

The Journal of Behavioral Science (TJBS)

Quantitative Research Article

A Bibliometric Analysis of Journal Performance, Trends, and Visualization of Scientific Research in The Journal of Behavioral Science

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Abstract

Background/ problem: The Journal of Behavioral Science (TJBS) makes significant contributions to behavioral science knowledge, research, and its applications. Although it has been published since 2006, TJBS gained wider academic recognition after its inclusion in the Scopus database in 2018, raising questions about how this milestone has influenced the scope, quality, and direction of its published research.

Objective/ purpose: The study’s main objective was to analyze how interdisciplinary research, and advanced methodologies have influenced the content and impact of TJBS, especially since it was included in the Scopus database in 2018.

Design and Methodology: A bibliometric analysis design was utilized to quantitatively evaluate publication trends, research themes, and citation patterns in TJBS. Using VOSviewer to visualize data from the Scopus database, 144 out of 154 articles published between 2018 and 2024 were selected for the analysis, excluding 10 review articles.

Results: The findings re-affirm substantial interest in diverse behavioral science topics and utilization of advance research methodologies. Journal performance has shown steady progress, with an increase in total publications, author networks, institutional collaborations, and citations over time. The key terms co-occurrences reveal thematic clusters highlighting key areas such as health promotion, organizational behavior, and educational contexts.

Conclusion and Implications: The study concludes that TJBS is increasingly focusing on interdisciplinary research, especially in work and health-related themes, particularly in response to contemporary global issues. Implications of these findings are discussed in terms of quality management of similar journals, orientation of scholars and authors, and considerations for future researchers in behavioral science.

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In the rapidly changing world today, publishing high-quality scientific research in behavioral science is crucial for researchers, academicians, and practitioners. The emergence of complex issues related to human behavior is accompanied by unprecedented situations and problems, such as those caused by climate change and geopolitical instability. This research aimed to analyze and present the content analysis of the published articles in the peer-reviewed and Scopus indexed journal, *The Journal of Behavioral Science* (TJBS), and showcase the changes and trends in this journal over a period of time.

The Behavioral Science Research Institute (BSRI), established in 1955 at the Srinakharinwirot University, Bangkok, Thailand, has made many salient contributions to behavioral science and behavioral science research (Mohan, 2015; 2016). Among these contributions was the launch of an academic journal in 2006, that was named *The Journal of Behavioral Science* (TJBS); and managed and published through the consistent and diligent efforts of the faculty and staff of the BSRI. This journal has been a prestigious

symbol of their academic service and contribution to the discipline of behavioral science, especially since the journal presents an eastern perspective on behavioral science knowledge and research.

It is vital for academicians, readers, and authors to understand trends and track the changes in the discipline which can be provided by the content analysis of journals and published articles as noted by various researcher who have conducted such studies (Ayanoglu, 2022; Järvelin & Vakkari, 2021; Järvelin et al., 2023; Klinmalee et al., 2023; Mohan et al., 2016). In 2016, a research synthesis of the articles in TJBS was conducted and published (Mohan et al., 2016). This gave valuable information about the content published in the journal from its commencement in 2006 till 2014. The editorial teams of TJBS have strived to achieve the highest quality in the publication of this journal. Through dedicated efforts this journal was indexed in the reputed database of Scopus in 2018, which subsequently had a positive effect on the journal impact and reach.

Therefore, this research was designed to scientifically examine the changes of the published articles of TJBS from 2018 to 2024 through content analysis, utilizing bibliometric techniques and data visualization to study the journal performance and trends. Other objectives were to gain insights into the diversity of the content, design, methodology, and analysis, as well as the authorship changes, and compare it with the previous research-based information about the journal (Mohan et al., 2016). It is believed that this study will have a significant impact on understanding the trends in the discipline of behavioral science. This study provides evidence of the scientific rigor in published behavioral science research, and also demonstrates the diversity and scope of behavioral science in solving real-world problems.

Literature Review

This section comprises four main parts, an overview of the journal, conducting content analysis of journals, the previous research-based findings of TJBS, and the emerging research objectives.

The Background of The Journal of Behavioral Science

We first present the history and development of the journal for the readers. As stated on the journal website (<https://so06.tci-thaijo.org/index.php/IJBS/history>) and mentioned in the previous content analysis of the journal (Mohan et al., 2016, p.2), this international journal was launched in 2006 by the Behavioral Science Research Institute (BSRI) in Thailand. It was titled, 'The Journal of Behavioral Science'. Originally, the journal published one issue per year. In 2011, the title/ name of the journal was changed to 'International Journal of Behavioral Science', to display the widening range and scope of the papers that were being published and make it more attractive to the international audiences. As the interest in the journal grew, another significant policy change was implemented in 2014, by increasing its publications from one issue per year to two issues.

One of most important milestones in the history of the journal was the year 2018, when the journal was reviewed for evaluation and indexing in the Scopus database. Beginning in 2017, the journal's editors participated in a series of workshops and training organized by the national organization, the Thai-Journal Citation Index Centre (TCI). The TCI launched several initiatives to support the development of Thai journals (see the website, <https://tci-thailand.org/>). These workshops were supported by the Thailand Research Fund (TRF) and Scopus (Elsevier). In April 2018, our journal got indexed with the Scopus database, and we reverted to the original title/name that was registered for ISSN- 'The Journal of Behavioral Science'.

Over the years, there have been consistent efforts to uphold the quality of the journal. Subsequently, to match the growing interest of the authors in the journal, in January 2019, the journal management team increased the number of publications from two issues per year to three issues.

Aims and Scope of the Journal

Since its inception, the purpose of publishing the journal was to contribute towards the growth of the discipline and support the mission of academic service by the Behavioral Science Research Institute

(BSRI). The aims of the journal have also evolved for greater clarity of the authors and readers, and are clearly stated on the journal website (<https://so06.tci-thaijo.org/index.php/IJBS/about>):

This journal aims to endow a platform for authors to publish their original academic work that seeks explanations for understanding behavior through an interdisciplinary perspective of behavioral sciences, that shows an integration and application of knowledge from various disciplines such as psychology, sociology, education, economics, management, health sciences, social sciences, and others. Authors are recommended to use advanced research methodology (whether quantitative, qualitative, or mixed methods) in their submissions.

Furthermore, authors should highlight the original contributions to behavioral science knowledge (such as in content, research, and application). The authors should clearly state the behavioral science implications of their results for policy, practice, or theory.

The authors interested in submitting their manuscript to TJBS are encouraged to look at the aims and scope before submission.

