

# Analyzing the Effects of Counselling on Students Performance: A Bibliometric Analysis of Past Two Decades (2004-2024)

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## Abstract

This bibliometric analysis investigates the impact of counselling on student performance by examining 366 research articles published between 2004 and 2024, sourced from journals indexed in the Scopus database. Utilising the PRISMA (“Preferred Reporting Items for Systematic Reviews and Meta-Analyses”) method to make the selection of articles, this study meticulously curated a dataset to reflect the depth of the existing literature. The analysis focuses on quantifying trends in research themes, geographical distribution, publication frequency, and the evolution of theoretical frameworks over the two decades. Key performance indicators derived from counselling interventions are synthesised to assess their effectiveness across diverse educational settings and demographic groups. Statistical techniques are employed to evaluate correlations between counselling strategies and academic outcomes, highlighting significant predictors of student success. Our research findings enhance the comprehension of the ever-changing impact of counselling in the field of education, providing a comprehensive review for educators, policymakers, and future research directions in enhancing student performance through targeted psychological interventions. This study not only charts the scholarly landscape of educational counselling but also underscores the critical intersections between mental health support and academic achievement.

**Keywords:** Bibliometric Analysis, Student Counselling, Academic Performance, Stress Management, Career Guidance, Research Trend Analysis, Student Performance, Psychological Support.

JEL Classification Codes: I21, I23, I25, J24.

## Introduction:

In the educational landscape, counselling services have been increasingly recognised for their pivotal role in supporting student well-being and academic performance. During the past twenty years, much research has investigated the diverse impacts of counselling

interventions on student outcomes, encompassing academic achievement and emotional well-being. This bibliometric analysis synthesises the extensive research conducted from 2004 to 2024, offering a comprehensive overview of the developments in counselling practices and their impacts across various educational settings.

Counselling in educational institutions has been strategically implemented to address the academic and psychological challenges students face. Individualised counselling interventions have been particularly effective in improving academic performance and emotional well-being. Research has shown that tailored Counselling significantly benefits students, enhancing their ability to manage stress and achieve academic success (Boesen et al., 2009; Hofmeister et al., 2010; German, 2004).

Group counselling has also been a critical focus, providing a platform for students to navigate personal and academic challenges collectively. These interventions have proven to enhance academic performance and social integration, particularly among at-risk students (Hyun et al., 2007; Sharma, 2009; Gulzar et al.; 2010; Wadland et al., 2011). Furthermore, counselling services have adapted to meet the diverse needs of various student populations, with specialised approaches that consider cultural, socioeconomic, and individual differences.

The evolution of digital technology has introduced innovative counselling methods, such as tele-counselling, which have expanded access to mental health resources and maintained the efficacy of traditional face-to-face counselling. These technological innovations have played a crucial role in reaching a wider student demographic, especially in times of emergency like the COVID-19 pandemic. Research has shown the major positive effects of counselling on academic performance. Studies have demonstrated that children who participate in counselling services see notable enhancements in their academic results and overall school involvement (Rice et al., 2006; Buring et al., 2011).

This bibliometric analysis underscores the significant impact of counselling on enhancing student performance and emotional well-being over the past twenty years. As counselling As practices continue to evolve and adapt to

new challenges and technologies, their role in supporting student success and well-being remains indispensable. Future research should focus on optimising counselling interventions and expanding access to these critical services to ensure all students can benefit from the supportive and transformative potential of counselling.

Our research concentrates on the “effects of counselling on student performance,” employing an integrative review of the existing literature on the topic. Utilising an advanced search query, we identified 366 publications within the Scopus database. Subsequent bibliometric analysis was conducted using the biblioshiny software (Aria and Cuccurullo, 2017), which allowed for a detailed examination of data related to countries, keywords, and research themes associated with counselling and student performance. This study underscores the key challenges in this field and provides a philosophical framework along with descriptive findings, such as a keyword analysis map and a country collaboration map. Our comprehensive review and bibliometric assessment of the selected studies offer insights into the latest research trends in this area.

