



## Research Output on the Yazidi Minority After the ISIS Terrorist Attack: A Bibliometric Analysis

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### ABSTRACT

This paper aims to conduct a bibliometric analysis of scholarly literature on the Yazidi community published between 2014 and 2021. The data for this study were retrieved from "Scopus" using relevant search terms in titles, abstracts, and authors' keywords. The analysis of the literature is based on different parameters, allowing for a comprehensive mapping of the existing literature on the Yazidi community. The results indicate that the number of studies conducted on the Yazidi community is inadequate given the gravity of the situation. Furthermore, there is a significant discrepancy between the number of funded studies and unfunded studies. The majority of the extracted papers reviewed were affiliated with universities and other institutions of higher education. Through co-word analysis via Vos Viewer, this study identifies four clusters within literature. The findings of this study have significant implications for governmental and institutional agencies, as well as academics, in furthering their understanding and response to the Yazidi crisis. This paper provides valuable insights into recent research trends, emerging opportunities, and current topics in Yazidi studies for academics. Finally, this study highlights the broader social and long-term implications of the Yazidi crisis, underscoring the importance of continued research and policymaking on this issue.

## **1. Introduction**

Human rights advocates used the 2014 slaughter carried out by the extremist group Islamic State of Iraq and Syria (ISIS, also known as Daesh), as a signal to draw attention to the extent of the region's organized and systemic violence. Yazidis are one of the most susceptible communities at risk of ethnic cleansing, given the magnitude and scope of brutality committed by ISIS against all demographic groups and minorities, including Christians, Sabeen, Shia Shabak, and Turkmen (Isakhan, 2020; Al-Ali, 2016). It was horrifying that the Yazidis (Ezidis), a 4,000-year-old religious minority, were exposed to such horrible atrocities and dehumanization in the area.

Many Yazidis have been brutally murdered and their bodies dumped in mass graves; women have been raped and sold as sex slaves; and children and women have been stolen from their families. As a result, by 2017, 300,000 Yazidis in Iraqi Kurdistan have been forced to relocate, either as IDPs (Internally Displaced Persons) or as refugees fleeing to neighboring countries (Nicolaus & Yuce, 2017). Although the exact number of victims of the genocide is unknown, according to Kurdish authorities and human rights organizations, 3,100 Yazidis were killed and 6,800 were abducted as a result of the slaughter (Cetorelli, Sasson, & Burnham, 2017). "The United Nations have called the onslaught a campaign of genocide against the Kurdish religious minority" (Elias & Kajjo, 2021, Para. 2). The sheer number of atrocities increased the urgency for responsible authorities, scholars, and citizens to take the necessary steps to restore justice and security, allowing Yazidis to return home and start over.

When looking into the current Yazidi situation, it has become clear that not enough international attention has been given. Seven years have passed, and it is still unknown how many people have gone missing or are being held captive by black-banner terrorist organizations. Bashar, a former victim of sexual assault and current advocate for Yazidi women, states: "Sinjar has not been reconstructed to allow residents to return. Individuals have grown weary of living in tent camps. Many of our women, girls, and children have yet to be rescued from Daesh" (Elias & Kajjo, 2021, Para. 4). Despite expectations, the

Yazidis have been and continue to be victims of the conflict in northern Iraq. With this caveat in mind, Yazidi topics and issues have been a research trend for nearly a decade, with numerous scholarly journals publishing a wide range of facets of these issues. In recognition of these studies' scholarly contributions, this article attempts to demonstrate trends in Yazidi studies and evaluate the publication from multiple perspectives in order to identify the publication's strengths and potential gaps in its coverage of Yazidi issues.

## **2. Historical Brief on Yazidi Minority**

The term "Yazidi" or "Yezidi" or "Izidi" or "Ezdayi" or "zidi", is derived from Kurdish and means "the one who created me," i.e., the Creator or God (Rashow & Kreyenbroek, 2007). The Yazidis are one of the oldest indigenous ethnic and religious groups in the Middle East. The majority of Yazidis reside in the northwestern region of Iraq, near Shingal Mountain<sup>1</sup> and the Shekhan district. Additionally, there are Yazidi villages and towns in the Kurdish Region of Iraq's Talkeef and Bashiqa Districts and Duhok Governorate (KRI). Community estimates indicate that there are between 550,000 and 600,000 Yazidis in Iraq, despite a paucity of reliable demographic data (Malik, 2018). After Christians, Yazidis are considered the second-largest religious minority in Iraq (Ali, Pirbari, & Rzgoyan, 2021).



1. Location of Yazidis on Iraq's Map

<sup>1</sup> Or Sinjar (in Arabic)



*Source: Middle East Eye*

Compared to the Indian caste system, the Yazidi community is organized by social classes and ranks. The Mir (Prince and secular leader) and the Baba Sheikh sit atop the hierarchy (the spiritual leader). The forty sheikhs immediately beneath them are divided into three factions: Adani, Achammsana, and Qatani. In addition, forty pirs are responsible for regulating the religious affairs of the followers. The followers, or common Yazidis, are referred to as Mureed. The Mureed is prohibited from marrying members of the Sheikh and Pir classes. Pirs and Sheikhs are unable to intermarry (Servant Group International, 2017).

It is a very old monotheistic religion—which means that it recognizes only one entity or God. Given that they believe in a single deity who both created the world and rules it, Yazidis are said to practice monotheism. Instead of scripture, Yazidism relied for centuries on the transmission of its beliefs through hymns, stories, and poetry. Eventually, however, the Mushafs, which are Yazidi holy books, were written down, albeit with the explicit directive that they not be distributed publicly or viewed by anyone outside the Yazidi community (van Zoonen & Wirya, 2017). Kurmanji Kurdish is the language of religious texts, books, songs, and prayers. It is widely acknowledged that the Yazidi community's native tongue is Kurdish, but many also speak Arabic due to their proximity to Arab neighborhoods and Ba'athist Arabization campaigns. Yazidis have a strong connection to their land and geographical location, especially their main temple in Lalesh, which was constructed on the spot where they believe creation began after the Great Flood.