Indexing of the Journal

The journal management team at the BSRI has always strived hard to reach the best quality of publishing. The journal was indexed in the Thai national database, Thai-journal Citation Index (TCI), since 2009. From 2015 till now has been evaluated periodically for quality and remains in the tier-1 category of TCI. On the international front, the journal was indexed in the prestigious Scopus database since 2018, the ASEAN Citation Index (ACI) since 2015, and the EBSCO database since 2013. The journal is also indexed in the Emerging Sources Citation Index (ESCI) hosted by Web of Science (previously known as ISI Web of Knowledge).

Management of the Journal

The journal is managed by an editorial team comprising of faculty and staff at the BSRI, who volunteer to contribute towards the journal processes and publication. The core work is done by the editor-in-chief, along with an associate editor, and supported by two journal officers, who also work as supporting staff at the BSRI. The team actively engages with the faculty of BSRI to review each submission for initial acceptance. Constructive feedback is shared with authors, and once they edit their works, they can submit them to TJBS for the review process. The editors at BSRI follow systematic steps to ensure each submission undergoes a double-blind peer review process. All efforts are made to support the authors while upholding the highest criteria of quality in the publishing process.

Content Analysis of Journals

Using content analysis for evaluating the publications of a journal can be useful in understanding the current state of the discipline. As noted in the previous content analysis of TJBS (Mohan et al., 2016), such information can be useful for the editorial management team and for potential readers of the journal. Along with that, a content analysis can be useful in developing ‘awareness of the direction and emphasis of publications in the journal’ (Bulbotz, Jr. et al., 2010, as cited in Mohan et al., 2016, p.5).

As noted by Zhang and Wildemuth (2009), both quantitative and qualitative techniques can be applied when conducting content analysis. Some of the recent research studies have used quantitative approaches to analyze the content of the journals (Ayanoğlu, 2022; Sahoo et al., 2020). However, it can be useful to deploy qualitative techniques to develop codes and categories of analysis. This is very useful as “qualitative analysis deals with the forms and antecedent-consequent patterns of form, while quantitative analysis deals with duration and frequency of form” (Smith, 1975, p.218, as cited in Zhang & Wildemuth, 2009).

Bibliometric analysis has been used for rigorous and systematic identification of large volumes of data within a field or for journals (Donthu et al., 2021; Passas, 2024). This technique can be utilized to analyze patterns, trends, and impact in a discipline (Passas, 2024). Thus, the current study planned to utilize bibliometric and data visualization techniques, such as VoS, that are being increasingly used in the analysis of journal’s content (Givi et al., 2022; Munda et al., 2025; Panitz & Dell’Acqua, 2025; Zyoud & Zyoud, 2021).

Previous Research Findings

The first systematic research to analyze the articles published in TJBS was conducted in 2014-2015, and subsequently published as a research paper in 2016 (Mohan et al., 2016). The articles included were from 2006 (when the journal was first published) till 2014. That research was conducted by the editor, along with two faculty members at BSRI. The researchers/authors adapted the technique of quantitative content analysis for analyzing the 86 published articles in the journal. The findings summarized the key content and the methodologies used in TJBS along with other key characteristics. Though, the journal published a diverse range of topics from the various disciplines related to behavioral science, majority were from psychology. Multidisciplinary and applied perspectives of behavioral sciences were reported in the research; and a use of diverse methodological approaches, more quantitative, followed closely by qualitative and mixed methods (Mohan et al., 2016, p.13).

The implications of the findings were discussed for the development of the quality of the journal, for authors, and for future researchers in behavioral science. In conclusion, it was recommended that a review, synthesis, and content analyses of the publications in the journal should be undertaken periodically since this kind of study provides valuable insights about the status of the journal and helps develop a strategic plan for future development. (Mohan et al., 2016, p.15). Thus, the current research study was grounded in the previous research-based evidence and recommendations.

Emerging Research Gaps and Research Objectives

Ever since the journal was indexed in Scopus, it provided an excellent opportunity to reach a wider audience. But at the same time, it also brought some challenges. Though the number of articles submitted to the journal has risen considerably since 2018, very few articles match the aims and scope of the journal. It has become quite a challenge to review the rising numbers and then select good quality articles for publishing. Furthermore, with the rapid changes in the field of behavioral science and the growing popularity of the journal, it becomes imperative to design another systematic review of the content of the publications in TJBS. Subsequently, this research was designed to conduct another content analysis by integrating both quantitative techniques such as bibliometric analysis and qualitative techniques, along with the utilization of latest technology and software for data visualization. Three research objectives of the current research were identified:

- 1) To study the overall changes in the quality of TJBS during 2018-2024, particularly about the number of citations, the impact factor, international collaborations and the contributions towards the UN's Sustainable Development Goals (SDGs).
- 2) To analyze the trends in the research articles published in TJBS after it was indexed in Scopus in 2018, based on the diversity of authors, content diversity, and theories.
- 3) To compare the differences in the research articles published in TJBS between the two periods of content analysis, period 1 (2006-2014) and period 2 (2018-2024).

It is hoped that the emerging information from this research will be valuable to authors, readers, and academicians in the field of behavioral science, as well as other academic institutes that publish journals for academic contribution and not commercial gains.

Method

Research Design

This study adopted a case study approach to investigate the three research objectives, which is useful in research when we need to obtain an in-depth understanding of a topic, event, or phenomenon of interest in its natural real-life context (Crowe et al., 2011). Recent research studies analyzing the content of journals have also reported the use of the case study approach (Ayanoğlu, 2022; Sahoo et al., 2020).

This study utilizes a bibliometric analysis approach to substantiate the quantitative assessment of publication patterns, thematic structures, and citation impact within TJBS. Metadata from articles published between 2018 and 2024 was systematically collected, organized, and analyzed using bibliometric methods,

sourced from the Scopus database. Through this method, the identification of influential authors, frequently cited publications, keyword co-occurrence patterns, and emerging research themes within the journal can be identified, giving a comprehensive overview of its academic performance. To enhance the depth of analysis, VOSviewer software was utilized to visualize bibliometric networks, including keyword co-occurrence, citation, and bibliographic coupling. The visualization process reveals the interconnection of specific topics and concepts and the dominant research clusters within the journal.

