https://doi.org/10.14686/buefad.1092893>

1 | INTRODUCTION

Interaction through virtual environments brought about some conveniences and opportunities but simultaneously problems. Scientific research, policies, and practices suggested by academicians or educators could not prevent the problematic use of the internet (Lan et al., 2022; Ng et al. 2022). This failure can be attributed to young people's adapting to technological innovations more quickly and skillfully than adults, insufficient adult supervision, inappropriate child-rearing. The problematic use of the internet includes gaming, gambling, social media addictions, pornography, drug abuse/encouragement, fraud, and cyberbullying/victimization (Agastone et al. 2007). Among these increasing problems, violence-related ones stand out, and violence gained a different dimension via virtual environments. In this sense, cyberbullying is one of the leading problems (Sezgin Nartgün & Limon, 2020). The literature suggests that cyber victims doubled in nine years between 2009 and 2016 (Hatchin and Hinduja (2016). It was reported that the situation even worsened during the Covid-19 pandemic (Barlett et al. 2021). Cyberbullying is defined as aggression through modern communication tools (Belsey, 2004; Slonje & Smith, 2008). For an aggressive behavior to be considered bullying or cyberbullying, it must be repetitive, intentional, and hostile (Belsey, 2004; Patching & Hinduja, 2015). Cyberbullying emerges when a person or group deliberately intimidates, slanders, insults, threatens, or embarrasses others through information technology (Feinberg & Robey, 2008). Willard (2007) listed eight types of cyberbullying behaviors: flaming, harassment, denigration, impersonation, outing, trickery, exclusion, and cyberstalking.

Cyberbullying is similar to traditional bullying in many ways. However, it is distinct in that cyberbullying can be conducted through instant messaging on mobile devices, social media, and the internet and other electronic devices (Ayas & Horzum, 2010; Erdur-Baker & Kavşut, 2007; Kowalski et al. 2014). Cyberbullying is a type of bullying that is not face-to-face but takes place in virtual environments (Mason, 2008). Additionally, in traditional bullying perpetrator is always apparent, whereas in cyberbullying, it is not always possible to know who it is (Zuckerman, 2016). It is possible to bully with an anonymous name and profile picture in the virtual environment. On the other hand, there might be an association between traditional bullying and cyberbullying. When the bully and victim know each other in person, cyberbullying can turn into traditional bullying (Shariff & Hoff, 2007) or vice versa. However, Barlett (2017) argued that psychological processes associated with cyberbullying should be explained by considering them completely separate from traditional bullying within the Barlett and Gentile Cyberbullying Model framework. The model suggests a clear distinction between cyber and traditional bullying, which might also improve the effectiveness of prevention and intervention efforts. According to Barlett (2017) and Bartlett and Gentile (2012), although there is a close association between traditional and cyberbullying, cyberbullying is distinct in that the bully has anonymity and their physical condition is secondary. The authors also state that cyberbullying is a learning process and becomes a personal trait after some repetitions, which becomes a cycle. The Bartlett and Gentile Cyberbullying Model suggests that cyberbullying becomes habitual after repeated several times. On the other hand, the model is criticized for undervaluing the effect of personality traits that were significantly associated with cyberbullying (Tanrikulu & Erdur-Baker, 2021). A recent study also showed that cyberbullying is associated with self-control (Peker & Yıldız, 2021). The underlying causes of being a cyberbullying or victim can be associated with all the internal and external psychological factors.

Cyberbullying is considered a crime (Henry & Powell, 2016; Serebrennikova et al. 2021), and there should be at least one victim to define behavior in the virtual environment as cyberbullying. The victim should also suffer psychologically, physiologically, socially, or financially. Cyberbullying restricts the victim's freedom and causes financial or psychological harm. It is also a violation of others' rights. Cyberbullying has serious consequences both for the bully and victim. Previous studies in the literature discussed the psycho-social factors associated with cyberbullying, legal rights and responsibilities, and the informatics-based technical framework. There are also longitudinal studies recently. These longitudinal studies suggested that cyberbullying has detrimental effects such as depression, loneliness, anti-social or asocial behaviors, low self-esteem, life satisfaction, or self-esteem, academic failure, suicide (Hinduja & Patchin, 2019; Isik & Ozdemir, 2019; Wolke et al. 2017; Zych et al., 2017).

PREVIOUS BIBLIOMETRIC RESEARCH ON CYBERBULLYING

The scholars have been working diligently to reveal the causes and consequences of cyberbullying for nearly two decades. There is a considerable knowledge accumulation in national and international databases, giving rise to document, bibliometric, meta-analysis studies. However, bibliometric analysis requires rich literature on a

specific research field (Ellegaard & Wallin, 2015). When we consider the quarter-century history of research on cyberbullying, it allows researchers to conduct a bibliometric analysis. Thus, various disciplines show a growing interest in the bibliometric study. Bibliometrics reveal the concepts and the productivity and network of universities, authors, and countries on a specific research topic. Since software such as VOSviewer allows to obtain valid and reliable bibliometric findings, bibliometric analysis attracts increasing attention from researchers. A comprehensive literature review yielded four bibliometric studies on cyberbullying (See Table 1). These studies retrieved their data from reputable databases such as WoS or Scopus. They revealed the most frequent keywords, the most productive authors, articles, universities, and countries and their co-occurrences.