A central tenet of Yazidism is its belief in a single origin for both good and evil. Rather than believing in a source of good (God) and one of evil (Satan), Yazidis believe that the hearts, spirits, and minds of individuals determine the existence of good and evil on earth (Kizilhan, 2017). Yazidism's central principle is the power of choice. Melek Taus, the arch-angel of the Yazidis, assists humanity in choosing between good and evil. The story of Melek Taus, who is frequently depicted as a peacock and is therefore also known as the peacock angel, resembles the account of Shaytan (Satan) in Islam and has been the cause of



discrimination against Yazidis in Iraq (Gerdau, Kizilhan, & Noll-Hussong, 2017). Misinterpretation of their religion has led to the labeling of Yazidis as "devil-worshippers"—a stigma that has been difficult for the community to overcome. In addition, the history of Yazidis in Iraq has been one of massive discrimination, neglect, and violence (Ringrose, 2020; Ahmed & Singh, 2021)

### **3. Literature Review**

The plight of the Yazidi people has propelled the concept of terrorism back to the forefront of international debates. There is no agreed-upon definition of terrorism, despite the abundance of definitions. Considering terrorism as "the premeditated use or threat to use violence by individuals or subnational groups to achieve a political or social objective by intimidating a large audience beyond the immediate victims" (Sandler, 2014, p. 257) has led to the realization that the atrocities committed against the Yazidis constitute acts of terrorism. Terrorism research has been bolstered by the unprecedented scale of terrorism. Therefore, terrorism studies have benefited from a flood of literature from countries all over the world as a response to the rise in terrorist attacks. Terrorism worldwide peaked in 2014, with 33,555 deaths and an estimated \$US111 billion in economic damage (Bardwell & Iqbal, 2020). As such, bibliometric studies that provide an exhaustive survey of relevant literature in the field of terrorism appear indispensable.

Schmid and Jongman's pioneering 1988 work on the review-based literature of terrorism helped researchers pinpoint the vast majority of works on the subject that had been published after 1969, primarily from 1960 to 1990. (Ranstorp, 2007). In the Middle East of the twenty-first century, 90 percent of the literature on terrorism was published after September 11, 2001, according to research conducted by Silk (2008). There has been a fourfold increase in the number of articles published each year on terrorism by the leading journal, *Studies in Conflict and Terrorism* (one per month).

On the bibliometric analysis of terrorism in general and specifically after 9/11, Loan's (2012) research demonstrates a 90 percent increase in the rate of publishing full-text e-books in Google Books after 9/11 (amounting to 130



books). In addition, the results demonstrated Google's capability to cover all major facets of terrorism, including political, business, economic, technological, and religious issues. Recent bibliometric research by Loan and Shah (2018) examines the scholarly literature published by India and Pakistan on terrorism. The Web of Science (WoS) was mined for 105 relevant articles, which were then analyzed based on various parameters.

A substantial amount of bibliometric research has contributed to the infusion and evolution of terrorism studies and their impact on business-related issues (Klona, Menzies, & Zutshi, 2021) as well as the impact of terrorism on elections and political stability (Yi, Luo, & Wübbenhorst, 2020). Other studies have provided the performance analysis of the terrorism concept in multidisciplinary aspects for the periods 1951–2010 (Silke & Schmidt-Petersen, 2017) and 1981–1990 (Mumtaz & Sultan, 2017).

community is warranted in light of the dearth of bibliometric analysis. Extending and revising the aforementioned bibliometric studies with a focus on the Yazidi on terrorism and Yazidi-related research conducted in prior studies. That the researcher is aware of, this is the first academic study to examine this question.

#### **4. Research Design/Methodology/Approach**

The bibliometric study is a novel method for estimating, analyzing, and visualizing the development of scientific fields of knowledge (Koskinen, et al., 2008). It is frequently employed to reveal the level of development of the chosen field in a particular field of knowledge (Liu, Lu, Xu, Zhu, & Yao, 2018). This method involves initiating an evaluation of publications, including citations, publishers, and publication countries, to name a few (Lee, 2019; Iefremova, Wais, & Kozak, 2018). The database for the bibliometric study of scientific literature on "Yazidi Community" was extracted from the multidisciplinary database "Scopus," with access via the university library of Universiti Utara Malaysia (UUM), in order to provide a descriptive-quantitative analysis of the presence of Yazidi community content from 2014 to 2021, as opposed to evaluating the quality of the papers' content.



Scopus has been selected as the database for this study because it contains both ISI and Scopus indexed papers (Oakleaf, 2009). The Scopus database, which was created by Elsevier in 2004, contains more than 76.8 million references (51,3 million records post-1995 and 25.3 million records pre-1996, with the earliest record dating back to 1788) and serves as a scientific, multidisciplinary, and international literature portal with extensive coverage of more than 21,000 scientific journals. The research will utilize the software VosViewer, which was developed by Nees Jan van Eck and Ludo Waltman (van Eck & Waltman, 2010). This software assists the researcher in determining the most and least frequent words in the title, abstract, and keywords (Nadzar, Bakri, & Ibrahim, 2017). It is also capable of handling large corpora and delivering data relationships. However, based on the objectives of the study, the researchers must decide which feature would be most important to employ. The VosViewer's built-in features for identifying connections between data corpora are a major selling point for using it in the present investigation. The software also assists researchers in identifying emerging subject areas during a specified time period (van Eck & Waltman, 2010). As was mentioned before, this is the first time any kind of bibliometric analysis has been performed on the subject. The subject database was extracted using the combination of terms "Yazidi" or "Yezidi" or "Ezidi" or "Ezidi" and "Islamic State of Iraq and Syria" or "ISIS." The search was limited to English-language journal articles published between 2014 and 2021. There was a total of 170 articles retrieved. Of the 170 papers, 140 were deemed relevant to the study. Consequently, the following study objectives were formulated to identify:

