Global Research Productivity on Hepatitis B: A Scientometrics Study

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ABSTRACT: *In this work, we have mapped the domain of hepatitis B using the Web of Science Data. We took five years to download the indexed papers. We then subjected the papers to extensive analyses of various bibliometric parameters to understand the structure of the domain.*

Keywords: Inclusive And Equitable Access, Academic Libraries, Democracies, E-Governance, Open Access, Open Data, Open Educational Resources

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1. Introduction

Hepatitis B (HBV) is a severe liver infection first recognised in the mid-20th century. It spreads through contact with infected blood and sexual activity. There are two main types: acute, which usually clears up within six months, and chronic, which can last longer and lead to severe liver damage. Despite significant progress in understanding and managing the disease, ongoing research is essential. This study will explore global research on hepatitis B, focusing on how knowledge has evolved, key trends in studies, and the effectiveness of vaccines and treatments. The goal is to understand the current state of hepatitis B research and identify areas for future work.

2. Review of Literature

Recent studies highlight significant advancements and ongoing challenges in hepatitis B (HBV) research. Conners (2023) updates the CDC's 2008 recommendations for HBV screening, proposing universal screening for adults and specific groups such as those with hepatitis C and a history of incarceration. This update is based on systematic reviews and expert assessments to improve early detection and prevention. Popa (2022) explores the role of oxidative stress in HBV patho-physiology, noting that while research on HBV-related oxidative stress is emerging, it underscores the need for new markers to monitor chronic infections. Ahmad (2021) presents a comprehensive analysis of hepatitis A research, revealing trends in publication and highlighting key contributions from various organizations and countries, with the United States leading in research output. Chen (2020) reviews China's progress in managing HBV and hepatitis C, emphasizing successful strate

gies like childhood vaccination and nucleic acid testing while addressing systemic challenges such as governance and treatment standardization. Mak (2020) discusses the complexity of HBV infection states, including occult hepatitis B, where HBV DNA is present in the liver despite negative serological markers. These studies collectively enhance our understanding of HBV, inform public health strategies, and identify areas for further research.

3. Objectives

We fix a few priorities in this work by determining specific aims. Due to varied factors, the publication pattern for the volume may not exhibit a standard or linear growth pattern. We intend to know the growth distribution of literature on Hepatitis B during the studied period. The contributing countries to the studied literature are important to fixing priorities for the low-producing countries. Thus, we measure the contribution of different countries in this domain. Similarly, it is important to recognise the prolific authors; hence, productivity is recorded. All journals in this domain may not contribute equally, and disparities or uneven distribution is measured. What the predominant languages used by authors is an important exercise. The sub-domains inclusion in Hepatitis B is analysed in terms of the number of papers in this work.

4. Methodology

Data were obtained from the Web of Science database through Clarivate. I typed “hepatitis B” into the search bar to get the total number of published articles. Utilizing the analysis results, more research was done. Results from 2020 through 2024 are included in the analyzed timeframe. Due to insufficient data collection, April was not taken into consideration.

5. Data analysis and interpretation

5.1. Year-wise distribution of articles

The distribution of articles published each year from 2020 to 2024 is as follows: in 2021, the highest number of articles was 3524, while the lowest number appeared in 2024, at 715.