Caceres-Reche et al. (2019) searched Scopus and limited their search with the keywords of “*adolescent*” and “*child*” and the date between 2004-2018. The study by Lopez-Meneses et al. (2020) included 2004-2019 in the Scopus database and investigated socioeconomic influences of cyberbullying in the educational context globally. On the other hand, Gonzales-Moreno et al. (2020) examined the trends in cyberbullying research in WoS between 2003-2020. Lastly, Barragan-Martin et al. (2021) conducted a bibliometric analysis on research cyberbullying in adolescents between 2010-2020 indexed in WoS. Table 1 below presents these studies.

Table 1. Bibliometric studies on cyberbullying

Research Title	Author(s)	Year	Search word(s)	Database	Documents	Timespan	Limitations
The Phenomenon of Cyberbullying in the Children and Adolescents Population: A Scientometric Analysis.	Cáceres-Reche, M. P., Hinojo-Lucena, F. J., Navas-Parejo, M. R., & Romero-Rodríguez, J. M.	2019	cyberbullying AND children; cyberbullying AND adolescent	Scopus	1097	2004-2018	Adolescents and children
Socioeconomic effects in cyberbullying: Global research trends in the educational context.	López-Meneses, E., Vázquez-Cano, E., González-Zamar, M. D., & Abad-Segura, E.	2020	“cyberbullying”, “cyberbullying”, “social”, “economic” and “education”	Scopus	1128	2004-2019	Socio-economic effects
Cyberbullying and education: State of the art and bibliometric analysis.	González-Moreno, M. J., Cuenca-Piqueras, C., & Fernández-Prados, J. S.	2020	"cyberbull*"	WoS	2227	2003-2020	-
Study of Cyberbullying among Adolescents in Recent Years: A Bibliometric Analysis	Barragán Martín, A. B., Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Simón Márquez, M. D. M., Martos Martínez, Á., Sisto, M., & Gázquez Linares, J. J.	2021	cyberbullying AND adolescent OR youth OR teenagers OR adolescence	WoS	1276	2010-2020	Adolescents

This is a country-specific study including cyberbullying research conducted in Turkey and will contribute to the literature in that it will reveal the most influential studies by Turkish scholars. It will also exhibit the trends and gaps in cyberbullying WoS indexed literature in Turkey. The study will steer further research by showing the bibliometric profile of existing research on cyberbullying.

This study mainly aims to conduct a bibliometric analysis of research on cyberbullying in Turkey. To this end, the study sought answers to the following questions:

RESEARCH QUESTIONS

1. What are the most frequently used keywords in research on cyberbullying and co-occurrences of these keywords?
2. What is the collaboration pattern of Turkey with other countries?
3. What is the frequency distribution of articles and citations by year?
4. What are the most influential articles in Turkey?

5. What are the most influential journals publishing on cyberbullying?
6. Who are the most productive scholars in Turkey publishing cyberbullying research?

2 | METHOD

This study employed a qualitative design and used primary data sources to conduct data mining and descriptive analysis. It included only the WoS database to survey high-quality articles.