- the academic contribution to the Yazidi community after the terrorist attack
- funded and non-funded research publications
- the chronological trace of the intensification of literature in countries of publications
- authorship trends and collaborative patterns
- the contribution of various institutions

- the core journals and subject domains of these journals
- the citation count of these research articles
- the themes in the database using co-word analysis
- the co-authorship patterns in data

## 5. Data Analysis

### 5.1 Academic Contribution

Articles made up 86.4 percent of all Yazidi-related publications. Figure 1 shows that reviews account for 7.1 percent of all articles, followed by letters (2.0 percent), conferences (1.4 percent), errata (1.4 percent), and notes (1.4 percent).

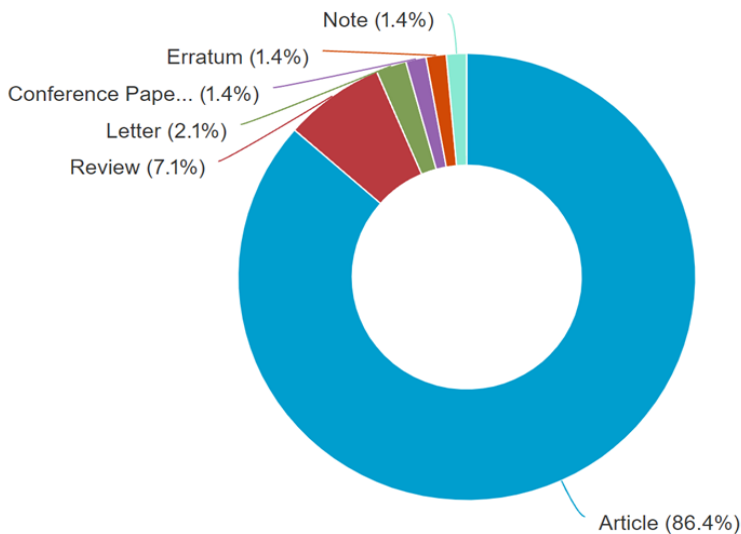


Figure 1. Research on the Yazidis in the wake of the ISIS genocide

### 5.2 Funded Versus Non-Funded Research

Seven of the total articles (19.2 percent) were the result of funded research, while the remaining eighty-eight percent (88.1 percent) received no financial support from any governmental, organizational, educational, or nonprofit entity (Figure 2). Non-funded research contributed to the majority of the literature on the subject. This may symbolize the lack of international attention paid to the





plight of the Yazidi people. There could be several probable reasons for the lack of funded research on the Yazidi crisis, including:

- 1- Complexity of the issue: The Yazidi crisis is a complex issue that involves multiple factors such as religious persecution, human rights violations, and displacement. Researching such a multifaceted issue may require a significant amount of resources and expertise, which may be a barrier to funding.
- 2- Lack of data: There may be a lack of reliable data on the Yazidi crisis, which could make it difficult for researchers to conduct meaningful studies. This, in turn, could discourage potential funders from investing in research on the topic.

Despite the defeat of ISIS in the region in 2017, the Yazidi crisis continued to endure for several years thereafter. One contributing factor to this ongoing crisis may have been the insufficient allocation of financial resources. Adequate financial support from governmental and non-governmental organizations is crucial in addressing the pressing needs of the Yazidi community. Further research on the challenges faced by the Yazidi people and their unique cultural and societal perspectives can aid in the development of effective long-term solutions to mitigate the current and potential future crises.

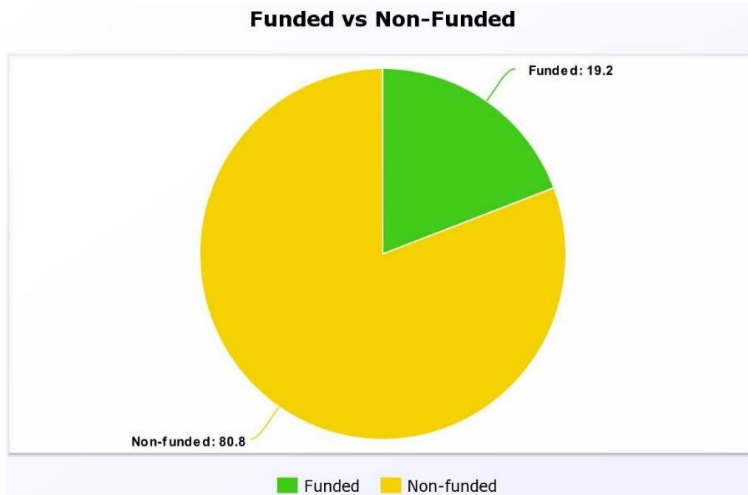


Figure 2. Funded vs non-funded research

### 5.3 Chronological Development

Academics and researchers have begun studying the "Yazidi community" since 2014, when the Sinjar massacre at the hands of ISIS first came to light. Only 41 papers had been published by 2014; the first appeared in 1997. Nonetheless, the global impact of the tragic situation facing the Yazidi community as a result of ISIS attacks led to the publication of 140 articles in several journals by various researchers between 2014 and 2021. Figure 3 shows that between 2018 and 2020, paper production will have increased by 18.6 percent, 19.3 percent, and 25.7 percent, respectively. Over the past few years, there has been a surge in the study of the Yazidi people in response to the widespread impact that ISIS's attacks have had on their society. However, there has not been a significant increase in the number of articles that examine the international repercussions of the genocide against this group.

