

A Bibliometric Analysis of the WoSCC Literature on the Use of Selective Serotonin Reuptake Inhibitors as Antidepressants

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Background: Many studies have been conducted on the use of selective serotonin reuptake inhibitors (SSRIs) for the treatment of depression. However, the overall trends in research publications in this field remain elusive. There is still little quantitative analysis of the literature in this field. Therefore, we conducted a bibliometric analysis to explore the research patterns surrounding SSRIs for depression, aiming to gain a deeper understanding of their development and impact.

Methods: Publications about the use of SSRIs for the treatment of depression were identified in the Web of Science Core Collection. Visualization analysis was performed with Bibliometrix, VOSviewer, and CiteSpace.

Results: A total of 1149 publications published from 1990 to 2024 were included in the bibliometric analysis. Since 1990, the annual number of published papers has increased annually, reaching the maximum value of output in 2004. Fitted curve showed that after 2004, the number of publications per year was essentially stable. The United States dominates the field. Among these institutions, University of Pittsburgh excels in this field. Fava M has the highest scientific productivity and extensive academic influence. *European Neuropsychopharmacology* is the most active journal in this field. The three most relevant keywords were “fluoxetine”, “double-blind”, and “major depression”. The trend topics in recent years were “connectivity”, “c-reactive protein”, and “anhedonia”.

Conclusion: Research on the use of SSRIs for the treatment of depression continues to receive increased attention but still requires further exploration and innovation. We further analyze the current research hotspots and frontiers in this field.

Keywords: selective serotonin reuptake inhibitors, depression, bibliometrics, double-blind, fluoxetine, major depression

Introduction

Depression is characterized by persistent symptoms such as low mood, loss of interest, slowed thinking, and changes in appetite and sleep patterns and can significantly impact a person's daily life, even leading to suicidal tendencies.^{1,2} The etiology of depression is multifaceted. Physiologically, depression is often associated with imbalances in brain neurotransmitters, particularly a decrease in serotonin levels.^{3,4} Psychologically, stress, traumatic events, and personality traits can all increase the risk of developing depression. In short, depression places a great burden on families and society.⁵

Selective serotonin reuptake inhibitors (SSRIs) have been extensively studied for the treatment of depression, with a wealth of research supporting their effectiveness in managing this mood disorder.^{6–8} SSRIs work by specifically targeting the serotonin system in the brain, inhibiting the reuptake of serotonin and thereby increasing its availability at synaptic junctions.⁹ This action is believed to alleviate symptoms of depression by restoring the balance of serotonin

levels in the brain. Over the years, numerous studies have investigated the therapeutic benefits of SSRIs for depression.^{10–12} These studies included randomized controlled trials, meta-analyses, and long-term observational studies, providing a comprehensive understanding of the efficacy, safety, and tolerability of drugs.

Bibliometrics plays a pivotal role in the field of medicine. By employing mathematical and statistical methods, deep and quantitative analyses of medical literature can be performed, enabling researchers to comprehensively and accurately understand the current research status, historical trends, and future directions within the medical domain.¹³ This approach allows medical researchers to systematically evaluate the quality and impact of various research outcomes, identify emerging topics and research hotspots, and provide valuable guidance for their work.

Despite many studies on the use of SSRIs for the treatment of depression, the overall research trend in this area remains unclear. To bridge this knowledge gap, we conducted a bibliometric analysis to explore the research patterns surrounding SSRIs for depression, aiming to gain a deeper understanding of their development and impact.

Methods

The last search date was April 22, 2024. Both the Web of Science Core Collection (WoSCC) and Scopus are popular search tools for bibliometric analysis.¹⁴ Considering the long history and wide recognition of the WoSCC, as well as its rich citation indexing capabilities, we selected the WoSCC as the search tool.¹⁵ We used “selective serotonin reuptake inhibitors” and “depression” as the main search terms. Publications in languages other than English were excluded. The two researchers used search strategies to search simultaneously, and when disagreements arose, they resolved them through discussion. The specific search strategy is shown in Table 1. The specific process is shown in Figure 1.

In recent years, a significant number of studies on bibliometrics have emerged across various fields.^{16–21} These studies employ diverse visualization methods. Building upon prior research, we selected the Bibliometrix package in R (version 4.3.1), VOSviewer (version 1.6.18), and CiteSpace (version 6.4 R1) as our visualization analysis tools. The synergy between these software applications enhances the visualization process. The use of these data can make full use of our data and result in clearer and more comprehensible visualizations. All visualization software parameters were set to the defaults. Data obtained from database searches were analyzed with Bibliometrix, and basic data such as publications, citations, annual scientific productivity, and average citations per year were recorded via the overview function. Word frequency and word cloud maps were obtained via keyword analysis. In terms of cooperative relationships, VOSviewer was used to generate a cooperative relationship diagram of authors, institutions, countries/regions, and keyword co-occurrence. CiteSpace was applied mainly to the dual-map overlay of journals.