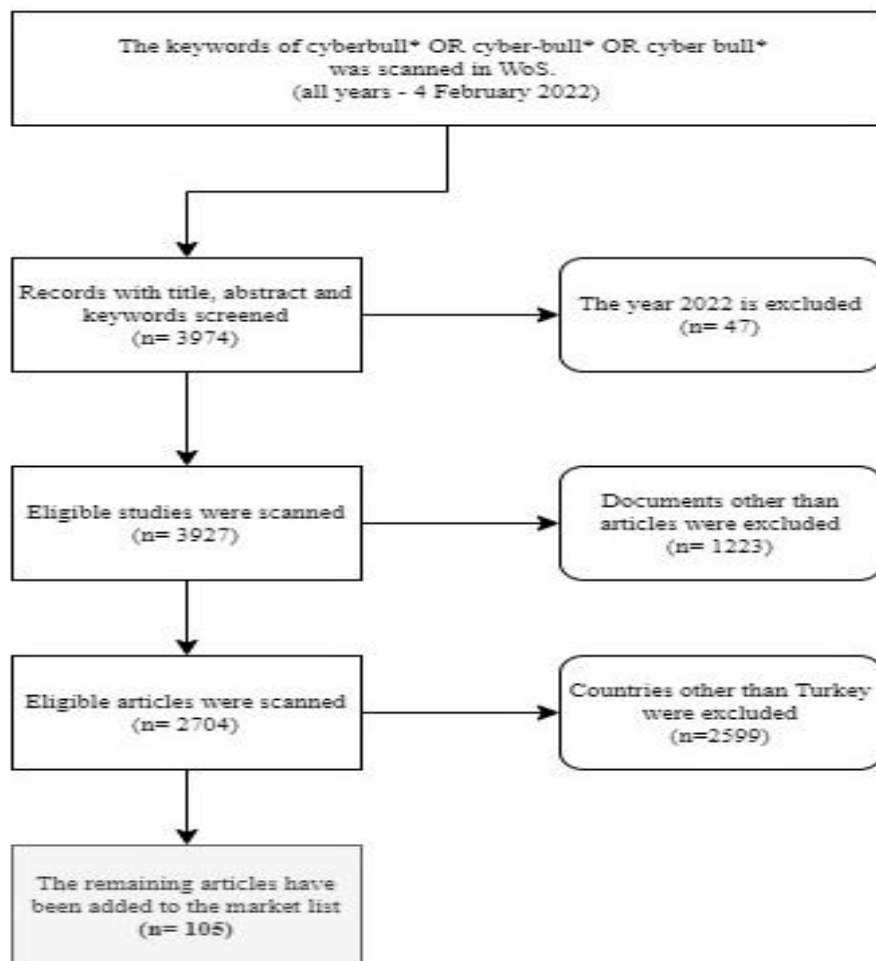


Figure 1. Flowchart of the study

First, the literature on cyberbullying indexed by the Web of Sciences (WoS) database was reviewed in February 2022. To reach the most relevant studies, search terms of “*cyberbull**”, “*cyber bull**” and “*cyber-bull**” in TOPIC (title, abstract, and keywords) were used. All terms were searched simultaneously using the “OR” link. The search results were added to WoS marked list (N=3974). Since the study was carried out in January-February 2022, it excluded publications in 2022 (N=47). “Early Access (N=130)”, “Book Chapters (N=160)”, “Proceedings Papers (N=508)”, “Review Articles (N= 182)”, “Editorial Materials (N=99)”, Meeting Abstract (N=82)”, “Book Reviews N=42)” and other documents such as “Corrections, News Items, Letters, Books, Data Papers, Withdrawn Publication (Total N=43)” were also refined. On the other hand, 23 publications appearing both in the article and other categories were included in the analysis. Following these filtering, 2704 articles emerged, and these articles were analyzed within the scope of the second research question (*What is the collaboration pattern of Turkey with other countries?*) in VOSviewer. A further filter was applied to exclude the research in other countries, resulting in 119 articles conducted in Turkey. All these articles' titles, abstracts, and keywords were checked to ensure relevancy. During this stage, it was noticed that 14 papers were in the Turkish language but not conducted in

Turkey. Thus, they were not included in the analysis carried out on 105 articles. It was also determined that the first study of Turkey origin was in 2007 in the WoS database.

In some bibliometric maps, a concept might likely emerge due to typing errors or different spellings (e.g., self-esteem, selfesteem, self esteem). This prevents researchers from reaching accurate findings. To avoid this, a strategy was used in the study. Using the “find+change” feature of the .txt file downloaded from WoS, the terms cyber-bullying and cyber bullying were combined as “cyberbullying” and the terms “cybervictimization” and “cyber-victimization” as “cyber victimization”. Then, the old and edited formats of the file were compared, and it was observed the problem was resolved, which increased the chance of reaching more accurate findings.

INCLUSION CRITERION

The articles included in the study were based on the following criterion:

- indexed in WOS database,
- dealing with only “*cyberbullying*”,
- conducted in Turkey.

RESEARCH ETHICS

Since this is a bibliometric study, it did not require ethical or legal consent.

3 | FINDINGS

Figure 2 below shows that 268 keywords occurred at least once in 105 articles. 176 keywords co-occurred with cyberbullying, and the total link strength was 259. On the other hand, there were 61 keywords co-occurring with “*cyber victimization*” and the total link strength was 99. Keywords occurring at least five times other than “*cyberbullying*” were “*cyber victimization (f=30)*”, “*adolescent (f=17)*”, “*bullying (f=12)*”, “*reliability (f=5)*”, “*validity (f=5)*”, and “*internet addiction. (f=5)*”. By total link strength, the first five keywords were the same. The most frequently co-occurring keywords with cyberbullying was “*cyber victimization*” with a link strength [Ls]= 26. Considering keywords of “*adolescent*” (Ls=13) and “*high school students*” (Ls=3), their total link strength is 16. “*Cyberbullying*” and “*bullying*” co-occurred nine times and “*cyberbullying*” and “*traditional bullying*” four times.

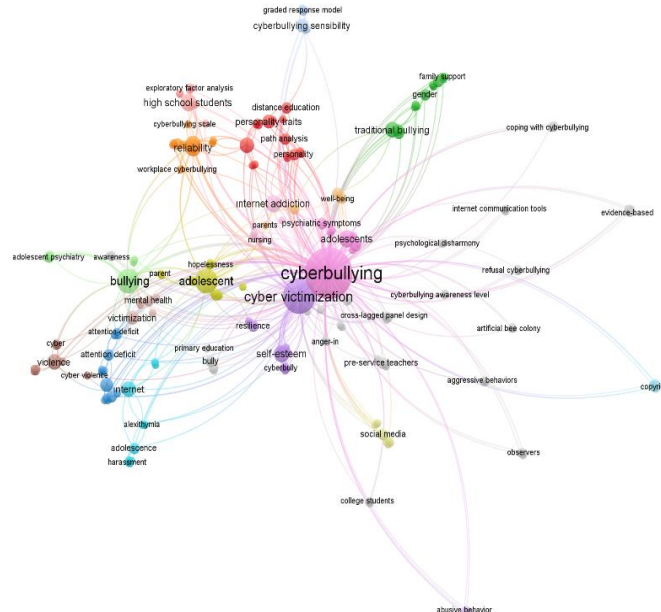


Figure 2. Network map between the keywords of articles published on cyberbullying in Turkey

Figure 3 shows co-authorship by countries. As the figure shows, Turkish scholars had co-authorship with scholars from 21 countries out of 92, corresponding to 22.8%. By their Ls with Turkey, these countries can be listed as follows: England (f=7), the U.S.A. (f=5), Australia (f=4), Hungary (f=2), Czech Republic (f=2), Germany (f=2), Austria, China, Cyprus, Estonia, Greece, India, Italy, Japan, Kuwait, Luxembourg, Malaysia, Pakistan, Saudi Arabia, Sweden, and Taiwan. As listed above, Turkish scholars had the most co-authorships with scholars from England, the U.S.A., and Australia. Shortly, Turkey had collaborations on cyberbullying research with 21 countries out of 92.