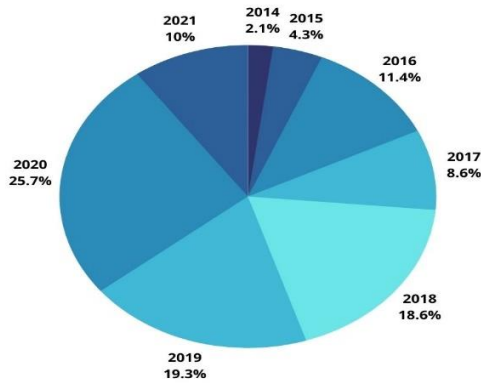


Figure 3. Chronological Development of Studies on Yazidis

#### 5.4 Place of Publication

The United States received 18.55 percent of the total number of publications, followed by Germany (14.9 percent), Iraq (12.37 percent), and the United Kingdom (10.30 percent). The higher number of publications related to the Yazidi issue coming from the United States, Germany, Iraq, and the United Kingdom could be due to geopolitical interests, academic and research interests, and funding opportunities. These countries may have political or strategic interests in the region where the Yazidis live, host large Yazidi communities, or have researchers with a particular interest in Yazidi culture, religion, or history. Additionally, they may have greater access to funding and resources to support their research on Yazidi-related topics. Global paper production has been rising since 2014, reaching a peak of nearly 36 in 2020. However, that number drastically dropped to 15 publications in 2021. The drop in Yazidi-related publications in 2021 may be attributed to various factors, such as disruptions caused by the COVID-19 pandemic, exhaustion of pressing issues related to the Yazidi crisis, changes in funding priorities or research interests, or it could be a temporary blip rather than a long-term trend. There is a possibility that interest in the Yazidi issue may increase again in the future. As the home country of the Yazidis, where they were subjected to persecution at the hands of ISIS, Iraq is mentioned in 12.37 percent of all articles about the Yazidi people. There has been an uptick in the number of papers coming out of Iraq, with predictions of

9 articles by the year 2020. But the 2021 paper has dropped significantly to 3, revealing a lack of proper academic consideration and the need for more attention by scholars. The fact that some authors have contributed to multiple articles through various partnerships should be noted (as shown in the table below).

**Table 1. Place of publication**

<b>Place of Publication</b>	<b>No</b>	<b>Percentage</b>
United States	36	18.55
Germany	29	14.94
Iraq	24	12.37
United Kingdom	20	10.30
Turkey	9	4.63
Armenia / Canada	8	4.12 (each)
Austria	7	3.60
Australia	5	2.57
France/Italy/Norway/ Russia/ Switzerland/	4	2.06 (each)
Hungary/Lebanon/ Netherlands/ Poland/ Israel	3	1.54 (each)
Czech Republic/ Georgia/ Sweden/	2	1.03 (each)
Afghanistan/China/Jordan/ Kuwait/KSA/South Africa/UAE	1	0.51 (each)

Even though the Yazidi community is still experiencing difficulties, the number of papers published on the topic in 2021 was significantly lower than in previous years, suggesting a lack of appreciation for its significance.

**5.5 Authorship Trends and Affiliation**

As far as the collaborative pattern of authors is concerned, 47.14 percent (66) of the articles were single-authored, whereas 53.86 percent (74) were authored in collaboration. Among the multiple-author publications, 21.42 percent (30) were authored by two researchers, 10.71 percent (15) by three researchers, 7.14

percent (10) by four researchers, and 13.57 percent (19), by five or more authors, respectively.

Table 2. The number of papers published by single and multiple authors

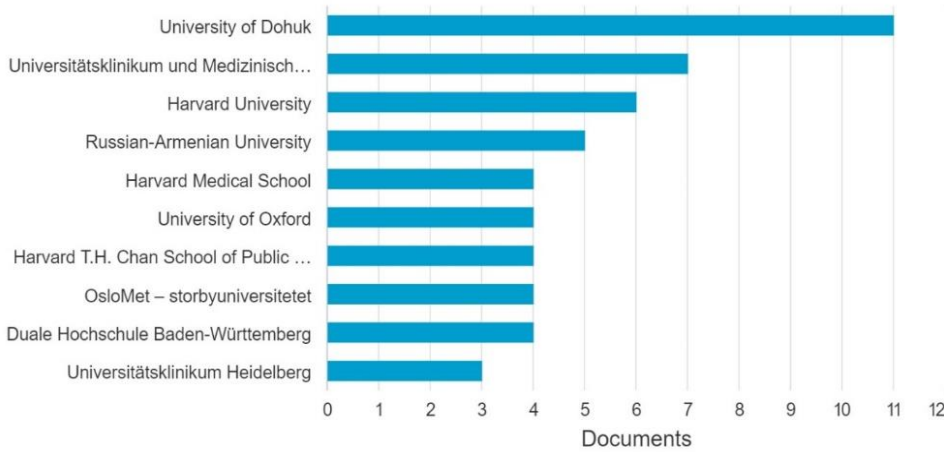
<b>No. of authors</b>	<b>No.</b>	<b>Percentage</b>
Single author	66	47.14 %
two authors	30	21.42 %
Three authors	15	10.71%
Four authors	10	7.14%
Five and more	19	13.57%

Authors with ties to universities and HEIs in various countries across the globe account for 88.57 percent of the research papers published, followed by those with ties to colleges (6.42 percent), foundations and organizations (2.85 percent), lone researchers (1.42 percent), and governmental agencies (0.71).