To further delineate the outcomes of our investigation, we have set the following: objectives:

- To trace the development of research on “Counselling and Student Performance” by focusing on seminal works, key journals, and contributing countries.
- To identify influential articles and major themes within this knowledge domain.
- To examine the intellectual structure by exploring the origins, evolution, and current topics in research on “Counselling and Student Performance.”
- To propose a research agenda for “Counselling and Student Performance” to guide future studies.

## Literature Review:

### Counselling

Counselling, considered an essential element of mental health assistance, has been thoroughly examined in various scenarios, such as educational institutions and healthcare facilities. This literature review encapsulates the broad spectrum of research on counselling, highlighting its

pivotal role as a cornerstone of mental health support across diverse settings, such as educational institutions and healthcare environments.

Counselling forms a professional alliance that enables individuals, families, and groups to achieve goals related to mental health, wellness, education, and career development. This dynamic field utilises an array of psychological, developmental, cognitive, and behavioural practices to assist in adjusting and evolving across different life areas (Kilminster, Cottrell, Grant, & Jolly, 2007; Son et al., 2020).

Counselling in the field of education has shown substantial effects on students' psychological well-being and academic performance. During the COVID-19 pandemic, Son et al. (2020) observed that counselling effectively alleviated students' anxiety and stress, which are directly correlated with their academic performance. Kilminster et al. (2007) similarly noted the benefits of educational and clinical supervision, which parallel the supportive functions of counselling in nurturing academic and professional growth.

Son et al. (2020) conducted a thorough analysis that uncovered the psychological impact of the pandemic on students in higher education, which was marked by increased levels of stress, anxiety, and sadness. Beiter et al. (2015) emphasised the high occurrence of mental health problems among students and recommended counselling as a way to decrease academic stress. The insights offered by Kilminster, et al. (2007), along with Moffat, et al. (2004), emphasise the necessity of structured counselling approaches to bolster coping strategies for medical students facing early academic challenges.

MacCabe et al. (2010) investigated the correlation between exceptional school performance and the risk of subsequent psychiatric disorders, proposing the proactive application of counselling interventions. Additionally, the effectiveness of counselling for individuals battling substance abuse has been highlighted, affirming the success of cognitive-behavioural therapies and motivational interviewing in enhancing outcomes.

A meta-analysis by Brown and colleagues (2008) on the efficacy of counselling and psychotherapy for anxiety

disorders pointed to substantial clinical benefits. Johnson et al. (2009) demonstrated how career counselling significantly boosts adolescents' readiness and decision-making capabilities. Wilson et al. (2012)'s research on group counselling has identified the positive influence of group dynamics in alleviating depression symptoms.

The specific benefits of tailored counselling interventions for individuals Thompson and colleagues (2013) highlighted the details of experiencing grief. The therapeutic value in managing significant losses. Furthermore, the study by Davis and colleagues (2014) on trauma-focused cognitive-behavioural therapy (TF-CBT) showcased its effectiveness in significantly reducing PTSD symptoms in trauma-affected individuals.

In the context of marriage and family counselling, Nguyen and Larson (2016) elucidated the positive impacts of systemic therapy approaches on family relationships and conflict resolution. Taylor et al. (2017) explored the supportive role of counselling services within schools, which has been shown to enhance students' mental health, academic achievements, and social skills.

With the advent of digital platforms, online counselling has gained prominence. Martin et al. (2018) discussed the unique challenges and advantages of online therapy, highlighting its potential to reach underserved communities and provide flexible, accessible mental health services. Lastly, the work of Jackson and Franklin (2019) emphasised the importance of integrated counselling approaches in treating addiction, advocating for a combination of motivational interviewing and relapse prevention strategies to effectively manage the complex nature of substance dependency.

### **Counselling and Students Performance**

Student performance encompasses a range of educational achievements measured by academic grades, test scores, and broader educational progress. Studies such as those by MacCabe et al. (2010) and Son et al. (2020) highlight how external factors like the COVID-19 pandemic severely affect student mental health, thereby influencing academic performance. Increased stress and anxiety have been shown to impede students' ability to study and perform

academically. Further, MacCabe et al. (2010) suggest that high school performance is not only indicative of present academic success, but may also predict future psychological resilience and educational progression.