Research Context and Sample

The context of this research is the ‘case study’ of a journal- *The Journal of Behavioral Science* (TJBS). The selected articles are from 2018, when TJBS was indexed in the Scopus database. The ‘sample’ in this research are 144 research articles published since the January 2018 issue till the September 2024 issue. A total of 154 articles were published during this period, but only 144 articles were considered for the research analysis. To maintain consistency in analyzing only original research contributions, 10 review articles were excluded from the Scopus database when extracting these articles. The chosen sample is a focused dataset that can be used to evaluate the journal’s performance, thematic development, and scientific contribution over the specified time period.

Instruments and Coding Variables

The instruments used in this research were coding sheets designed by the researchers to capture the important parameters of publications in the journal, such as author information, content, area/ discipline, methodology, designs, etc. The primary source used was the Scopus database, which provided comprehensive metadata for all research articles published in TJBS between 2018 and 2024. The metadata contained information like article titles, author names, affiliations, publication years, keywords, abstracts, and citation count. VOSviewer software was utilized as a second-tier tool to depict and evaluate connections between variables, such as co-authorship, keyword co-occurrence, citation patterns, and bibliographic coupling. Variable coding was conducted by categorizing data into several key bibliometric indicators. These included publication year (to track trends over time), author frequency (to identify prolific contributors), institutional affiliation (to assess research collaboration), keyword frequency (to detect dominant themes), and citation count (to determine the impact). Thematic clusters and research hotspots were revealed through further analysis of keywords using co-occurrence networks. The journal’s scientific output was analyzed objectively and comprehensively using structured coding and visualization tools.

Data Collection

A total of 154 articles published in TJBS during 2018 to 2024 were downloaded from the Scopus database. As the inclusion criteria focused only on research-based articles, 10 review articles were excluded and the remaining 144 articles were chosen for this research. The research team scanned and reviewed these research articles. Several research meetings resulted in the recording, analysis, and discussion of information. Article titles, author names, affiliations, publication years, keywords, abstracts, and citation counts were among the key bibliometric details collected. The foundation for conducting quantitative, quantitative, and visual bibliometric analysis using VOSviewer software was provided by this dataset.

Data Analysis and Procedure

Appropriate content analysis techniques were applied using bibliometric methods to systematically examine publication patterns, research themes, and citation impact within TJBS. Quantitative content analysis was useful in providing answers to the research questions, as shown by other researchers analyzing publications in a journal (Järvelin & Vakkari, 2021; Järvelin et al., 2023), and was used in the previous content analysis of TJBS (Mohan et al., 2016). Quantitative content analysis was used to analyze the journal metrics, and salient characteristics, including diversity of authors, topics and methodologies used. Appropriate software was used to substantiate quantitative analysis, such as network visualization by using VOSviewer, which is a software tool for constructing and visualizing bibliometric networks (see more-<https://www.vosviewer.com/>). Bibliometric analysis was used for evaluating journal performance since it is being widely used in analyzing journals since it was suggested by Pritchard (1969, as cited by Givi et al., 2022).

Qualitative content analysis was used to determine the codes and categorize the emerging themes of the content and theories of the published articles. This has been used in similar research, such as for analyzing the publication profile of a journal (Ayanoğlu, 2022). We used the ATLAS.ti software and ChatGPT to extract data from published articles, such as theories used in our research. The research team conducted cross-checking on this data during research meetings. Tables or visualization software were used to quantitatively describe the results. In this research, the qualitative coding followed an inductive process involving all members of the research. First, we began with identifying categories of analysis, followed by member cross-checking during team meetings, adjustment of the categories and sub-categories, and final decision making by the research team.

The steps of this study's content analysis were adapted from the approaches described by other researchers (Mohan et al., 2016; Wallgren et al., 2021). The specific steps included: (i) establishing inclusion and exclusion criteria; (ii) creating categories (content areas) guided by previous research (Mohan et al., 2016) and experts in behavioral science; (iii) creating coding of the categories; (iv) verifying article classification and categories; (v) summarizing data in tables to answer the research questions/objectives; (vi) and analyzing changes in prevalence of select categories over time. Software results were cross-checked and discussed by the research team. Further review of research processes used by other journals were applied to enhance the quality of this research.

Results

The results of this research are presented in three sections that are aligned with the direction and scope of the three research objectives. The research revealed that TJBS experienced significant improvements in quality between 2018 and 2024, resulting in a significant increase in citation counts, a higher impact factor, expanded international collaborations, and greater alignment with the UN's SDGs. The journal has been indexed in Scopus since 2018, and it has shown an increase in diversity in authorship and research themes, which encompasses a wider range of theoretical perspectives. In addition, a comparison of the analysis periods (2006 – 2014 and 2018 – 2024) showed significant shifts towards research that is more globally relevant, interdisciplinary, and socially impactful.

I. Analyzing the Journal Performance from 2018 – 2024

There are many indices for tracking the performance of a journal quality, and we present some of these for TJBS. There were many changes in TJBS after it was indexed in the Scopus database in 2018. At the time of indexing, the journal editors selected two subject categories of Scopus: *applied psychology* and *social psychology*. Scopus identifies journals based on their focus, which assists researchers in discovering content that is relevant to their fields. Despite this, the subject categories were too narrow to reflect the wider range of behavioral science articles that were chosen for publication in the journal. Subsequently, the editorial team requested the Scopus management team for inclusion of additional subject categories in 2022, which were added in 2023: *psychology (miscellaneous)* and *social sciences (miscellaneous)*. Information for journal metrics was sourced from Scopus database (as of April 4th, 2025).

Table 1 displays the gradual improvement in the performance metrics of TJBS from 2018 to 2024 in terms of the percentile ranking in different subject categories, the number of citations (cites), and the CiteScore metric based on the Scopus database. The journal ranked higher in the added subject categories of social psychology (miscellaneous) and psychology (miscellaneous) by 2023; notably TJBS was placed in the 62nd percentile in social sciences (miscellaneous). The number of citations increased dramatically from 9 in 2019 to 215 in 2024, indicating an increase in scholarly recognition. CiteScore increased slightly from 0.11 in 2019 to 0.27 in 2023, indicating gradual impact growth. While international collaboration (IC%) fluctuated, peaking at 26.32% in 2019 and dropping to 11.11% in 2024, the journal maintained a global presence. The researchers further analyzed and reported the percentage of international collaborations per issue, and the number of articles per issue that showed contributions towards the United Nations' 17 Sustainable Development Goals (SDGs) (see more <https://sdgs.un.org/goals>).