Table 3. Identification of the papers' affiliations

<b>First author affiliation</b>	<b>No.</b>	<b>Percentage</b>
Universities and other HEIs	124	88.57%
Collage	9	6.42%
Foundations and organisation	4	2.85%
Others (including independent researchers)	2	1.42%
Governmental departments	1	0.71%

The preceding figure shows how colleges and universities far outnumber all other establishment types. Given the chasm between them, it's clear that more attention needs to be paid to the Yazidi community's issues and problems, especially in the wake of the horrific crisis caused by the ISIS attack and its effects on all facets of their lives, including their social and financial stability. Since most Yazidi-related research is conducted in universities and other HEIs, the researchers have compiled a list of the top ten institutions that have made significant contributions to the Yazidi-related literature across disciplines, as shown in Figure 4.



*Figure 4. Documents number by affiliation*

### 5.6 Top Performer Journal

To determine which periodicals were most effective in addressing Yazidi concerns, the authors counted the number of articles published in each. It was discovered that the articles were published in over 101 journals. Most articles were published (9.28 percent) in the Journal of Iran and the Caucasus, followed by the Journal of Kurdish Studies (5.0 percent). Journals like BMC Psychiatry, the British Journal of Middle East Studies, Frontiers in Psychiatry, and others have also contributed to the growing body of academic research on the Yazidi people, accounting for a combined 2.14 percent of the total. The most fruitful academic journals are listed in Table 4.

**Table 4. Top Performer Journals**

<b><i>Journals</i></b>	<b><i>No.</i></b>	<b><i>Percentage</i></b>
Iran And the Caucasus	13	9.28%
Kurdish Studies	7	5.0%
BMC Psychiatry/British Journal of Middle East Studies/Frontiers in Psychiatry/ Genocide Studies International/ Women S Studies International Forum.	3 each	2.14% each
Others (The number of papers varies between one to two	105	75%

**5.7 Citation Count**

Of the total of 140 research articles, 94 (or 67.14 percent) have been cited at least once, while 46 (or 32.85 percent) have never been cited at all. The article titled "Psychiatric symptoms and disorders among Yazidi children and adolescents immediately after forced migration following ISIS attacks," published by Neuropsychiatric Journal in 2016, was the most cited article (48 citations), followed by "Posttraumatic stress and depression in Yazidi refugees," published by Neuropsychiatric Disease and Treatment in 2016 (37 citations). Medical studies received the most citations, followed by those in the social sciences and, finally, those in political studies.

Table 5. The number of cited and not cited papers

<b>Cited and Not Cited papers</b>	<b>No. of citation</b>	<b>Percentage</b>
Not Cited papers	46	32.8 percent
Cited papers	94	67.1%
Cited between 1-4	55	39.2%
Cited between 5-9	20	14.2%
Cited between 10-20	11	7.85%
Cited 20 Above	8	5.71%

Germany has been given the highest citation rate among countries (over 100 citations) with 207 citations, followed by the United States (US) with 155, Iraq (129), Turkey (117), and the United Kingdom (UK) with 110 citations.

Table 6. Place of publication

<b>Place of Publication</b>	<b>No</b>	<b>Citation No.</b>
Germany	29	207
United States	36	155
Iraq	24	128
Turkey	9	117
United Kingdom	20	110
Austria	7	61
Armenia	8	37
Canada	8	26
Australia	5	6

As a result, the following table 6 shows the total number of citations among the most prominent authors. Jan Ilhan Kizihan was the most often mentioned author, with 96 references. Jana Katharina Denkinger and Florian Philipp Junne were next, with 38 references each. Phuong Ngoc Pham (28), Peter Nicolaus (12), and Victoria Arakelova (6) follow Petra Windthorst and Stephan Zipfel with a total of 37 citations each. The lack of eminent Iraqi authors suggests that academic institutions in Iraq are less committed to producing cutting-edge papers that make a substantial scientific contribution.

Table 7. Most prominent authors

<b>Authors</b>	<b>Number of documents</b>	<b>No. of citation</b>
Jan Ilhan Kizihan	8	96
Jana Katharina Denkinger	7	38
Florian Philipp Junne	7	38
Petra Windthorst	5	37
Stephan Zipfel	5	37
Phuong Ngoc Pham	5	28
Peter Nicolaus	5	12
Victoria Arakelova	5	6

### 5.8 Subject Domain of the Research

Figure 5 displays the different types of journals in which these articles have appeared. These journals cover a wide range of subject matter, from the hard sciences to the humanities. The field of social science produced the most articles (38.9 percent), followed by arts and humanities (23 percent), medicine (17.3 percent), and psychology (4 percent). Even though social scientists dominate academia, their fields of study are diverse, ranging from law and anthropology to history and sociology. Less attention has been paid to other disciplines, such as linguistics, computer science, economics and finance, and others, which could provide novel solutions to the Yazidis' problems, improve their situation, and speed up their recovery.