Results

Publications and Citations

A total of 1149 publications published from 1990 to 2024 were included in the analysis. The distribution of article types is shown in Figure 2A. There were 528 articles. There are an average of 5.29 authors per article. As shown in Figure 2B, since 1990, the annual number of published papers has increased annually, reaching the maximum value of output in

Table 1 Search Strategy

Item	Search Strategy
#1	TI= (“selective serotonin reuptake inhibit*”) OR (“selective serotonin reuptake inhibitors”)
#2	TI= (SSRI) OR (SSRIs)
#3	#1 OR #2
#4	TI= (depress*) OR (depression) OR (“depress* symptom*”) OR (“emotion* depress*”) OR (“depressive symptoms”)
#5	TI= (“depress* disorde*”) OR (“depressive disorder”) OR (“depressive neuro*”) OR (“depressive neuroses”) OR (“depressive neurosis”) OR (“endogen* depress*”) OR (“endogenous depression”) OR (“depress* syndrom*”) OR (“depressive syndrome”) OR (“neuro* depress*”) OR (“neurotic depression”) OR (melanchol*) OR (melancholia)
#6	#4 OR #5
#7	#3 AND #6

Note: Index: Science Citation Index Expanded (SCI-E); Language: English.

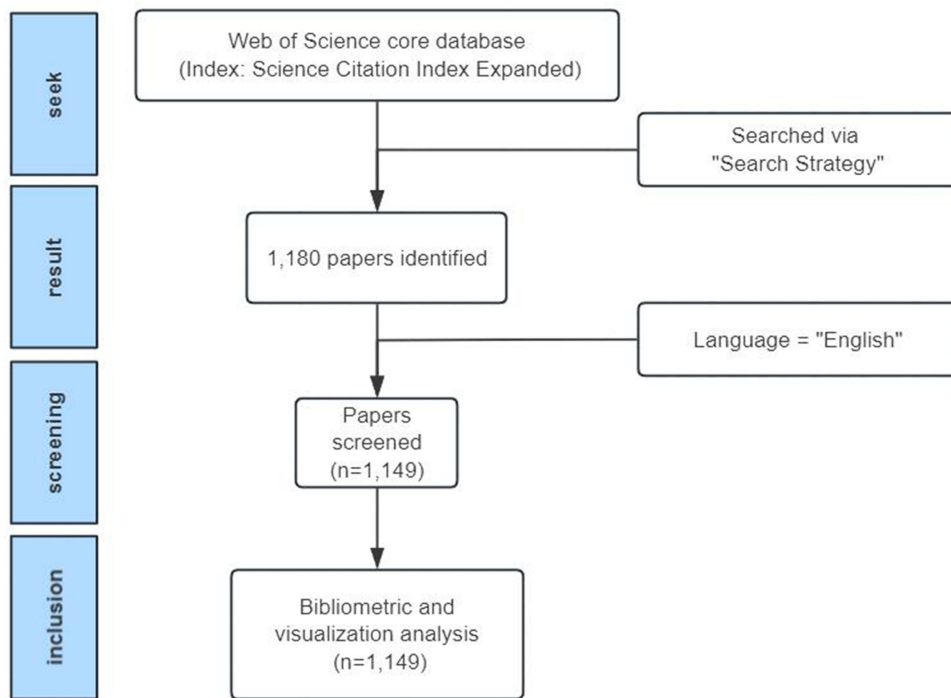


Figure 1 Search flow chart.