Table 1

TJBS Metrics from 2018-2024

Year	Percentile Ranking in Subject Categories				Cites	CiteScore	IC (%)	SDGs
	Applied psychology	Social Psychology	Psychology (Miscellaneous)	Social Sciences (Miscellaneous)				
2024*					215	0.24	11.11	22
2023	33rd	30th	50th	62nd	187	0.27	12.00	16
2022	32nd	32nd	–	–	158	0.23	16.00	13
2021	26th	29th	–	–	101	0.21	17.86	24
2020	17th	21st	–	–	42	0.21	6.25	11
2019	7th	11th	–	–	9	0.11	26.32	11
2018	0th	1st	–	–	–	–	21.43	9

Note. Quartile rankings from Scopus (4 April 2025). IC = international collaboration percentage per issue. CiteScore = based on Scopus; SDGs= Number of articles contributing towards the Sustainable Development Goal.

*The Scopus database has yet to update the data for 2024 (as of April 4th, 2025).

II. Analyzing the Trends of the Research Articles Published in TJBS during 2018-2024

We conducted four types of analyses to showcase the trends in the content of behavioral science research from the articles published in TJBS. These included the diversity of author networks (Figure 1), key term co- occurrences (Figure 2), top theoretical underpinnings of the published articles (Figure 3), and the top 10 most cited articles in the journal (Table 2).

The number of published articles in a journal is an essential indicator for assessing the progress in the field of behavioral science. A total of 154 research articles were published in TJBS during the period of analysis (2018 to 2024), with the number of publications steadily rising as detailed in Table 4. The selection of only research articles for this content analyses resulted in 144 articles, corresponding to 623 citations being found in the Scopus databases between January 1, 2018 and December 31, 2024. The growth in the number of publications was slow but in a positive direction during this period, mainly due to the editorial team following strict acceptance criteria and a rigorous process in selecting articles that matched the aims and scope of TJBS.

Diversity of Author Networks

The intricate network of international collaborations within the realm of behavioral science research for TJBS is depicted in Figure 1. The size of the node is linked to the number of publications produced by that country. High betweenness centrality indicates the importance of a node. According to the ranking of betweenness centrality: Thailand, Indonesia, and Malaysia are first three. Thailand is the top country for academic publishing, with 82 articles accounting for 45.81% of the total publications. The second country is Indonesia publishes 33 articles which accounts for 18.44%, followed by Malaysia with 19 articles which accounts for 10.61%. The quantity of publications produced by a country is a key factor in assessing its influence within this domain, as shown in Figure 1.

Key Term Co- Occurrences Analysis of TJBS Articles

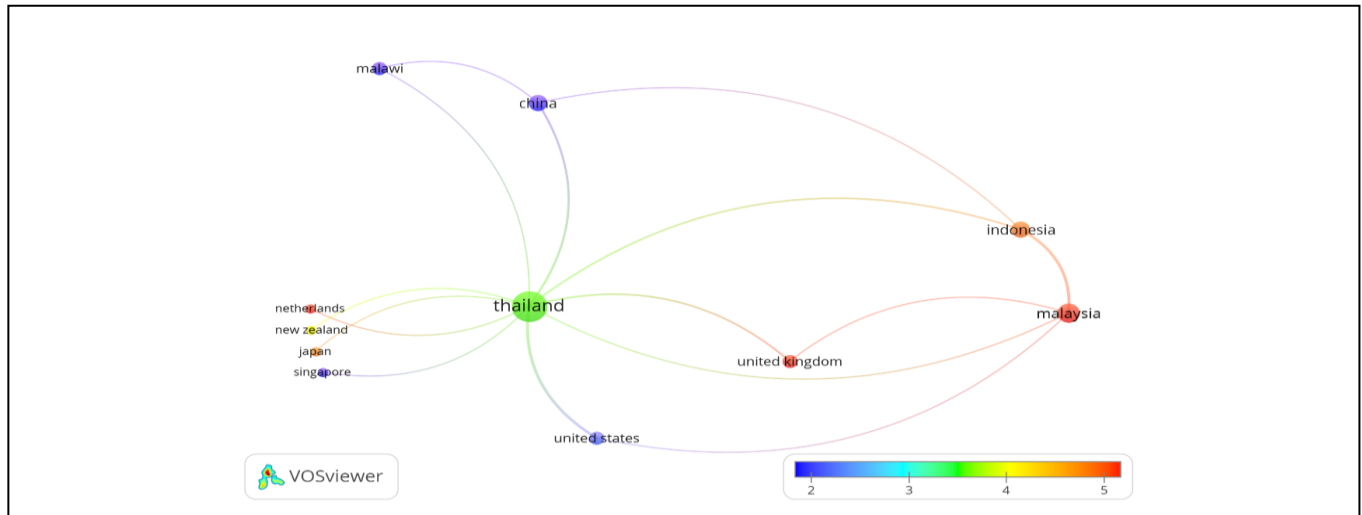
A cohort of 623 citations links to the publications from a total of 144 articles selected in this study. An evaluation of the co-occurrence of research hotspots was found in the behavioral science publications in TJBS between 2018 to 2024. The clustering analysis was capped at two times, and 300 out of 428 keywords met this requirement. The bibliometric knowledge mapping has identified four distinct clusters, as shown in Figure 2. A link between two nodes signifies that both keywords are included in the same publication, which is a representation of keywords. The frequency of the keyword being observed depends on the size of the node. The prevalence of keyword co-occurrences increases when there is an extensive connection.

The 300 keywords were grouped into two distinct clusters, each with a distinct color. The order of clusters in the timeline is determined by the number of keywords present in each cluster. Cluster one signified that “theory of planned behavior” was the center of research and a dominant trend. Cluster two

with ‘perceived organizational support’ describes the trend toward work-related publications. Cluster three includes ‘transformational leadership’; cluster four includes ‘higher education’; cluster five includes ‘innovative behavior’; cluster six includes ‘resilience; and cluster seven includes ‘health literacy’.