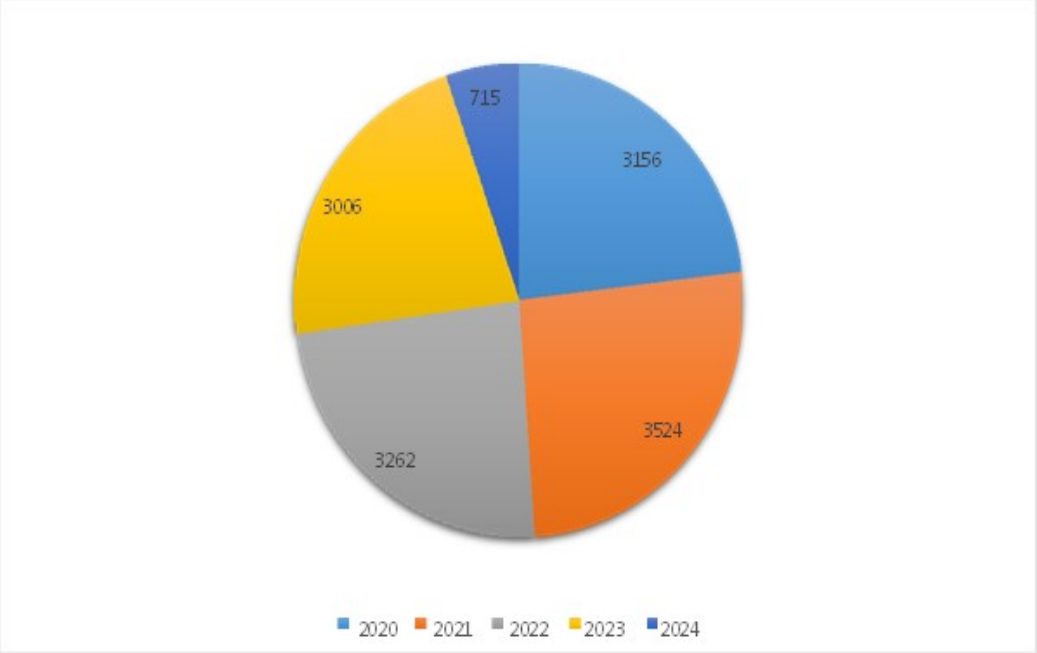

Figure 1. Year-wise distribution of articles

5.2. Geographical contribution of articles

The top 10 countries studying Hepatitis B have published various articles, with China leading at 5404 articles in 5 years, followed by India with 380 articles in 5 years, and Canada in 10th place with 444 published articles.

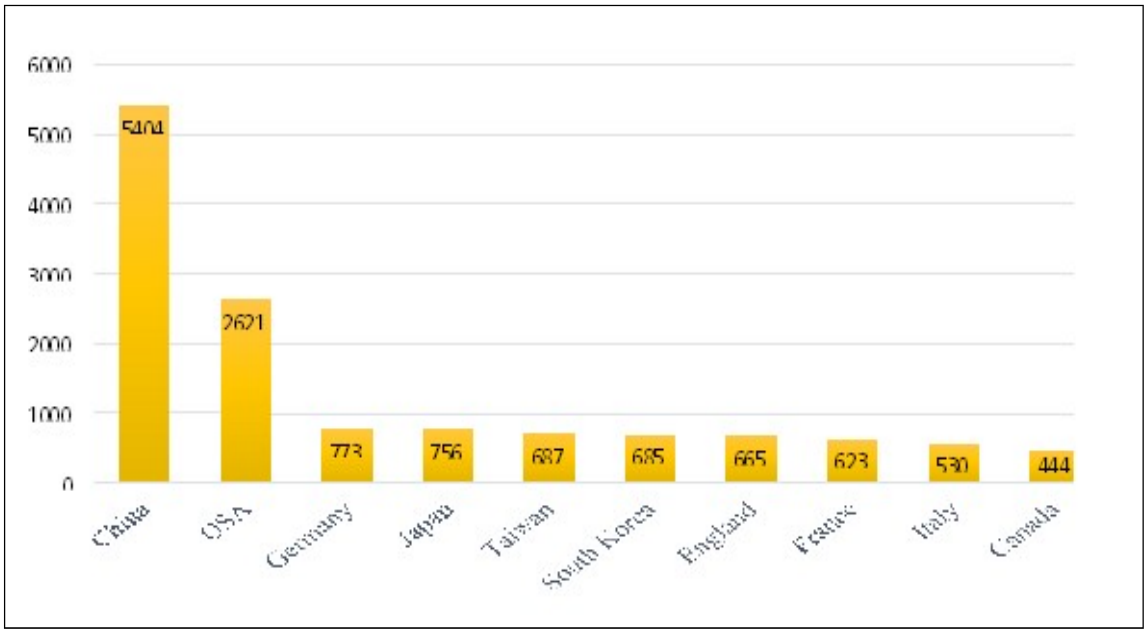

Figure 2. Geographical contribution of articles

5.3. Most productive authorship contribution

Number of articles published by the top 10 authors that study Hepatitis B. The highest number of articles published by an author (Yuen Richard Man Fung) is 82 in 5 years. In 10th place is Chen Zhuo, who has published 52 articles.