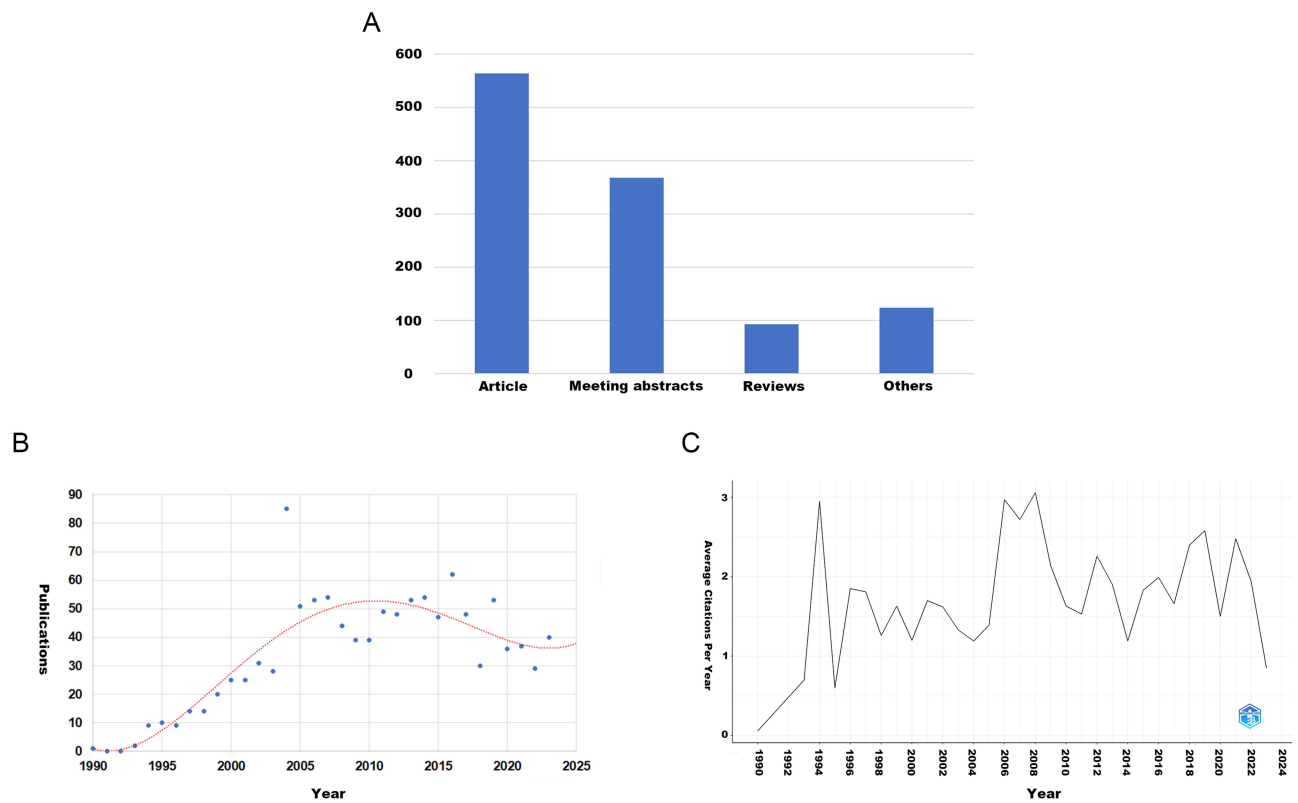


Figure 2 Publication characteristics. (A) Article type proportions. (B) Annual number of publications. (C) Annual number of publications forecast.

2004 (n=85), and the growth rate of published papers during this period was 18.2 per year. We further assessed the trend in the number of publications by fitting a curve, which showed that after 2004, the number of publications per year was essentially stable, with the number fluctuating between 29 and 62. The average annual number of cited articles did not fluctuate greatly, with an average of 1.64 citations per article. Among them, the highest annual number of cited articles was in 2008 (3.06 citations per paper) (Figure 2C).

Countries/Regions

We listed the top 10 most popular countries/regions ranked by publication (Table 2). In terms of both the number of articles published and the total number of citations, the United States was in the lead, with the United Kingdom ranking second. In terms of publications, China ranked third. Canada ranked third in terms of total citations. Among them, Denmark ranked first in average citations per article, with a result of 56.10. We used VOSviewer to further analyze the cooperation between countries/regions. The United States, the United Kingdom, China, France, Japan, Germany, Italy, Spain, Canada, and Australia were the countries with the most cooperation (Figure 3A).

Institutions

We obtained data from the most essential universities using Bibliometrix (Table 3). The University of Pittsburgh led the way in the use of SSRIs for the treatment of depression. Harvard University and Columbia University came next. In terms of the institutions' cooperative relationships, we discovered that there was strong collaboration. The University of Pittsburgh, Columbia University, University of Oxford, University of Texas Southwestern Medical Center, University of Gothenburg, and Eli Lilly Company were the institutions that collaborated the most (Figure 3B).

Authors

Table 4 presents a ranking of the top ten notable authors on the basis of publication, H-index, or citation. With 48 publications, Fava M ranked first in terms of number. Papakostas GI was second, with 26 articles published. Thase ME and Trivedi MH, with twenty publications, ranked third. Fava M had the highest H-index of 28. Furthermore, with 3894 citations overall, Fava M had the most citations. Effective research could not be conducted in isolation from author cooperation. Figure 3C shows who collaborated with the other authors most closely: Fava M, Hieronymus F, Mann JJ, and Papakostas GI. We also examined the author's time frame for publishing the literature (Figure 4). Among them, Fava M, a prolific author, published related studies from 1997 until 2024. His highest annual volume was in 2004, when he published 6 articles. The second most prolific author, Papakostas GI, concentrated his production between 2004 and 2024.

Table 2 Top 10 Popular Countries/Regions

Country	Publication	Citation	Average Citation	SCP	MCP
USA	358	14,026	39.20	307	51
United Kingdom	72	3361	46.70	45	27
China	56	678	12.10	46	10
Canada	45	2182	48.50	32	13
Italy	35	1251	35.70	24	11
Germany	31	993	32.00	21	10
Denmark	17	954	56.10	11	6
Sweden	30	869	29.00	23	7
Australia	19	734	38.60	13	6
Netherlands	27	727	26.90	22	5

Abbreviations: SCP, single-country authors; MCP, multi-country authors.