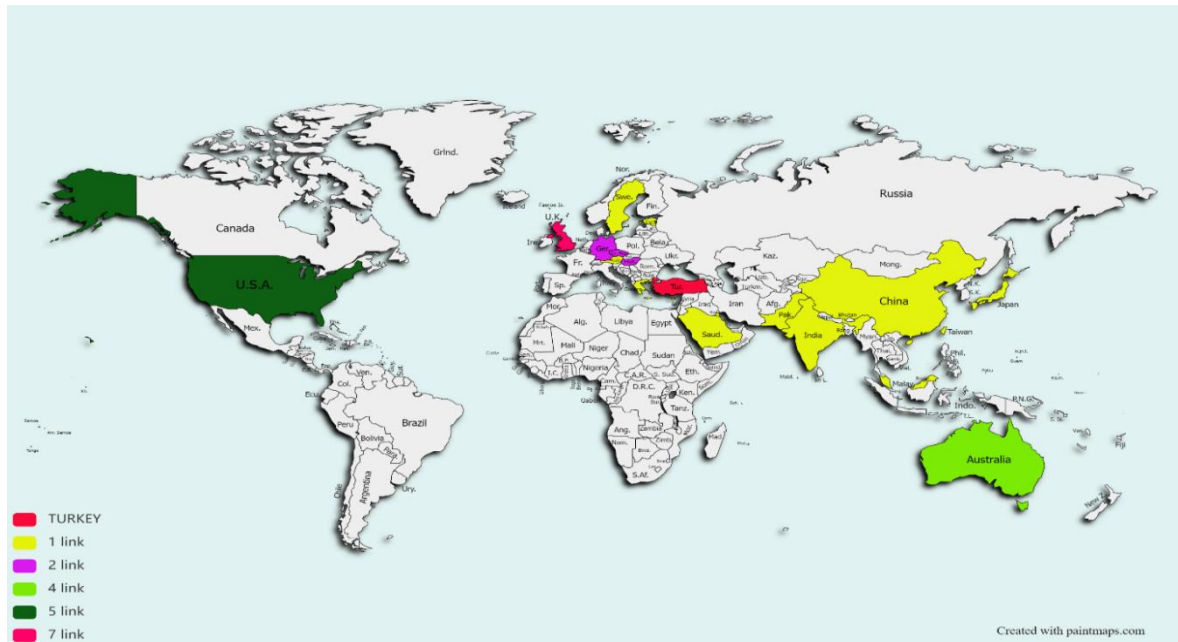


Figure 3. Collaboration world map of cyberbullying research conducted in Turkey

Figure 4 shows the frequency distribution of articles and citations by year. As shown in the figure, the first publication was in 2007. A steady increase was observed until 2007, and the most productive year was 2021, with 17 articles. Although there were dramatic declines in 2013 (f=5) and 2014 (f=1), there was an increase as of 2015. On the other hand, despite the declines in articles in 2012 and 2014, the number of citations also steadily increased as of 2007, with the exceptions of 2014 and 2021. There were more than 200 citations in 2019, 2020, and 2021 separately. To conclude, 105 articles were cited 1495 times (Average per item= 14.24). The number of articles and citations did not include 2022.