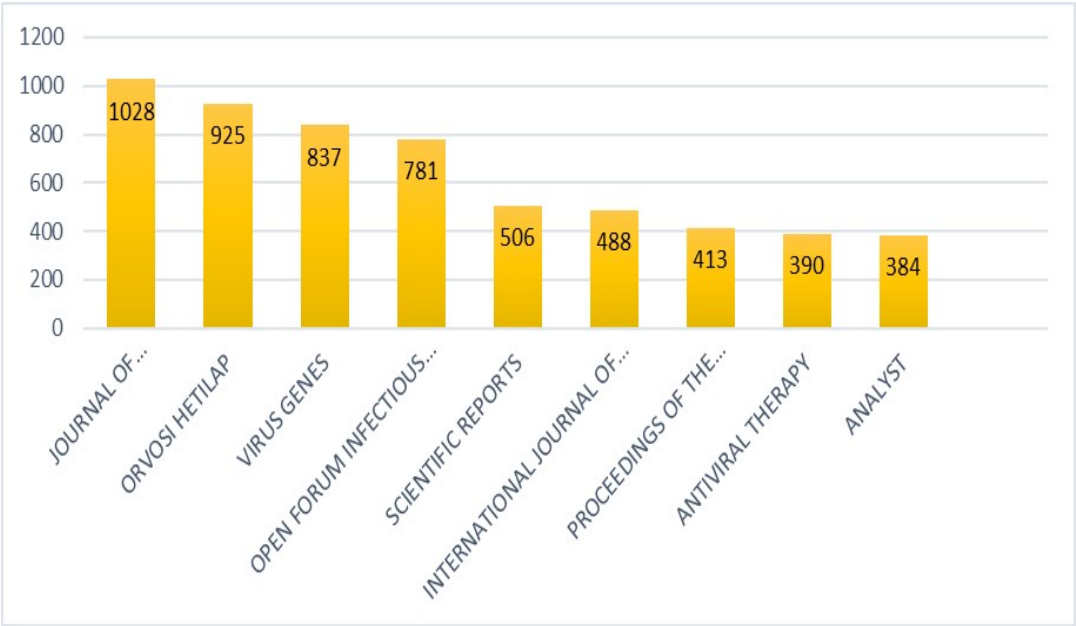

Figure 3. Most productive authorship contribution

5.4. Highly cited journals

In Figure 4, we can see the most cited journals on the topic of “Hepatitis-B.” The journal with the most cited articles, the

Journal of Gastroenterology and Hepatology, has 1029 citations in 5 years. The second most cited journal, Journal of Gastrointestinal Oncology, has 1028 citations, followed by Orvosi Hetilap with 925 citations, Virus Genes with 837 citations, and Analyst with 384 citations, ranking 10th.

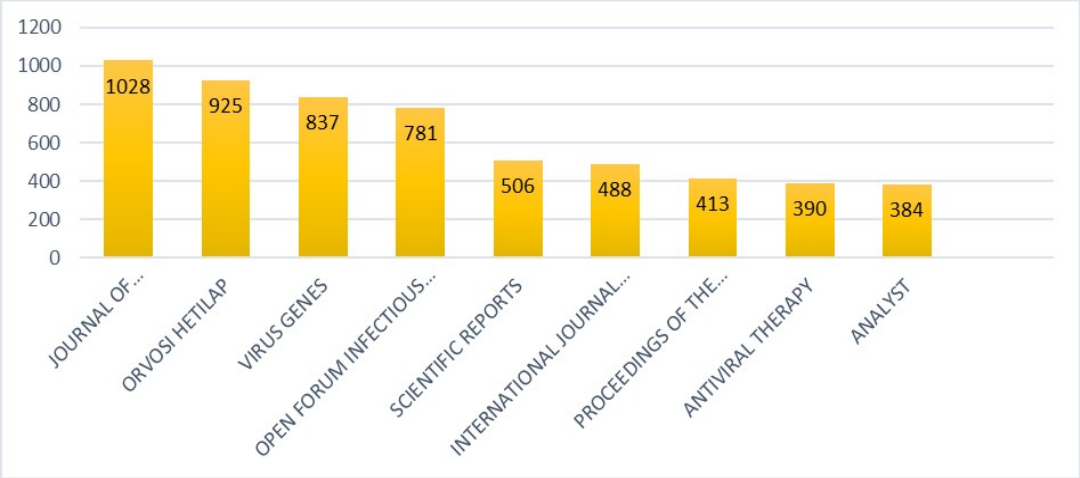

Figure 4. Highly cited journals

5.5. Language-wise distribution of articles

Figure 4 shows the distribution of language in published articles. With 13539, most articles are written in the English language. The second language, German, has 57 numbers for articles. In the past five years, 23 articles in Spanish ranked third, and just one article in Japanese ranked eleventh.