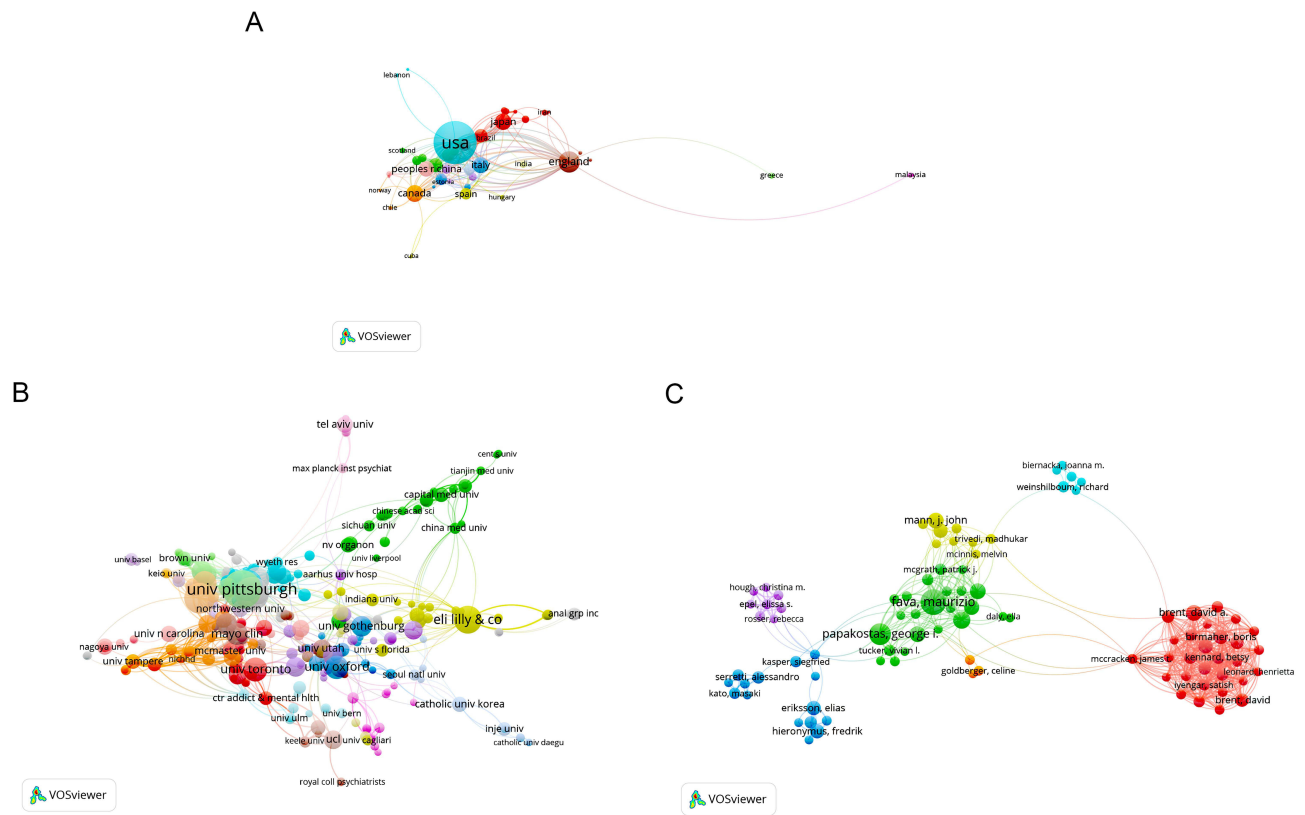


Figure 3 Collaboration among individuals. **(A)** Map of collaboration among countries/regions. **(B)** Map of collaboration among Institutions. **(C)** Map of collaboration among authors.

Journals

The publications were drawn from 311 distinct journals in total. With 81 published papers, *European Neuropsychopharmacology* was the most relevant journal in terms of publication volume (Table 5). With 48 and 47 publications, respectively, the *Journal of Clinical Psychiatry* and the *Journal of Affective Disorders* came in second and third place. A hybrid quantitative indicator known as the H-index can be used to compare the level of academic output with the quantity of academic output produced by a researcher or journal. As a result, we further analyzed these journals’ H-indexes in this domain. The top three journals according to H-index rankings were the *Journal of Clinical Psychiatry* (H-index=33), the *Journal of Affective Disorders* (H-index=22), and *International Clinical Psychopharmacology*

Table 3 Top 10 Institutions in Terms of Publication Volume

Institutions	Articles
University of Pittsburgh	95
Harvard University	74
Columbia University	52
Massachusetts General Hospital	48
University of Toronto	36
University of British Columbia	33
University of Oxford	33
New York State Psychiatric Institute	32
University of Pennsylvania	31
Emory University	30

Table 4 The Top 10 Popular Authors Ranked by Publication/H-Index/Citation

Rank	Author	Publication	Author	H-index	Author	Citation
1	Fava M	48	Fava M	28	Fava M	3894
2	Papakostas GI	26	Papakostas GI	18	Thase ME	2488
3	Thase ME	20	Nierenberg AA	14	Nierenberg AA	2356
4	Trivedi MH	20	Trivedi MH	13	Ritz L	2324
5	Entsuh R	15	Thase ME	12	Trivedi MH	2140
6	Eriksson E	15	Birmaher B	9	Wisniewski SR	1872
7	Hieronymus F	15	Rush AI	9	Rush AJ	1870
8	Nierenberg AA	15	Wisniewski SR	9	Warden D	1744
9	Brent DA	12	Alpert JE	8	Luther JF	1589
10	Kasper S	12	Brent DA	8	Biggs MM	1548

(H-index=18). Moreover, the journal with the highest impact factor (IF) was *Biological Psychiatry*, which has an IF of 10.6. More than 70% of these journals are included in area Q1 of the Journal Citation Reports (JCR) partition.

As displayed in Table 6 and Figure 5, among Journals cocitations, the most cited journal was the *American Journal of Psychiatry* (n=495), closely followed by the *Journal of Clinical Psychiatry* (n=488). *Archives of General Psychiatry* (n=417), the *Journal of Affective Disorders* (n=384), and *Biological Psychiatry* (n=348) are other highly cited journals. The majority of these journals focus on research areas related to psychiatry, drug therapy, and neuroscience. The citation counts for *British Journal of Psychiatry* and the *Journal of Clinical Psychopharmacology* were 343 and 280, respectively, indicating the significant impact these publications have on the field of medicinal psychology research. Furthermore, scholarly medical journals such as the *Journal of the American Medical Association (JAMA)* were mentioned 244 times, suggesting that scholarly journals hold a particular academic standing in psychiatry and drug research in addition to having a significant influence on the medical sector.