Figure 1

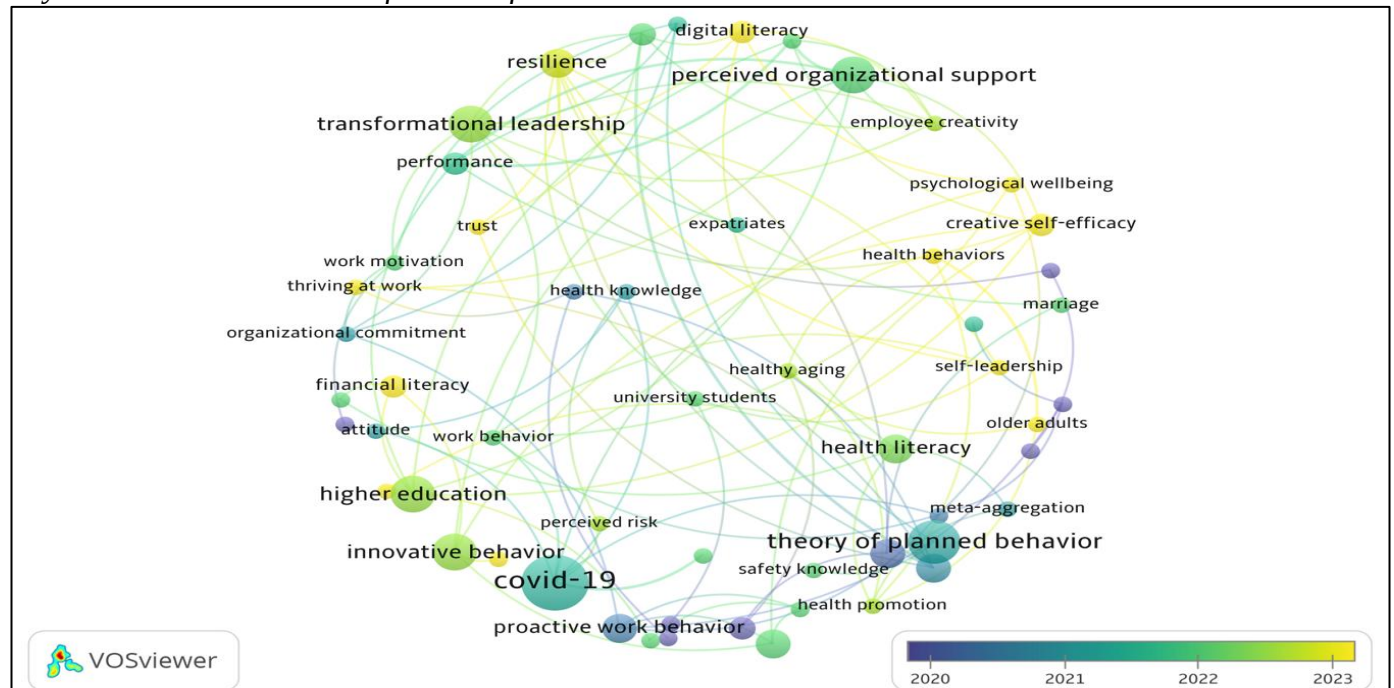
Diversity of Author Networks



The analysis of keywords from articles published in TJBS between 2018 and 2024 shows that there are several dominant and interconnected research themes. The theory of planned behavior, health literacy, and transformational leadership were the central nodes in COVID-19, which demonstrates their high relevance and frequent connection with other nodes. The map reveals significant thematic clustering around three main topics, (i) health-related topics, such as health promotion, psychological well-being, and healthy aging; (ii) work-related topics, such as innovative behavior, proactive work behavior, perceived organizational support, and (iii) educational research with themes such as university students, digital literacy, and higher education. The latest topics displays the contemporary research trend towards digital literacy, employee creativity, psychological well-being, thriving at workplace, and older adults.

Figure 2

Key Term Co- Occurrences of Articles from 2018-2024



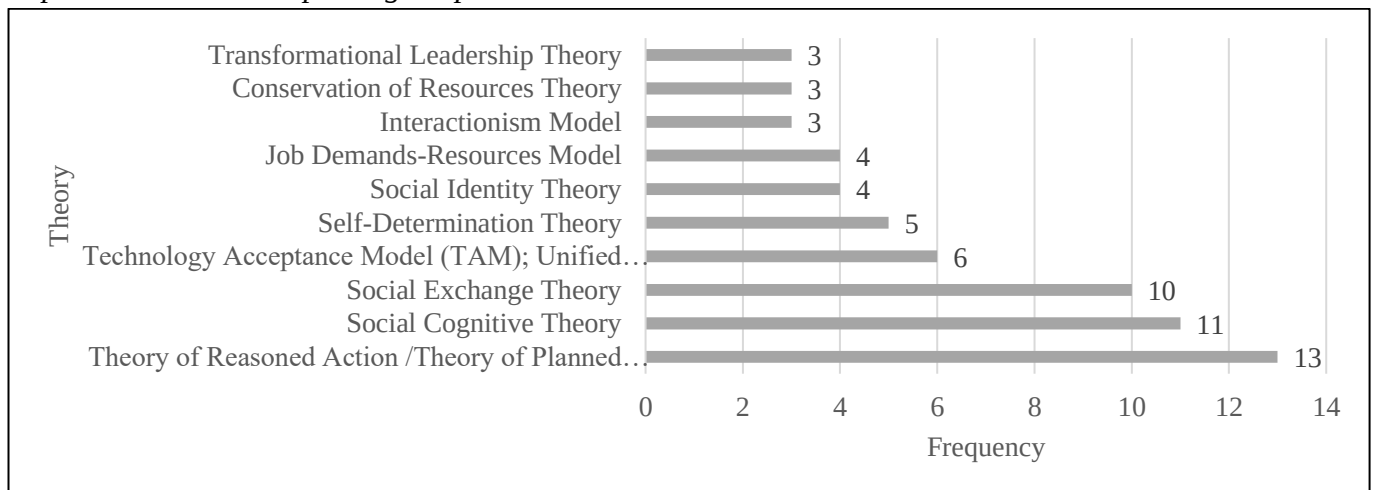
Top Behavioral Science Theories in Reported in TJBS Articles

As per the journal guidelines, we encourage authors to show their original contribution to behavioral science, along with a clear behavioral science theoretical base for developing the conceptual framework. A detailed analysis of the theoretical underpinnings of the articles in TJBS was conducted using both quantitative and qualitative techniques. Our first step was to analyze thematic content using Atlas.ti software. The emerging data was qualitatively scanned and analyzed by the first author, followed by member cross-checking for the emerging theories. The theoretical underpinnings of the TJBS articles were analyzed by using qualitative searches, member cross-checking, and quantitative cross-checking.

The synthesized data representing the top 10 theories utilized in the articles is displayed in Figure 3. The top most frequency ($n = 13$) is for the *theory of reasoned action* and *theory of planned behavior*. This analysis shows that all the theories display the inter-disciplinary perspective of behavioral sciences, and substantiates that TJBS that publishes work showing an integration of knowledge from various disciplines.