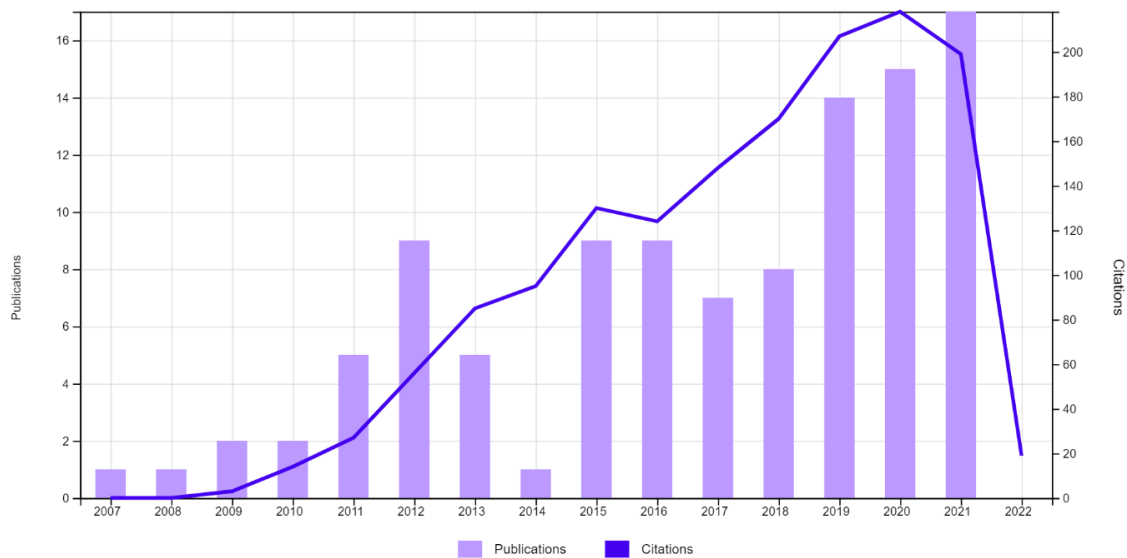


Figure 4. Frequency distribution of articles and citations by year

Table 10 shows the ten most cited articles. As the table shows, there was one article with more than 200 citations and two articles with more than 100 citations, all of which were single-authored articles. The first article was “Cyberbullying and its correlation to traditional bullying, gender, and frequent and risky usage of internet-mediated communication tools” by Erdur-Baker (2010); the second was “Psychological needs as a predictor of cyberbullying: A preliminary report on college students” by Dilmacı (2009) and the third one was “Psychiatric symptomatology as a predictor of cyberbullying among university students” by Arıcağ (2009). Erdur-Baker contributed to three of the ten most cited articles, while Topçu, Akbulut, and Kirişti contributed two.

Table 2. Ten most cited articles

No	Author(s)	Article Title	Source Title	Citations	Pub. Year	WoS Category
1	Erdur-Baker, O	Cyberbullying and its correlation to traditional bullying, gender, and frequent and risky usage of internet-mediated communication tools	New Media & Society	269	2010	Communication
2	Dilmacı, B	Psychological Needs as a Predictor of Cyberbullying: a Preliminary Report on College Students	Kuram ve Uygulamada Eğitim Bilimleri	112	2009	Education & Educational Research
3	Arıcağ, OT	Psychiatric Symptomatology as a Predictor of Cyberbullying among University Students	Eurasian Journal of Educational Research	104	2009	Education & Educational Research
4	Topcu, C; Erdur-Baker, O; Çapa-Aydın, Y	Examination of Cyberbullying Experiences among Turkish Students from Different School Types	Cyberpsychology & Behavior	99	2008	Communication, Psychology, Applied
5	Topcu, C; Erdur-Baker, O	Affective and cognitive empathy as mediators of gender differences in cyber and traditional bullying	School Psychology International	82	2012	Psychology, Educational
6	Şahin, M	The relationship between the cyberbullying/cyber victimization and loneliness among adolescents	Children and Youth Services Review	66	2012	Family Studies; Social Work
7	Cetin, B; Yaman, E; Peker, A.	Cyber victim and bullying scale: A study of validity and reliability	Computers & Education	54	2011	Computer Science, Interdisciplinary Applications; Education & Educational Research
8	Akbulut, Y; Erişti, B	Cyberbullying and victimization among Turkish university students	Australian Journal of Educational Technology	50	2011	Education & Educational Research
9	Ak, S; Özdemir, Y; Kuzucu, Y.	Cyber victimization and cyberbullying: The mediating role of anger, don't anger me!	Computers in Human Behavior	53	2015	Psychology, Multidisciplinary; Psychology, Experimental
10	Akbulut, Y; Şahin, YL.; Erişti, B	Cyberbullying Victimization among Turkish Online Social Utility Members	Educational Technology & Society	49	2010	Education & Educational Research

Figure 5 displays journals in which the articles were published. The findings suggested that *Education and Science* was the most productive journal with six articles. Five articles were published in *Computers in Human Behavior* and *Eurasian Journal of Educational Research*; four articles in *Kuram ve Uygulamada Eğitim Bilimleri*; three in *Anatolian Journal of Psychiatry* and *School Psychology International*. The journals publishing cyberbullying research were mainly educational sciences, psychology, and informatics.



Figure 5. TreeMap of journals

Table 3 shows below that the 15 most influential authors published 57 articles. The findings suggested that Özgür Erdur ranked first with seven and Adem Peker second with six articles. It was also striking that Özgür Erdur-Baker ranked first by the number of articles, citations, and total link strength. One of the authors had more than 500, and four authors had more than 100 citations. Although Çiğdem Topçu, Osman Tolga Arıcak, and Bahadır Erişti each had three articles, it was noteworthy that they had more than 100 citations. By citations, Çiğdem Topçu ranked second whereas by total link strength Osman Tolga Arıcak did. However, the ranks in the table may vary by publications, citations, or total link strength.