Psychiatry has the greatest frequency of occurrence (731 times) among the subject co-occurrence data, reflecting the discipline's dominance in all the cited journals. Pharmacology and Pharmacy was ranked second with 387 times, indicating the importance of drugs in mental health research. The high frequency of occurrence observed in both neuroscience (336 times) and clinical neurology (284 times) highlights the importance of neuroscience in understanding the molecular underpinnings of mental disease. Furthermore, there were notable disciplinary contributions from clinical psychology (77 times) and internal medicine (89 times). Pediatrics (25 times), genetics (24 times), cardiology (23 times), and gerontology (19 times) were among the low-frequency disciplines.

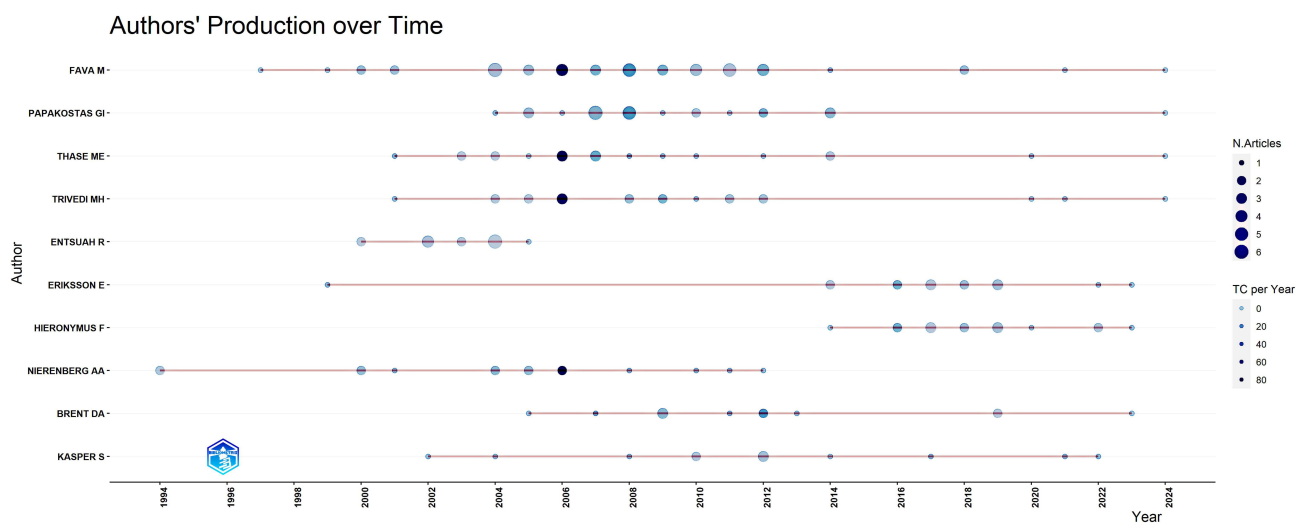
**Figure 4** The time distribution of the authors' publications.

Table 5 Top 10 Popular Journals

Rank	Journal	Production	Citation	H-index	IF	JCR	JCI
1	<i>European Neuropsychopharmacology</i>	81	500	10	7.6	Q1	1.14
2	<i>Journal of Clinical Psychiatry</i>	48	3496	33	5.3	Q2	1.07
3	<i>Journal of Affective Disorders</i>	47	1501	22	6.6	Q1	1.5
4	<i>Biological Psychiatry</i>	43	695	6	10.6	Q1	2.37
5	<i>European Psychiatry</i>	41	93	3	7.8	Q1	1.36
6	<i>Neuropsychopharmacology</i>	37	304	7	7.6	Q1	1.65
7	<i>International Journal of Neuropsychopharmacology</i>	36	67	4	4.8	Q1	1.22
8	<i>International Clinical Psychopharmacology</i>	28	843	18	2.6	Q3	0.54
9	<i>Journal of Clinical Psychopharmacology</i>	25	870	15	2.9	Q3	0.62
10	<i>Value in Health</i>	25	3	1	4.5	Q1	1.26

Abbreviations: IF, impact factor; JCR, Journal Citation Reports; JCI, Journal Citation Indicator.

Table 6 The Top 10 Cited Journals and Co-Occurrence Discipline

Journal	Cited Times	Discipline	Occurrence Times
<i>American Journal of Psychiatry</i>	495	PSYCHIATRY	731
<i>Journal of Clinical Psychiatry</i>	488	PHARMACOLOGY & PHARMACY	387
<i>Archives of General Psychiatry</i>	417	NEUROSCIENCES	336
<i>Journal of Affective Disorders</i>	384	CLINICAL NEUROLOGY	284
<i>Biological Psychiatry</i>	348	MEDICINE, GENERAL & INTERNAL	89
<i>British Journal of Psychiatry</i>	343	PSYCHOLOGY, CLINICAL	77
<i>Journal of Clinical Psychopharmacology</i>	280	PSYCHOLOGY	57
<i>International Clinical Psychopharmacology</i>	248	HEALTH CARE SCIENCES & SERVICES	43
<i>Journal of The American Medical Association</i>	244	HEALTH POLICY & SERVICES	34
<i>Neuropsychopharmacology</i>	235	ECONOMICS	30