Figure 3

Top Theoretical Underpinnings Reported in the Published Articles



Citation Analysis

Another important metric of journal performance was to examine the most cited articles in TJBS. The top 10 ranked articles, in terms of the number of times these were cited, are shown in Table 2. Each article also displays the *field-weighted citation impact* (FWCI), which is the ratio of the total citations actually received by the denominator's output, with the data sourced from Scopus (Elsevier). There are 3 articles ranked in the tenth position, and most used quantitative methodology, with only 2 of the articles using the qualitative methodology. Notably, three of the top cited articles depict work-related research.

Table 2

Top 10 Most Cited Articles in The Journal of Behavioral Science (2018-2024)

Rank	Authors	Year	Title	Times Cited	FWCI	Methodology
1st	Helmy et al.	2019	Linking psychological empowerment, knowledge sharing, and employees' innovative behavior in Indonesian SMEs	33	1.45	Quantitative
2nd	Tepayakul and Rinthaisong	2018	Job satisfaction and employee engagement among human resources staff of Thai Private Higher Education Institutions	22	.79	Quantitative

Table 2 (Continued)

Rank	Authors	Year	Title	Times Cited	FWCI	Methodology
3rd	Smithikrai and Suwannadet	2018	Authentic leadership and proactive work behavior: Moderated mediation effects of conscientiousness and organizational commitment	21	.79	Quantitative
4th	Fenitra et al.	2021	Factors Influencing Preventive Intention Behavior Towards COVID-19 in Indonesia	19	1.54	Quantitative
5th	Tiamboonprasert and Charoensukmongkol	2020	Effect of ethical leadership on workplace cyberbullying exposure and organizational commitment	19	.93	Quantitative
6th	Teng-Calleja et al.	2020	Examining organizational response and employee coping behaviors amid the COVID-19 pandemic	18	.93	Qualitative
7th	Abdullah and Aziz	2020	Safety behavior in the laboratory among university students	16	.85	Quantitative
8th	Koednok and Sungsanit	2018	The influence of multilevel factors of human resource practices on innovative work behavior	14	.56	Quantitative
9th	Hamzah et al.	2021	The Role of Well-Being, Supervisor Support and Positive Feedback on Lecturers' Work Engagement	13	0.97	Quantitative
10th	Smithikrai	2022	Antecedents and Consequences of Proactive Work Behavior Among Thai Employees	11	1.30	Quantitative
10th	Surakarn et al.	2020	Active learning and its outcomes: A case study from the education reform project in Thailand	11	.42	Qualitative
10th	Noor et al	2018	Gratitude, gratitude intervention and well-being in Malaysia	11	.34	Quantitative

Note. FWCI = Field-Weighted Citation Impact

III. A Comparison of TJBS Articles Between *Period 1* (2006-2014) versus *Period 2* (2018-2024)

The research articles published in TJBS were compared between the two periods of content analysis, *period 1* (2006-2014) and *period 2* (2018-2024). The purpose was to analyze the trends and changes in the journal before and after it was indexed in the Scopus database. The data for period 1 was used from the published research (Mohan et al., 2016), while the data for period 2 was extracted using Atlas.ti software. Physical cross-checks of the data were carried out by at-least two members of the research team to ensure reliability and validity of the findings.

Number of Published Articles in TJBS

The total number and percentage of articles published and selected for research during the *period 1* (2006-2014) and *period 2* (2018-2024) are shown in Table 3. While *period 1* covered 9 years of publishing, which was more than the *period 2* of 6 years, the comparative analyses shows that the total number of articles published increased by 85.45%. The number of articles has increased each year from 2018 to 2024, to around 198.86% or nearly double in 2024.

Author Diversity

Table 4 shows that the diversity of authors has increased when comparing *period 1* (2006-2014) to *period 2* (2018-2024). The comparison of author diversity indicates a significant change from an authorship that was dominated by Thailand (60.60%) in 2006–2014 to a more internationally diverse group in 2018–2024, with Thailand's share dropping to 45.81%. Thailand is the primary source of articles in TJBS, with a reported 68.6% in period 1 and 45.81% in *period 2*, indicating an increase in authorship diversity. Although TJBS also attracts other Asian authors, this number has increased as we can see when we compare *period 1* (26.74%) with period 2 (44.69%). Additionally, in *period 2*, the number of authors from other countries increased to 17%, which is more than in *period 1* (4.65%).

Table 3

Articles Published in Period 1 (2006-2014) vs. Period 2 (2018-2024)

2006-2014					2018-2024				
Year	Published Articles in TJBS		Selected Articles for Contents		Year	Published Articles in TJBS		Selected Articles for Contents	
	Frequency	%	Frequency	%		Frequency	%	Frequency	%
2006	12	7.79	12	14.46	2018	14	9.09	14	9.72
2007	11	7.14	11	13.25	2019	19	12.03	17	11.81
2008	12	7.79	12	14.46	2020	16	10.13	15	10.42
2009	8	5.19	7	8.43	2021	28	17.72	26	18.06
2010	8	5.19	8	9.64	2022	25	15.82	24	16.67
2011	7	4.55	7	8.43	2023	25	15.82	22	15.28
2012	7	4.55	7	8.43	2024	27	17.09	26	18.06
2013	7	4.55	7	8.43	Total	154	100.00	144	100.00
2014	14	9.09	12	14.46					
Total	86	100.00	83	100.00					

Table 4

Author Diversity Compared in Period 1 (2006-2014) vs. Period 2 (2018-2024)

Country/ Region	2006-2014		2018-2024	
	Frequency	%	Frequency	%
Thailand	59	68.60	82	45.81
Indonesia	—	—	33	18.44
Malaysia	11	12.79	19	10.61
Asian countries	12	13.95	28	15.64
Australia and Oceania	2	2.33	2	1.12
UK and Europe	1	1.16	5	2.79
USA	1	1.16	4	2.23
Africa	—	—	6	3.35
Total	86	100.00	179	100.00

Methodological Rigor and Diversity in TJBS

We analyzed and compared the methodological designs, analytical techniques of reliability and validity reported in TJBS articles over the two periods. We ensure that the process of accepting new articles into our journal is rigorous and that new submissions display the use of advanced methodologies. The methodology reported in the published articles still shows a prevalence for quantitative research approaches when we compare *period 1* (2006-2014) versus *period 2* (2018-2024) as shown in Table 5. There is a slight decrease in the number of qualitative articles, but an increase in the mixed methods research. It may be noted that in *period 1* analyses we included reviews and syntheses, but excluded book reviews ($n = 30$); while in *period 2*, we excluded reviews ($n = 10$). To maintain high standards in publishing, we rigorously review all new article submissions to ensure the use of advanced research methodologies.