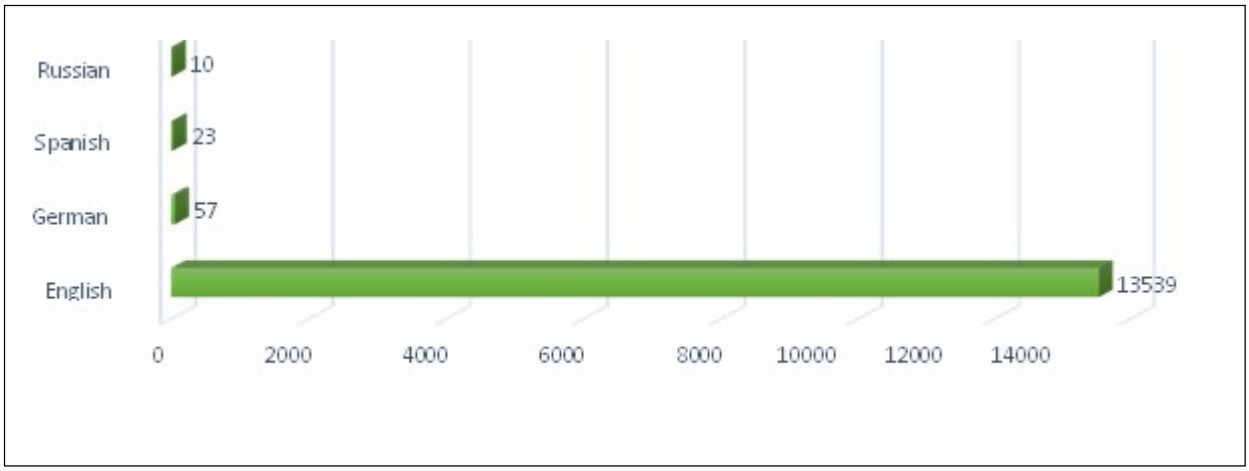

Figure 4. Language wise distribution of articles

5.6. Subject-wise distribution of articles

Figure 5 shows that the subjects by distribution have most number of articles published in the subject (Gastroenterology Hepatology) at 2591, and in 10th place is (Public Environment Occupational Health), which has published 730 articles.

6. Major findings

1. With 3524 articles published, 2021 saw the largest number of articles published.

2. China leads the world in articles published, with India coming in at number fourteen, or the least number of articles published by Trinidad and Tobago.

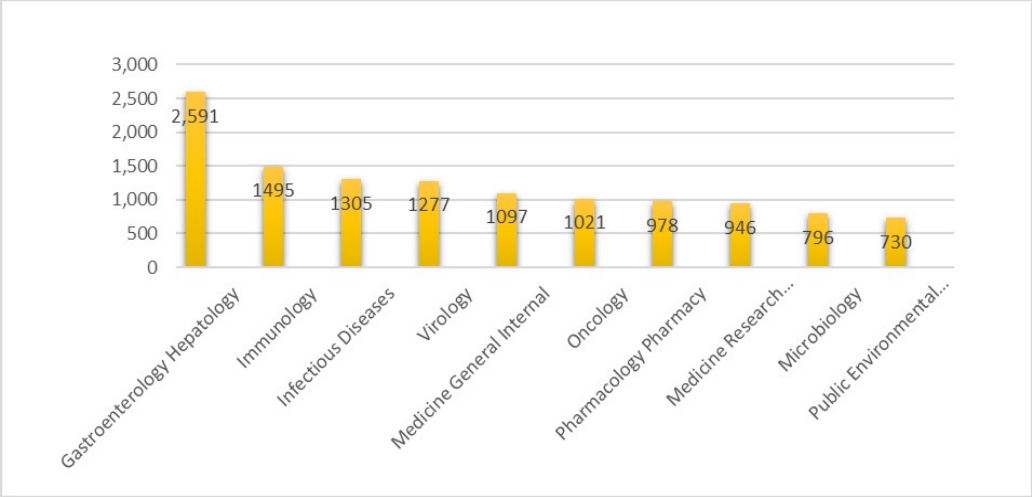

Figure 5. Subjects wise distribution of articles

3. In five years, Yuen Richard Man Fung has published the most articles with eighty-two, and Jeong Soung Won has authored the fewest articles with just nineteen.

4. The Journal of Gastroenterology and Hepatology has received the most citations (1029) in the last five years. The Journal of Gastrointestinal Oncology is ranked second (1028), and Analyst is ranked tenth.

5. Most of the articles, 13539, are written in English. The second language, German, has 57 articles. In the past five years, 23 articles in Spanish ranked third, and just one article in Japanese ranked eleventh.

6. The subject with the most published articles is gastroenterology and Hepatology, with 2591, followed by public environment and occupational health, with 730, at number 10. Additionally, the least publications on psychology and society were published in the previous five years.

7. Conclusion

During the study period, 13663 articles were published in the relevant Hepatitis B publication. According to the analysis, China was the most productive nation, producing 5404 articles throughout the study. In 2021, there were 3524 articles, the highest number in the previous five years. The survey also reveals that author Chen Zhao had the fewest published papers during the five years, while author Yuen Richard Man Fung had the most, with 54 publications. The journal with the highest number of citations was the Journal of Gastroenterology and Hepatology (1029), followed by the Journal of Gastrointestinal Oncology (1028). The survey indicates that English was the most frequently used language for writing articles.

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