Keywords

The map of keyword co-occurrence is shown in [Table 7](#). The three most relevant keywords were “fluoxetine”, “double-blind”, and “major depression”. Among them, “fluoxetine” occurred 160 times, “double-blind” 153 times, and “major depression” 130 times. There was little difference in the frequency of the top two keywords. VOSviewer was used to

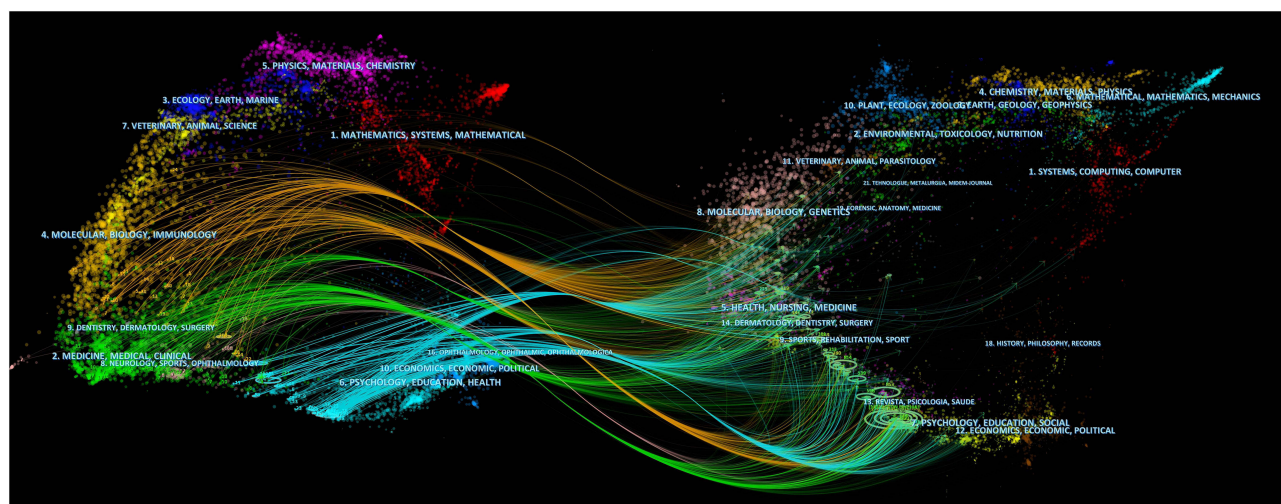


Figure 5 Dual-map overlay of journals in which research was published (left) or cited (right).

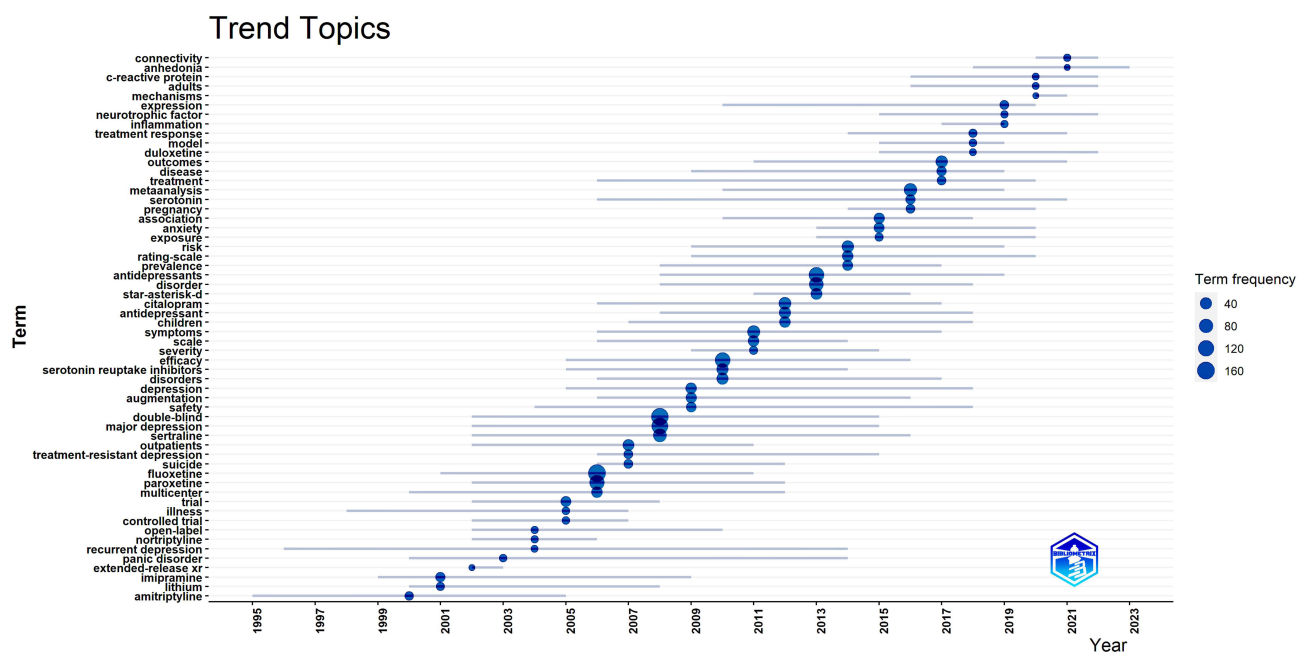


Figure 7 Trend topics between 1995 and 2023.