Table 5

Methodological Designs of the Articles included in the Content Analysis

Methodology	2006-2014		2018-2024	
	Frequency	%	Frequency	%
Quantitative	38	45.78	110	76.39
Qualitative	25	30.12	23	15.97
Mixed methods	5	6.02	11	7.64
R&D	6	7.23	—	—
Research Synthesis	6	7.23	—	—
Academic Review	3	3.61	—	—
Total	83	100.00	144	100.00

Comparing the analytical techniques utilized during *period 1* (2006-2014) with those utilized during *period 2* (2018-2024), it can be seen that the higher-level quantitative techniques such as structural equation modeling (27.92%) and partial least squares structural equation modeling (9.74%) were reported in the *period 2*. The comparison also shows an increasing trend to report other higher-level analytical techniques such as regression/ multiple regression and moderation/ mediation analyses. The details are shown in Table 6.

Table 6

Analytical Techniques Reported in the Articles During 2006-2014 vs. 2018-2024

Analytical technique	2006-2014		2018-2024	
	Frequency	%	Frequency	%
Quantitative research				
Descriptive analysis	19	22.09	118	76.62
t-tests	11	12.79	4	2.60
Correlational analysis	17	19.77	2	1.30
Structural equation modeling	N/R	N/R	43	27.92
Partial least squares structural equation modeling	N/R	N/R	15	9.74
Regression/ Multiple regression analysis	15	17.44	12	7.79
Hierarchical Regression Analysis	N/R	N/R	7	4.55
Mediation/ Moderation Analysis	N/R	N/R	14	9.09
Factor analysis (CFA, EFA)	8	9.30	22	14.29
Path analysis	5	5.81	8	5.19
ANOVA/ ANCOVA	11	12.79	6	3.90
MANOVA/ MANCOVA	2	2.40	2	1.30
Other analyses	13	15.70	12	7.79
Qualitative research				
Content analysis	28	32.56	9	5.84
Thematic analysis	7	8.14	15	9.74
Theoretical coding	N/R	N/R	1	.65
Ethnographic Delphi futures research	N/R	N/R	1	.65

Note. NR = not reported. Frequencies and percentages may not equal 100% because one article may use multiple analytical techniques.

When comparing reliability techniques from *period 1* (2006-2014) to *period 2* (2018-2024), it can be seen that a higher number of quantitative researches reported the use of Cronbach's alpha (65.97%) in the *period 2* as shown in Table 7. At the same time, rigor reported in qualitative studies was also on the increase.

Table 7

Reliability Techniques Reported in the Articles During 2006-2014 vs. 2018-2024

Reliability technique	2006-2014		2018-2024	
	Frequency	%	Frequency	%
Quantitative research				
Cronbach's alpha	28	33.73	110	76.39
Composite reliability	N/R	N/R	41	28.47
Item-total correlation	N/R	N/R	7	4.86
Factor loadings	N/R	N/R	6	4.17
Internal consistency	N/R	N/R	5	3.47
Confirmatory factor analysis	N/R	N/R	3	2.08
Corrected item-total Correlation	N/R	N/R	3	2.08
Pilot testing	N/R	N/R	3	2.08
Guttman scale coefficient	1	1.20	—	—
Test-retest	2	2.41	3	2.08
Qualitative research				
Qualitative triangulation	4	4.82	15	10.42
Qualitative generalizability	1	1.20	12	8.33
Not Mentioned	47	56.63	2	1.39

The comparison of validity techniques in *period 1* (2006-2014) with *period 2* (2018-2024), demonstrates that the use of validity techniques in TJBS articles has significantly increased. The construct validity increased from 3.35 to 64 percent, while the content validity increased from 5.8 to 43.06 percent. The number of articles that did not mention validity decreased significantly from 79.52 to 1.39 percent. Table 8 shows that a larger number of publications reported validity. Moreover, qualitative research publications also showed rigor through report of techniques such as expert check (17.36%) and triangulation (5.56%) in *period 2*, which was not reported in the previous *period 1*.

Table 8

Validity Techniques Reported in the Articles During 2006-2014 vs. 2018-2024

Validity technique	2006-2014		2018-2024	
	Frequency	Percentage	Frequency	Percentage
Quantitative research				
Construct validity	3	3.35	93	64.58
Content validity	5	5.88	62	43.06
Convergent validity	3	3.35	38	26.39
Discriminant validity	—	—	34	23.61
Face validity	2	2.35	2	1.39
Other	1	1.18	36	25.00
Qualitative research				
Expert check	2	2.35	25	17.36
Methodological triangulation	1	1.18	8	5.56
Cross verification	1	1.18	—	—
Not mentioned	66	79.52	2	1.39

Discussion and Conclusion

Discussion of Main Results

This content analysis of TJBS provides valuable insights into the journal's performance, trends, and comparisons with the previous analyses. The identification of author networks, institutional collaborations,

and topic evolution over time was examined through tools such as bibliometric analysis and visualization techniques using VOSviewer. From 2018 to 2024, the journal's annual publication output has increased consistently, which is a sign of a rising interest and engagement in behavioral science topics (Hallsworth, 2023). Citation metrics, including the H-index and average number of citations per article, also show a moderate upward trend, suggesting increasing scholarly impact and visibility within the behavioral sciences (Bryan et al., 2021). Each aspect of these findings is explained with added insights from the editorial team.

Firstly, the results clearly demonstrate that the journal's performance improved after it was indexed in the Scopus database. The number of citations, the impact factor, and international collaboration are all showing an increase. The main findings suggest that behavioral science research increasingly aligns with the UN's SDGs, particularly in areas such as health and well-being (SDG 3), quality education (SDG 4), and reduced inequalities (SDG 10). The SDG-related publications increased from 9 in 2018 to 22 in 2024. Furthermore, the linkage of articles with contributions towards UN's SDGs affirms the applied scope of behavioral science research (Jia & Mustafa, 2023; Yamaguchi et al., 2023). It is vital for a discipline if the research can be utilized for the achievement of SDGs. Researchers recommend the adoption of SDGs with academic research, to transform them into an application for organizations and communities to promote overall well-being (Berrone et al., 2023). In fact, we published a special issue in September 2024, with articles highlighting their behavioral science-based contributions towards the UN's SDGs. This is consistent with the recommendation of van Aaken (2024), who notes that the United Nations and other UN agencies encourage the use of behavioral sciences towards achievement of the 17 SDGs, but by using systematic and rigorous research.