Table 3. The most productive authors

No.	Author	Articles	Citations	Total Link Strength
1	Özgür Erdur-Baker	7	508	145
2	Adem Peker	6	78	85
3	Yavuz Akbulut	4	102	79
4	Zehra Uçanok	4	23	16
5	Didem Arslantaş	4	10	19
6	Alaettin Ünsal	4	10	19
7	Tuncay Ayas	4	8	30
8	Çiğdem Topçu	3	185	59
9	Osman Tolga Arıcak	3	139	96
10	Bahadır Erişti	3	101	78
11	Serkan Volkan Sari	3	45	36
12	İbrahim Tanrıku	3	30	24
13	Yüksel Eroğlu	3	28	71
14	Zeynep Demirtaş	3	10	11
15	Fuat Bakioğlu	3	3	12
Total		57	1280	-

4 | DISCUSSION & CONCLUSION

This study aimed to reveal the bibliometric profile of research on cyberbullying conducted in Turkey. To this end, the study focused on keywords, the collaboration between Turkey and other countries, the frequency distribution of articles and citations by year, the most influential articles and journals, and the most productive authors. A comprehensive literature review showed that there were already four bibliometric analyses on cyberbullying research. Two of them were limited to adolescents (Cacares-Reche et al. 2019; Barragan Martin et al. 2021), one to the effect of socio-economic status on cyberbullying (Lopes-Meneses et al. 2020), and the other one on cyberbullying in general (Gonzales-Moreno et al. 2020). The current study is original because it is country-specific (Turkey) and includes 2021, which shows that it is up to date. Considering the current and previous studies, they are different in terms of their limitations, timespan and databases included. Thus, this study has the potential to contribute to the existing literature using bibliometric analysis, which is still in its infancy, providing a different perspective.

The findings suggested that emerging topics of cyberbullying were cyber victimization and adolescents, which was consistent with previous literature (Gonzales-Moreno et al. 2020; Cacares-Reche et al. 2019). It was also shown that the focus of studies conducted in Turkey was consistent with international studies. A frequent term used in studies conducted in Turkey was “bullying.” Some researchers claim that cyberbullying is not bullying and should be considered as a completely different phenomenon from traditional bullying (Barlett, 2017). However, the current study’s findings showed that cyberbullying in Turkey was associated with conventional bullying.

The terms *self-esteem*, *violence*, *attention deficit*, *psychiatric symptoms*, *mental health*, *hyperactivity disorder*, *aggression*, *anger*, *addiction*, *narcissism*, *anxiety disorder*, *sexual abuse*, *loneliness*, and *harassment* showed that cyberbullying threatens mental health, and it is a problem that is a direct field of research for psychology. Additionally, keywords such as *distance education*, *computer security*, *cellular phone*, *machine learning*, *online social games*, *digital/internet safety*, *internet technologies*, *cyber* indicated that cyberbullying is also within the interest of information technologies. As for family, parenting, and legal dimensions, there were only a few

keywords (*digital parenting, parenting strategy, family relations, cybercrime, criminal law*), and their link strength was low. In other words, it can be concluded that studies on cyberbullying in Turkey mostly focused on the aspects affecting mental health. There were few studies concerning the technical dimension. Parenting roles and the legal aspect of cyberbullying were ignored. On the other hand, cyberbullying did not attract enough attention in sociology. However, it is a violence-related phenomenon, and some of the terms in the studies indicate cyberbullying's association with sociology. The words in the bibliometric map which are thought to be related to sociology can be listed as *violence tendency, violence, Turkish ethnic children, Turkish, Turkey, social media analysis, ethnic minorities, ethnic-based cyberbullying*.

Cyberbullying has increased during the Covid-19 pandemic (Alsawalqa, 2021; Barlett et al. 2021; Utemissova et al. 2021). However, only one keyword related to Covid-19 emerged (Sengil Akar & Kurtoglu Erden, 2021), which implies that further studies should be conducted investigating the situation within the pandemic framework in Turkey.

The findings on Turkey's collaborations with other countries revealed that it did not collaborate with countries from South America and Africa. Additionally, it can also be noted that Turkey did not collaborate with Turkic Republics. As for neighboring countries, co-occurrences emerged between Turkey, Greece, and Cyprus. On the other hand, European countries and Turkey did not collaborate much. The collaborations were mostly with the U.S.A., England, and Australia (Ls=16), corresponding to 43% of the total Ls (f=37). It was concluded that authors from 92 countries published a bibliometric study on cyberbullying. The number of studies conducted in Turkey was relatively high compared to other countries. Still, Turkey collaborated with only 21 countries, and nearly half of the link strength was with only three countries, indicating a need to diversify the country collaborations.

Lastly, the findings indicated that the first article on cyberbullying in the WoS database appeared in 2003, but the first Turkey origin study was in 2007. Thus, it can be concluded that scholars from Turkey fell behind the up-to-date trend in cyberbullying research, which also influences the number of articles and citations. There were fluctuations between 2012 and 2018. As of 2019, there was a growing body of literature on cyberbullying. With the more common use of personal smartphones in the 2010s, technology-related problems became more widespread, steered researchers' attention to the studies on problematic use of technology. In other words, the growth in cyberbullying literature can be attributed to the more widespread and frequent use of digital tools.

Limitations and Suggestions

The current study is limited to the WoS database and Turkey origin research on cyberbullying. The previous four and this bibliometric study included only one database (WoS or Scopus). Thus, further studies can be conducted, including both databases. In countries with enough knowledge of cyberbullying, country-specific bibliometric studies can be carried out. Researchers from sociology can discuss cyberbullying in terms of its social consequences, which can contribute to existing literature. Researchers from psychology mainly dealt with psychological problems and psychological symptoms of cyberbullying. Through applied and descriptive studies, further research should emphasize digital parenting, parenting roles, and family roles. It can also be suggested that the researchers discuss cyberbullying within the Covid-19 pandemic in Turkey. Finally, researchers from Turkey should develop more international collaborations, which will improve Turkey's contribution to international literature.