Discussion

Our study is the first to delve deeply into the relevant research on the use of SSRIs for depression from the perspective of bibliometrics. From 1990 to 2024, research on SSRIs for depression exhibited a remarkable level of activity, with a total of 1149 publications included in the analysis. Among them, 309 articles had an average of 5.29 authors per article, indicating a trend toward teamwork and multiperson participation and highlighting the depth and breadth of research in this field. The annual number of publications has been increasing annually since 1990, reaching a peak in 2004, reflecting the popularity and recognition of SSRIs in the treatment of depression. However, since 2004, although the number of publications has remained stable, fluctuating between 29 and 62; this may suggest that research in this field has entered a mature stage and is awaiting breakthroughs and hotspots. Overall, research on the use of SSRIs for the treatment of depression continues to receive increased amounts of attention but still requires further exploration and innovation.

Our study highlights national/regional and institutional contributions and collaborative models for the use of SSRIs in the treatment of depression. The United States dominates the field, followed by the United Kingdom and China, reflecting the global diversity of research efforts. Denmark stands out for its high-quality research, topping the list in average citations per article. Notably, China ranks third in terms of publications but only tenth in terms of citations, indicating a need to improve the quality of articles. Most of these articles are products of domestic collaborations, with relatively few international collaborations, suggesting that efforts to strengthen international cooperation are necessary.²² Through a deeper comparison with the results of other bibliometric studies in similar fields, we find that the country with the highest ranking in terms of the number of articles and international collaboration in depressive-related fields is the United States, which is similar to the results of this study. The United States has dominated depression research.^{23–25} Among institutions in the United States, the University of Pittsburgh excels in this field, with Harvard and Columbia Universities also demonstrating strength. Close collaboration among institutions, including frequent partnerships between University of Pittsburgh, Columbia University, and the pharmaceutical company Eli Lilly and Company, underscores the advantages of industry-academia collaboration. Overall, the research in this area has exhibited globalization and diversification, with cooperation and exchange among different countries and institutions driving its in-depth development. In the future, we anticipate that more nations and institutions will collaborate to advance research on depression treatment.

Fava M stands out as the most prolific author with 40 articles as well as the highest H-index, reflecting the quality of his research. Fava M also tops the list in terms of citations, indicating widespread influence. The authors have different distributions of active research time, both in recent years of continuous production and in early concentrated creation. Notably, Fava M, Hieronymus F, Mann JJ, and Papakostas GI collaborate closely with other authors, fostering a collaborative environment that leverages collective strengths to drive progress in the field. There is high-frequency cooperation between Papakostas GI and Fava M.^{26–29} Their collaborative study focused on the use of selective serotonin reuptake inhibitors to treat major depressive disorder, as well as treating depressive disorders that are particularly resistant to these drugs. In 2024, the two had their most recent collaboration. They published a paper in the journal *Molecular Psychiatry* entitled “Comparative effectiveness research trial for antidepressant incomplete and nonresponders with treatment resistant depression (ASCERTAIN-TRD), a randomized clinical trial”.³⁰ The results of the study revealed that patients with treatment-resistant depression responded better to recurrent transcranial magnetic stimulation-augmented therapy than to antidepressant medication switching. The shift in direction of their research also suggests that research on treatment-resistant depression has moved toward a new stage of nondrug treatment. More importantly, the findings of their latest collaboration revealed a breakthrough in nondrug treatments for treatment-resistant depression. Studies found that nondrug treatments have been used in patients with mental or behavioral disorders, type 2 diabetes, and liver disease, with some success.^{31–33} Overall, the diverse mix of authors with varying degrees of productivity, impact, and collaboration provides a rich foundation for continued innovation and advancement in this area of research.

After a thorough analysis of the distribution of journals published in this field, we found that *European Neuropsychopharmacology* is the most active journal, with the highest number of articles published. Moreover, the *Journal of Clinical Psychiatry* stands out in terms of its h-index, reflecting its high-level research output and influence. Additionally, the *American Journal of Psychiatry* has a high IF, demonstrating its academic quality and influence. These journals not only provide researchers with a platform to publish high-quality research results but also promote academic exchange and progress in this field.^{34,35} The dual map reveals the close connection between highly cited journals in the fields of psychiatry, pharmacology, neuroscience, and the disciplines they cover. As a core discipline, psychiatry is led by highly cited journals such as the *American Journal of Psychiatry*, which highlights its significant position in this field. Simultaneously, the substantial involvement of neuroscience and pharmacology has promoted the creation and implementation of new knowledge and further enhanced the body of knowledge in psychiatry through cross-disciplinary research. Furthermore, combining the disciplines of clinical medicine and psychology affords a multifaceted outlook for the growth of therapeutic regimens and fosters an all-encompassing comprehension of psychological to biological processes. Importantly, the addition of foundational fields such as molecular biology, along with highly cited journals such as *Biological Psychiatry* and *Molecular Psychiatry*, has aided in the growth and depth of psychiatric research and created new avenues for the development of individualized treatment plans, preventative measures, and psychiatric drugs. The close cooperation and knowledge sharing between these disciplines jointly promote frontier progress in the field of psychiatry and provide a solid theoretical basis and innovative direction for clinical practice.