Secondly, the emerging trends of published articles in TJBS since 2018, show a wider diversity of authorship, along with the content and theories of behavioral science (BS). The thematic analysis of TJBS articles shows a more refined perspective with a wider range of topics in behavioral science, corroborating previous studies (Davis et al., 2015; Hagger et al., 2022; Ryan et al., 2021). The co-occurrence analysis identified key themes, such as health literacy, psychological well-being, digital literacy, and resilience, are highly connected to behavioral science and the UN's SDGs. The core concepts of behavioral science involve environmental sciences, social science, political science, and psychological science (Lehmann et al., 2021; Mladenović et al., 2023). The increasing number of citations, as shown in the top-cited articles, accentuate and validate that the research contributions can demonstrate scientific integrity (Nguyen & Tuamsuk, 2024). Systematic examination of these trends using bibliometric analysis and data visualization clarified the impact of the published scientific works (Donthu et al., 2021; Passas, 2024). This evolving technological use in behavioral science research is consistent with the recommendations of enhancing behavioral science through state-of-the-art technologies, methodologies, and applications (Jia & Mustafa, 2023).

Finally, the comparison of the research articles published in TJBS between the two periods of content analysis, *period 1* (2006-2014) and *period 2* (2018-2024), displays a wider diversity of authors, content, and rigors in methodologies. For academicians and researchers in BS, it is noteworthy that we provide a comparison between the trends based on the previously conducted and peer-reviewed research (Mohan et al., 2016) with the present content analysis. We wish to explain that though we used only the period 1 (2006-14) for analysis as a systematic content analysis was already conducted for this period, TJBS continued to publish papers in 2015 ($n = 14$), 2016 ($n = 18$) and 2017 ($n = 16$). The increasing use of analytical techniques demonstrates the quality of the journal and the changing scope of behavioral science research. This shift reflects a broader trend in the behavioral sciences, where researchers are increasingly focusing on the application of psychological and behavioral theories to real-world problems that align with sustainable development priorities. Therefore, the evolving research focus in TJBS suggests a meaningful contribution of behavioral science to the global sustainability discourse.

As scholars know, the indexing of a journal in Scopus predicts wider impact and visibility for the journal. Additionally, what is important is that our journal follows strict guidelines for acceptance of submissions that adhere to an interdisciplinary scope of behavioral science, utilizing theories to underpin

the research, and advanced research methodologies. Moreover, we publish research that has passed ethical approval from institutions or boards. This at times can be a limiting factor as we often have to reject some works. But in the development of scientific disciplines fostering research ethics and integrity is crucial for the younger generation of researchers, as noted by Nguyen and Tuamsuk (2024). Some studies have typically utilized a functional perspective, arguing through the behavioral science lens to integrate psychological flexibility and inflexibility to help conceptualize behavioral science theories (Daks et al., 2020).

These results signify the continuing importance of behavioral science research. Additionally, we must look to enhance the reach of our journal by encouraging cooperation among researchers for co-authorship and strengthening the structures to build scientific communities as suggested by previous journal content analysis (Mohan et al., 2016; Zyoud & Zyoud, 2021). This result is consistent with that of Albarracin and Jung (2021), Lehmann et al. (2021), and Ovretveit et al. (2021), who found that implementation of science in behavior, systems science, operational research, and psychology in considering “knowledge translation” may combine behavioral science content and paradigms. The findings of this study reveal that behavioral sciences are oriented towards embracing multi-perspectives, such as through psychology, education, social, economic, and political, to name a few.

Limitations

Bibliometric analysis can provide valuable insights into publication trends, impact, and scholarly collaboration, but it also has certain limitations. For this research of TJBS from 2018 to 2024, this method primarily relied on quantitative data such as citation counts, author affiliations, and keyword co-occurrence, which may not fully capture the depth, quality, or theoretical contribution of the research. In addition, metrics based on citations can be influenced by self-citations, language bias, and publication delays. The interpretation of bibliometric networks can be subjective, particularly when clustering or co-occurrence analyses are not validated qualitatively. Another limitation of our research is the lack of analysis of the articles published in the intervening period from 2015-2017. It is suggested that future research may address these issues.

Implications for Behavioral Science

The emerging implications of this study are shared from three key perspectives. Firstly, for behavioral science researchers, it is imperative to focus on contemporary problems, using advanced research and analytical techniques. More importantly, this research should be applicable, such as in achieving UN’s SDGs. We can synthesize from the current content analysis that behavioral science content can range from developing theories to analyzing complex research relationships in diverse contexts.

The second recommendation is for practical purposes, for authors seeking to publish their research works in TJBS and other high-quality journals. Authors need to closely examine the aims and scope of the journal and follow author guidelines. Furthermore, it is recommended that the prospective authors showcase original contributions towards behavioral science knowledge using advanced research methodologies and analytical techniques, and highlighting the applicability of their research.

Finally, this study highlights the necessity of a systematic journal management policy to assist editorial teams in maintaining journal quality, both prior to and after indexing in prestigious databases like Scopus. Our editorial team engages in active collaboration with the Thai-Journal Citation Index (TCI) center and Elsevier (Scopus). We not only participate in frequent workshops, training and discussions, but also rapidly implement the necessary policy changes that arise. For instance, one such recent addition in guidelines for authors was the usage of generative AI and AI-assisted technologies.

Conclusion

This study analyzed 144 articles published in *The Journal of Behavioral Science* (TJBS) between 2018 and 2024, demonstrating the journal's increasing impact and visibility as a unique platform in the field of behavioral sciences, with its reach expanding beyond Asia. The findings highlight that the theme of

planned behavior is predominant, along with emerging clusters in other areas such as organizational support, leadership, education, innovation, resilience, and health literacy. Using visual analytics and the bibliometric approach provided valuable insights into publication patterns, dominant topics, and scholarly impact. These findings can assist researchers, editors, and institutions in understanding a journal's evolution, and can guide future submissions by aligning them with identified research trends and emerging areas of interest. This research underscores the rich content and diverse applications within behavioral science. It reinforces the importance of providing behavioral science researchers with high-quality platforms, such as TJBS, to share their findings. Our study emphasizes the need for conducting and publishing research in behavioral science to address real-life challenges, while upholding rigorous publishing standards.

Declarations

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Ethical Approval Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of Human Research Ethics Committee of Srinakharinwirot University, vide protocol code SWUEC-672444, dated 14 July 2024.

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