REFERENCES

- Ak, Ş., Özdemir, Y., & Kuzucu, Y. (2015). Cybervictimization and cyberbullying: The mediating role of anger, don't anger me!. *Computers in human behavior*, 49, 437-443. Doi: 10.1016/j.chb.2015.03.030
- Akbulut, Y., & Eristi, B. (2011). Cyberbullying and victimisation among Turkish university students. *Australasian Journal of Educational Technology*, 27(7). Doi: 10.14742/ajet.910
- Akbulut, Y., Sahin, Y. L., & Eristi, B. (2010). Cyberbullying victimization among Turkish online social utility members. *Journal of Educational Technology & Society*, 13(4), 192-201

- Alsawalqa, R. O. (2021). Cyberbullying, social stigma, and self-esteem: the impact of COVID-19 on students from East and Southeast Asia at the University of Jordan. *Heliyon*, 7(4), e06711. Doi: 10.1016/j.heliyon.2021.e06711
- Agatston, P. W., Kowalski, R., & Limber, S. (2007). Students' perspectives on cyber bullying. *Journal of Adolescent Health*, 41(6), 59-60. Doi: 10.1016/j.jadohealth.2007.09.003
- Arıcak, O. T. (2009). Psychiatric symptomatology as a predictor of cyberbullying among university students. *Eurasian Journal of Educational Research (EJER)*, (34)
- Ayas, T. & Horzum, B., (2010). Sanal Zorba/Kurban Ölçek Geliştirme Çalışması. *Akademik Bakış Dergisi*, 19, 1-17. (Ayas, T. & Horzum, B., (2010). Cyber bully/victim scale development study. *Journal of Academic Perspective*, 19, 1-17)
- Barlett, C. P., Simmers, M. M., Roth, B., & Gentile, D. (2021). Comparing cyberbullying prevalence and process before and during the COVID-19 pandemic. *The Journal of Social Psychology*, 161(4), 408-418. Doi: 10.1080/00224545.2021.1918619
- Barlett, C. (2017). From theory to practice: Cyberbullying theory and its application to intervention. *Computers in Human Behavior*, 269-275. Doi: 10.1016/j.chb.2017.02.060
- Barlett, C. P., & Gentile, D. A. (2012). Attacking others online: The formation of cyberbullying in late adolescence. *Psychology of Popular Media Culture*, 1, 123e135. Doi: 10.1037/a0028113
- Barragán Martín, A. B., Molero Jurado, M. D. M., Pérez-Fuentes, M. D. C., Simón Márquez, M. D. M., Martos Martínez, Á., Sisto, M., & Gázquez Linares, J. J. (2021). Study of cyberbullying among adolescents in recent years: a bibliometric analysis. *International journal of environmental research and public health*, 18(6), 3016. Doi: 10.3390/ijerph18063016
- Belsey, B., (2004). "Cyberbullying an emerging threat to the always on generation", http://www.cyberbullying.ca/pdf/Cyberbullying_Article_by_Bill_Belsey.pdf
- Cáceres-Reche, M. P., Hinojo-Lucena, F. J., Navas-Parejo, M. R., & Romero-Rodríguez, J. M. (2019). The Phenomenon of Cyberbullying in the Children and Adolescents Population: A Scientometric Analysis. *Research in social sciences and technology*, 4(2), 115-128. <https://doi.org/10.46303/ressat.04.02.8>
- Cetin, B., Yaman, E., & Peker, A. (2011). Cyber victim and bullying scale: A study of validity and reliability. *Computers & Education*, 57(4), 2261-2271. Doi: 10.1016/j.compedu.2011.06.014
- Dilmac, B. (2009). Psychological needs as a predictor of cyber bullying: A preliminary report on college students. *Educational Sciences: Theory and Practice*, 9(3), 1307-1325
- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact?. *Scientometrics*, 105(3), 1809-1831. Doi: 10.1007/s11192-015-1645-z
- Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. *New media & society*, 12(1), 109-125. Doi: 10.1177/1461444809341260
- Erdur-Baker, Ö., Kavşut, F. (2007). "Cyber Bullying: A new Face of peer Bullying". *Eurasian Journal of Educational Research*, 27, Sayfa: 31 – 42
- Fenberg, T. & Robey, N., (2008), Cyberbullying: Whether it Happens at School or Off-Campus, Cyberbullying Disrupts and Affects All Aspects of Students' Lives. *National Association of School Psychologists (NASP)*, 10 (14)
- González-Moreno, M. J., Cuenca-Piqueras, C., & Fernández-Prados, J. S. (2020, March). Cyberbullying and education: State of the art and bibliometric analysis. In *Proceedings of the 2020 8th International Conference on Information and Education Technology*, 191-195. Doi: 10.1145/3395245.3396449.