Through an in-depth analysis of the keywords in this field, we gain a glimpse of its research hotspots. The high frequency of keywords such as “fluoxetine”, “double-blind”, and “major depressive disorder” underscores the focus of the current research. Double blinding, as a scientific method to ensure research objectivity, plays a crucial role in the treatment of depression.^{10,36,37} The efficacy and safety of fluoxetine, a representative antidepressant, has attracted widespread attention. Researchers in this field have continuously explored its effectiveness when used alone or in combination with other drugs, aiming to improve treatment outcomes.^{38,39} Meanwhile, major depressive disorder, another significant research focus, has garnered significant attention regarding its treatment methods and effectiveness evaluation.⁴⁰ Researchers are striving to provide patients with diverse treatment options and delve deeper into their pathogenesis and pathophysiological processes.⁴¹ These studies not only enhance our understanding of the nature of depression but also offer better therapeutic prospects for patients.

We further discovered a close connection between these hotspots via keyword co-occurrence analysis. Terms related to double-blind trials, such as placebo-controlled trials, imipramine, and amitriptyline, reflect commonly used methods and approaches in antidepressant research. Imipramine and amitriptyline are tricyclic antidepressants (TCAs). Although

the anticholinergic effects and membrane-stabilizing properties of TCAs contribute to their poor tolerability and overdose safety, they are still considered viable options for treating depression in certain circumstances.⁴² The mention of these drugs indicates researchers' ongoing concern and attention toward the efficacy and safety of traditional antidepressant medications. For example, the common issues with many studies on the safety of antidepressant medications are small sample sizes and short follow-up periods.^{43,44} Additionally, some studies are limited by a lack of randomization with intervention blinding.⁴⁵ It is important to consider larger sample sizes and longer time periods in future research. In addition to focusing on drug efficacy and experimental design, current research has focused on various aspects of depression treatment. Keywords associated with major depressive disorder, including suicide, risk, and barriers, highlight the challenges this illness poses to patients' quality of life and safety.^{46,47} Researchers are striving to provide more comprehensive and effective treatment plans for patients with depression by exploring new treatment methods, assessing risk factors during the treatment process, and giving attention to the mental health of patients.^{48,49}

Trend topic analysis can help researchers further identify the frontiers of the field. Connectivity reveals the effect of changes in functional connectivity in different brain regions on depression, and SSRIs improve these connections by regulating serotonin levels, thereby relieving symptoms.^{50–52} This study not only deepens our understanding of the neural mechanisms of depression but also provides a scientific basis for the optimized use of SSRIs. C-reactive protein, an inflammatory marker, plays an important role in the pathogenesis of depression.⁵³ SSRIs may exert their therapeutic effects by regulating the inflammatory response.⁵⁴ Therefore, studying the relationship between C-reactive protein and the efficacy of SSRIs is crucial for predicting treatment response and recurrence risk. Anhedonia, as a core symptom of depression, significantly impacts patients' quality of life, emphasizing the need for researchers in this field not only to focus on the disease itself but also to give more attention to managing improvements in patient functioning.⁵⁵ Moreover, anhedonia may be a significant negative prognostic indicator of treatment-resistant depression.⁵⁶ It is also a crucial metric for evaluating the efficacy of antidepressant drugs or nondrug treatments.⁵⁷

There are several limitations in this study. First, the publications included in our analysis were limited to the WoSCC, and our search strategy may not be able to cover all the publications in this field. Second, our bibliometric analysis focuses mainly on evaluating the research performance of scientific publications. This means that our analysis is primarily based on quantitative indicators such as the number of publications, citation count, and author influence. Although these indicators can provide an assessment of research quality and impact to a certain extent, they cannot fully reflect the depth, innovativeness, and practical application value of the research. Finally, with the advent of the digital age, the number and variety of academic publications are increasing dramatically. Bibliometrics must update its data sources in real time to ensure the comprehensiveness and accuracy of the analysis.

Conclusions

Research on the use of SSRIs for the treatment of depression continues to receive increasing attention but still requires further exploration and innovation. The United States dominates the field, and researchers from China need to further improve the quality of their publications. Among these institutions, the University of Pittsburgh excels in this field, with Harvard and Columbia Universities also demonstrating strength. Fava M has the highest scientific productivity and extensive academic influence. *European Neuropsychopharmacology* is the most active journal in this field.

The high frequency of the key terms “double-blind”, “fluoxetine”, and “major depressive disorder” underscores the focus of the current research. Moreover, ‘connectivity’, ‘C-reactive protein’, and ‘anhedonia’ are the frontiers of future research. In the future, bibliometrics can be incorporated into mainstream literature retrieval tools, including Scopus and Google Academic, to enrich the data sources. Moreover, the literature analysis tools of some databases can be used to check the gaps in the existing analysis tools, which makes the literature metrology results more abundant.

Data Sharing Statement

All the data are available from the corresponding authors upon reasonable request.

Funding

This work was supported by the Southwest Medical University Student Innovation and Entrepreneurship Project Fund (Grant Numbers: 202310632045 and 202310632059).

Disclosure

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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