**Documents by Subject area**

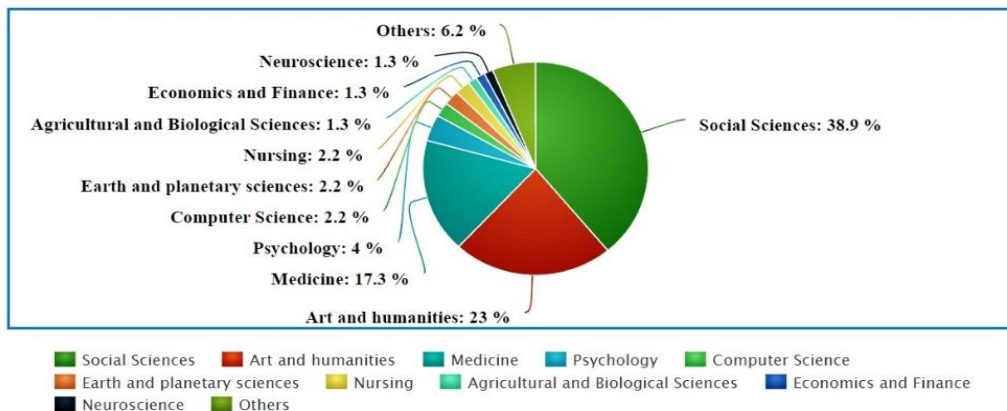


Figure 5. Documents’ percentage by subject area

**5.8 Co-Words Analysis**

In co-words analysis, significant words, terms, or phrases would be visualized and mapped to perceive the common structural pattern of a bibliometric network, i.e., identifying the principal topics in each domain and presenting the evolution of the topic over a specific time period (Dehdarirad, Villarroya, & Barrios, 2014; Viedma-Del-Jesus, Perakakis, Munoz, Lopez-Herrera, & Vila, 2011). Co-word analysis aids the researcher in identifying the key patterns and trends in previous studies and identifies likely future research topics (Nadzar, Bakri, & Ibrahim, 2017). This analysis will map the strong associations between topics in the textual data. Co-words are called maps (Carley, 1996), term mapping (Rokaya, Atlam, Fuketa, Dorji, & Aoe, 2008), bibliometric mapping (van Eck et al., 2010), keyword mapping, text mapping (van Eck & Waltman, 2010), networks of words (Danowski, 1993), networks of concepts (Popping, 2000), or a semantic network (Lehmann, 1992). Whichever term has been used, the purpose of performing the co-words analysis is pretty much the same: to analyze the text. Both authors' and index keywords will be used to determine clusters for this research. Previous studies have recommended using the frequency of five occurrences of words in a single publication for co-word analysis (Van Eck & Waltman, 2010). Because of this, the word will be automatically disregarded if

it appears fewer than five times. Words will be grouped together based on how similar they are to one another.

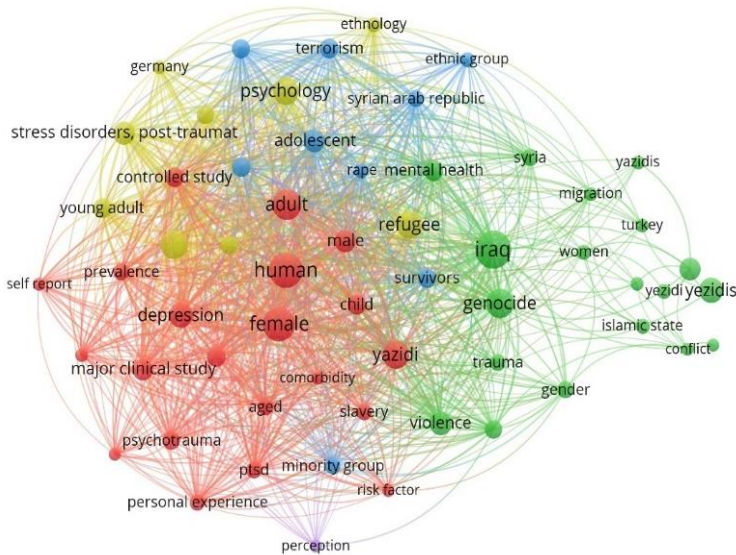


Figure 6. Vos viewer Co-word Analysis of Keywords

Articles that share a central focus can be easily identified using data clustering, which then aids the researcher in locating themes as networks, nodes, and edges (Everitt, Landau, Leese, & Stahl, 2011). Clusters in the database have been found by using the co-words analysis in the Vos Viewer software with 140 articles taken from the Scopus database. In a network diagram, the nodes with the most connections are shown in the middle, while those with fewer connections are shown on the outside. The dense nodes in the preceding diagram represent thematic clusters, with the density being calculated by the Vos viewer. The following table (Table 8) shows that 62 items have been divided into 4 clusters.

Table 8. The clusters observed after the analysis of keywords via Vos viewer

Cluster one (19 Items)	Cluster two (17 Items)	Cluster three (17 Items)	Cluster four (9 Items)
Conflict	Anxiety	Adult	Adolescent
Gender	Article	Aged	Ethnic group
Genocide	Child	Ethnology	Minority group



Identity	Comorbidity	Female	Priority journal
Iraq	Controlled study	Germany	Rape
ISS	Depression	Human	Survivor
Islamic State	Disease severity	Humans	Survivors
Mental Health	Major clinical study	Islam	Syria Arab Republic
Migration	Personal experience	Middle aged	Terrorism
Religion	Prevalence	perception	
Sexual violence	Psychotrauma	Posttraumatic stress disease	
Syria	PTSD	Psychology	
Trauma	Risk factor	Refugee	
Turkey	Self-report	Refuges	
Violence	Slavery	Stress Disorder, Post-trauma	
Women	Yazidi	Young adult	
Yazidis			
Yezidi			
Yezidis			

Researchers found four overarching themes by analyzing the commonalities between terms within each cluster. In the first group, we have the "human crisis," in the second, the "health status," in the third, the "post-conflict consequences," and in the fourth, the "ethnic violence." Co-word density is shown in the following graph by pinpointing the top ten most frequent keywords.



keyword groups. This interconnection between keywords from various clusters, including the top ten, exemplifies the interconnected nature of the Yazidi community as a whole. Some of the edges in the above diagram represent the lack of associations between the indicated keyword cluster and other clusters. Consequently, this demonstrates the lack of research on particular topics, revealing several research gaps that can serve as topics for future Yazidi research. For instance, the concept of "identity" is only tangentially connected to "conflict" and "Iraq." Therefore, it can be concluded that the topic of identity has not been addressed in relation to other search terms, such as "women," "female," "male," "child," "Yazidis," and others. For future study, this disconnection will prove useful.