- Henry, N., & Powell, A. (2016). Sexual violence in the digital age: The scope and limits of criminal law. *Social & legal studies*, 25(4), 397-418. Doi: 10.1177/0964663915624273
- Hinduja, S., & Patchin, J. W. (2019). Connecting adolescent suicide to the severity of bullying and cyberbullying. *Journal of School Violence*, 18(3), 333–346. Doi: 10.1080/15388220.2018.1492417
- Isik, B., & Ozdemir, N. (2019). How does cyberbullying affect the values of university youth?: Itsâ€™ analysis in terms of education and mental health. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 6(1), 405-412. Doi: 10.18844/prosoc.v6i1.4193
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: a critical review and meta-analysis of cyberbullying research among youth. *Psychological bulletin*, 140(4), 1073. Doi: 10.1037/a0035618
- Lan, M., Law, N., & Pan, Q. (2022). Effectiveness of anti-cyberbullying educational programs: A socio-ecologically grounded systematic review and meta-analysis. *Computers in Human Behavior*, 107200. Doi: 10.1016/j.chb.2022.107200
- López-Meneses, E., Vázquez-Cano, E., González-Zamar, M. D., & Abad-Segura, E. (2020). Socioeconomic effects in cyberbullying: Global research trends in the educational context. *International journal of environmental research and public health*, 17(12), 4369. Doi: 10.3390/ijerph17124369
- Mason, K. L., (2008). Cyberbullying: A Preliminary Assessment For School Personel. *Psychology in the School*, 45 (4). 323 – 348
- Ng, E. D., Chua, J. Y. X., & Shorey, S. (2022). The effectiveness of educational interventions on traditional bullying and cyberbullying among adolescents: A systematic review and meta-analysis. *Trauma, Violence, & Abuse*, 23(1), 132-151. Doi: 10.1177/1524838020933867
- Patchin, J. W., & Hinduja, S. (2016). Summary of our cyberbullying research (2004-2016). <http://cyberbullying.org/summary-of-ourcyberbullying-research>
- Patchin, J. W., & Hinduja, S. (2015). Measuring cyberbullying: Implications for research. *Aggression and Violent Behavior*, 23, 69–74. Doi: 10.1016/j.avb.2015.05.013
- Peker, A., & Nebioğlu-Yıldız, M. (2021). Mediating Role of self-control in the relationship between aggressiveness and cyber bullying. *Psychiatry and Behavioral Sciences*, 11(1), 40-49. Doi: 10.5455/PBS.20210114051215
- Şahin, M. (2012). The relationship between the cyberbullying/cybervictimization and loneliness among adolescents. *Children and Youth Services Review*, 34(4), 834-837. Doi: 10.1016/j.childyouth.2012.01.010
- Sengil Akar, S., & Kurtoglu Erden, M. (2021). Distance Education Experiences of Secondary School Math Teachers during the Pandemic: A Narrative Study. *Turkish Online Journal of Distance Education*, 22(3), n3. Doi: 10.17718/tojde.961809
- Serebrennikova, A. V., Kyrychenko, T. M., Leonov, B. D., Shablysty, V. V., Chenshova, N. V. (2021). Cyberbullying As A Way Of Causing Suicide In The Digital Age. *Medicine And Law*, 40 (4). 449-470
- Sezgin Nartgün, Ş., & Limon, İ. (2020). Prevention of cyberbullying at schools. In S.Polat & G. Günçavdı (Eds), *Empowering Multiculturalism and Peacebuilding in Schools* (pp.225-237). IGI Global. Doi: 10.4018/978-1-7998-2827-3.ch010
- Shariff, S., & Hoff, D.,L., (2007). Cyber Bullying: Clarifying Legal Boundaries for School Supervision in Cyberspace. *International Journal of Cyber Criminology*. 1 (1). 76 – 118
- Slonje, R. & Smith, K. P., (2008). Cyberbullying: Another Main Type of Bullying. *Scandinavian Journal of Psychology*, 49. 147 – 154. Doi: 10.1016/j.chb.2022.107238
- Tanrikulu, I., & Erdur-Baker, Ö. (2021). Motives behind cyberbullying perpetration: a test of uses and gratifications theory. *Journal of interpersonal Violence*, 36(13-14), NP6699-NP6724. Doi: 10.1177/0886260518819882

- Topcu, Ç., & Erdur-Baker, Ö. (2012). Affective and cognitive empathy as mediators of gender differences in cyber and traditional bullying. *School Psychology International*, 33(5), 550-561. Doi: 10.1177/0143034312446882
- Topçu, Ç., Erdur-Baker, Ö., & Çapa-Aydin, Y. (2008). Examination of cyberbullying experiences among Turkish students from different school types. *CyberPsychology & Behavior*, 11(6), 643-648.
- Utemissova, G. U., Danna, S., & Nikolaevna, V. N. (2021). Cyberbullying during the COVID-19 pandemic. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, 11(2), 77-87. Doi: 10.18844/gjgc.v11i2.5471
- Willard, N., (2007). "Educator's Guide to Cyberbullying and Cyberthreats". <http://new.csriu.org/cyberbully/docs/cbcteducator.pdf>
- Wolke, D., Lee, K., & Guy, A. (2017). Cyberbullying: A storm in a teacup? *European Child & Adolescent Psychiatry*, 26(8), 899–908. Doi: 10.1007/s00787-017- 0954-6
- Zuckerman, D. (2016). Bullying harms victims and perpetrators of all ages. *Health Progress*, 97(4), 63-66
- Zych, I., Baldry, A. C., & Farrington, D. P. (2017). School bullying and cyberbullying: Prevalence, characteristics, outcomes, and prevention. *Handbook of behavioral criminology*, 113-138 Doi: 10.1007/978-3-319-61625-4