**5.9 Bibliometric Analysis of Co-Authorship**

There are a total of 242 contributors to the book on the Yazidi people. There have been two people who have reached the highest level in VOS viewer: Jana Katharina Denking of the Department of Psychosomatic Medicine and Psychotherapy at the University Hospital Tübingen in Germany and Florian Philipp Junne of the Harvard Humanitarian Initiative (HHI) in the United States. Their primary concern was the effect that the violence had on the Yazidis' physical and mental health, so they centered their efforts on these areas. Phuong Ngoc Pham, Stephan Zipfel, and Petra Windthorst are their main partners (each with 19 strength links). Iraq has the most spies (20), followed by Germany (17), and then the United States (14).

Table 10. The number of documents, citations and strength link of the top nine countries

Countries	The No. of Documents	Citation	Strength link
Iraq	24	128	20
Germany	28	207	17
United States	35	155	14
Austria	7	61	6
UK	20	110	6
Canada	8	26	2



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Armenia	8	37	1
Australia	5	6	1
Turkey	9	117	1

## **6. Conclusion**

The Yazidi tragedy is a catastrophic event that has had long-term effects, and despite the significant attention it has received, the total number of publications on the Scopus platform is insufficient. Although some aspects of the problem have been extensively researched, other crucial areas that could help mitigate the impact of the massacre have been largely overlooked. Surprisingly, the number of funded projects is very low, indicating a lack of interest from humanitarian organizations and research institutes. Nevertheless, freelance researchers are highly committed to working on and studying issues affecting the Yazidi people, with nearly 80 percent of all research being conducted without any financial support. Research activity has increased gradually since 2014, peaking in 2020 before sharply dropping the following year.

According to the survey conducted in this study, social science, medicine, arts and humanities, and psychology are the most sought-after academic disciplines for research on the Yazidis. In Iraq, medical studies account for 37.5 percent of all publications, followed by social science at 25 percent, art and humanities at 20 percent, and other fields at 10 percent. However, some social science and arts and humanities disciplines, such as linguistics, law, history, and sociology, have been neglected in favor of political science research. There is an urgent need to increase the number of academic publications on the Yazidis, especially in essential legal and economic areas for Iraq. Research in legal and economic areas related to the Yazidis is important for several reasons. Firstly, legal studies can help understand the legal frameworks and policies that can be implemented to protect the rights of the Yazidis and prevent future atrocities. This includes understanding issues related to international law, human rights, and transitional justice. Secondly, economic studies can provide insights into the economic impact of the crisis on the Yazidis and the region as a whole, and identify



potential solutions to address the economic challenges faced by the Yazidi community. This can include examining issues such as access to education, employment opportunities, and economic development. Furthermore, the lack of support from Iraqi organizations or institutes for research on Yazidi issues highlights a broader problem of neglect and disregard for minority groups by the government. Focusing on legal and economic areas can help address the root causes of this neglect and identify potential solutions to ensure that the rights and needs of minority groups are met. Finally, the results of research in legal and economic areas can have a global impact, as the insights gained can be applied to other minority or marginalized communities facing similar challenges around the world.

Despite the fact that the majority of the top ten nations have some form of link to each of the retrieved clusters, the articles on Yazidis produced by the top ten countries clearly illustrate the level of contribution of each country to each of the extracted common themes. Each of them has made a significant contribution to at least one or two of these clusters. While countries such as the United States, United Kingdom, Armenia, Canada, Austria, and Australia focused primarily on social science and art and humanities (ethnic identity, minority, genocide, rape, media coverage, justice, violence, terrorism, migrations, and sexual violence, among others, which are related to clusters one and four), countries such as Germany, Iraq, Turkey, and France emphasized medical science and psychology (healthcare, distress, depression, trauma, psychological issues, mental health and others which are linked to cluster two and three). Despite the fact that the emerging themes extracted from the database on Yazidis cover an adequate topic related to the Yazidis minority after the ISIS attack, there was no topic related to the causes of the terrorist attacks and the methods of preventing similar terrorism attacks at the national and international levels.

Overall, Iraq has produced significantly fewer studies on the Yazidi crisis than expected, with the United States and Germany generating more publications than Iraq. This may be attributed to the lack of a research center or journal in Iraq dedicated to studying Yazidi issues or minority groups. By establishing such



a center or journal, more comprehensive studies could be conducted, contributing to the advancement of research in this vital area and positioning Iraq as a benchmark for other nations. Furthermore, the absence of leading authors from Iraq is a concern, given their potential to provide a deeper understanding of national issues and social dynamics that could assist other authors in obtaining more reliable and authentic data. Future research should examine the reasons for the absence of Iraqi academics, despite the region's high frequency of terrorist attacks.

## **7. Further Research and Recommendations**

To better understand the needs of the Yazidi minority impacted by the ongoing crisis, future researchers must focus on several areas. First, it is crucial to investigate why businesses and government agencies do not provide sufficient resources. Second, there is a need for more research on the role of media discourse in influencing public opinion and perception within the field of linguistics. Third, there should be greater attention to the economic and financial domains, especially in social science and arts and humanities publications. However, the current shortage of research in these areas may be due to the Scopus database's primary focus on science and technology fields. Therefore, using multiple databases in future research could help provide a more accurate classification of subject areas. Overcoming the limitations of this study, including limited access to library subscriptions, is essential to ensuring more precise and extensive research on the Yazidi crisis, as well as similar terrorism attacks at the national and international levels. Therefore, the recommendations of the authors can be summed up into a few points to be considered in future studies:

1. Increase the number of Yazidi-related publications worldwide, particularly in Iraq, the homeland of the Yazidis.
2. Establish more research centers that primarily focus on Yazidi minority issues in Iraq.
3. Encourage funding for Yazidi-related research projects.
4. Increase the amount of research on less-discussed topics.



5. Increase the number of research collaborations to improve the contribution and veracity of research.
6. Rather than relying solely on Scopus, rely on a variety of other database materials to provide more precise and distinct cluster classifications.

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## تویژینه وهیه که له سهر که مینه یه زیدیه کان دواى هیرشی تیرۆریستی داعش

### شیکردنه وهیه کی بیلۆمیتری

#### پوخته

ئهم تویژینه وهیه دواى به دوادا چونیکى زانستیانه له سهر ئه و تویژینه وانهى که له سهر که مینه یه زیدی له دواى سالى 2014 بلاو بوو ته وه و شیکردنه وهیه کی ته وا و زانستیانه دهدات له سهر بارودۆخى ئیستای ئه و که مینه. ئامارى ئه م تویژینه وه وه رگیراوه له (Scopus) له نیوان سالانى 2014 تا 2021 له سهر تویژینه وه ئاکادیمیه کانى که له سهر یه زیدیه کان نووسراوه. زانیاریه کان به پى چى چى شىوازیکی جیاواز شیکراونه ته وه بۆ ئه وهى بارودۆخى یه زیدیه کان به گشتى نیشان بدات. ئه م تویژینه وهیه پى وایه که ئه م بابه تانه ی تا ئیستا له سهر ئه م که مینه نو سراون قورسایى بابه ته که به جوانى نیشان ناده ن. ئه و تویژینه وهیه په یوه ندىان به چى زانکۆ و ریکراویکی دیاریکرا وه بووه و زۆر که متره له و ژماره ی که پى وىستیه تى. ده سته که وتى ئه م بابه ته پى شىبى ده کریت هه ندیک زانیاری باوه ر پیکرا وه ده سته به ر بکات بۆ هه موو لایه ک به تاییه ت بۆ حکومه ت و ریکرا وه کان بۆ ئه وهى به رچا و روونىان پى بدات بۆ کارى پى وىست. ئه م تویژینه وه به رچا و روونیه کی ته وا و دهدات به تویژهران و زانستکاران له سهر بابه تى یه زیدیه کان و هه روه ها مه جالى تویژینه وه ی زیاتر و تۆختر له و بابه ته دا ده خاته روو. ده سته که وته کانى ئه م تویژینه وهیه ده ریده خات بابه تى په یوه ندىار به یه زیدیه کان زۆر به رفراوانتره به نسه ت کۆمه لایه تى و باشته ره ره هه ندى ئاکادیمى و دیپلۆماسیشى بۆ له به رچا و بگىرى.

وشه سه ره کیه کان: بیلۆمیتری / ئیراق / که مینه یه زیدی / تیرۆریسم

## الملخص

تهدف الدراسة للبحث و التمحيص في الدراسات السابقة المتعلقة بالمجتمع الايزيدي المنشورة بعد العام 2014 لاجل تقديم تحليل ببليومتري عميق و مخصص للدراسات المنشورة ذات الصلة. قد قام الباحث بجمع البيانات المطلوبة من قاعدة البيانات الاكثر موضوعية و اكااديمية "سكوبس" و المحصورة بالدراسات المنشورة عن المجتمع الايزيدي من عام 2014 الى عام 2021. لقد استخدم الباحث في بحثه المعمق حول المقالات عدة كلمات ذات صلة في خانات البحث المختلفة كذلك المرتبطة بالعنوان, الملخص, و الكلمات المفتاحية. بعد عملية جمع و حصر المقالات, قام الباحث بتحليل هذه البيانات باتباع عدة مقاييس محددة مسبقا من قبل الباحث لهدف للوصول الى خريطة واضحة و دقيقة و منسقة عن البحوث. بعد تحليل البيانات, توصل الباحث الى ان مجموع البحوث المنشورة و المتعلقة بموضوع البحث شحيحة و لا تعكس اهمية هذا الموضوع و خطورته. توصل البحث الى ان عدد البحوث الممولة قليل جدا مقارنة بالبحوث المنشورة و الغير ممولة. الغالبية العظمى من البحوث المنشورة تابعين لجامعات, معاهد و مراكز ابحاث. من خلال استخدام برنامج Vos viewer لتحليل البيانات, توصل الباحث لاربع مجموعات تمثل توجهات معظم البحوث. إن مخرجات و توصيات البحث تقدم معلومات مهمة و دقيقة لجميع الاطراف ذات الصلة كالقطاع الحكومي و غيرها من الهيئات ذات الصلة لاجل القيام بالاجراءات المناسبة. تقدم الدراسة ايضا للباحثين في هذا المجال نبذة دقيقة حول اخر البحوث و الاتجاهات البحثية فيما يتعلق بالمجتمع الايزيدي و تقدم فرصة للمهتمين من باحثين من خلال تسليط الضوء على مواضيع لبحوث مستقبلية. اظهرت نتائج البحث ان المشاكل المتعلقة بالمجتمع الايزيدي لها تأثيرات عديدة, عميقة و طويلة الاجل مما يستوجب انتباه الاكاديميين و صناع القرار على حد سواء.

**الكلمات المفتاحية:** ببليومتري, العراق, خرطنة, المجتمع الايزيدي, الارهاب.