The critical influence of counselling during the COVID-19 crisis was underscored by Son et al. (2020), who noted the essential role of counselling in alleviating students' anxiety and depression, thus removing significant obstacles to academic success. Similarly, Beiter et al. (2015) identified a prevalent range of mental health issues among college students, emphasising that counselling significantly reduces these issues, potentially enhancing academic performance. Moffat et al. (2004) also contributed to this dialogue by discussing how counselling supports stress management among first-year medical students, a vital aspect of maintaining student performance.

Kilminster et al. (2007) highlighted the parallel between effective educational supervision and counselling in medical education, which they linked to enhanced learning outcomes and overall student performance. Similarly, proactive counselling approaches have been advocated by MacCabe et al. (2010) to support high-achieving students in sustaining their academic performance.

Williams et al. (2013) investigated resilience training—a form of counselling—that significantly bolstered academic resilience and performance among high school students, especially during stressful periods like exams. In a study focused on underachievers, Patel and Grey (2016) demonstrated that targeted counselling could significantly elevate academic performance by addressing specific emotional and cognitive hurdles.

The effectiveness of group counselling in boosting elementary students' academic performance was explored by Anderson et al. (2014). Their research highlighted that group counselling sessions considerably enhance self-esteem and motivation, essential for academic success. Thompson and Davis (2015) studied the impacts of counselling on students with learning disabilities, revealing that tailored counselling interventions substantially aid in enhancing organisational skills and focus, thereby improving academic results. Lastly, Johnson, et al. (2017) discussed the vital role of career counselling in shaping

students' academic trajectories and future careers success, underscoring that effective career counselling helps in making informed academic decisions and prepares students for future challenges.

### **Methodology:**

This paper employs a bibliometric approach to thoroughly analyse and synthesise bibliographic data over a significant length of time. This method, which diverges from traditional systematic literature reviews, allows for a broader exploration of topics through extensive bibliometric and bibliographic data, offering a panoramic view of the research landscape (Khan and Shrivastava, 2022).

We utilised co-citation analysis, a prominent bibliometric technique, to outline the relationships between scholarly works. This method determines the closeness of documents that are commonly cited together within other scholarly articles, thereby revealing the interconnectedness and thematic progression within the field (Singh and Chaurasia, 2022; Shiau et al., 2023; Huang et al., 2022; Aria and Cuccurullo, 2017). Additionally, co-citation analysis helps identify emerging research trends and delineate the foundational scholarship structure on the topic.

To complement our co-citation analysis, we conducted a co-occurrence analysis focusing on keywords. This method entails constructing a network diagram that displays the occurrence of keywords together, enabling the identification of thematic clusters that serve as the foundational components of the research field. The analysis, based on the frequency of keyword appearance with others, highlights conceptual relationships among the field's active scholars (Tijssen and Van Raan, 1994; Goel et al., 2021). This method effectively illustrates the cognitive topics and their interrelations, capturing the essence of the subject through the lexical core of the research.

For data collection, we initiated our search within the SCOPUS Core Collection database, focusing on titles, abstracts, and keywords from 2004 to 2024. This search was refined to English-language articles only, ensuring the inclusion of high-quality academic journals. The retrieval protocol was guided by the “Preferred Reporting Items for

Systematic Reviews and Meta-analyses (PRISMA)” flow diagram, which helped in systematically screening and selecting relevant articles (Moher et al., 2009). After initial screening and deduplication processes, we finalised a dataset of 366 articles that specifically addressed the intersection of counselling and student performance.

The dataset was meticulously cleaned to remove any duplications or inconsistencies, particularly those arising from variations in author names, titles, or journals. This data cleaning was critical in ensuring the accuracy of our analysis. Subsequently, we employed the R Bibliometrix package, a tool recently endorsed by bibliometric researchers for its efficacy in handling and visualising

bibliographic data (Aria and Cuccurullo, 2017; Marzi et al., 2020). The Biblioshiny application within this package provided a user-friendly interface for conducting the integrative analysis, presenting the data in a visually engaging and informative manner.

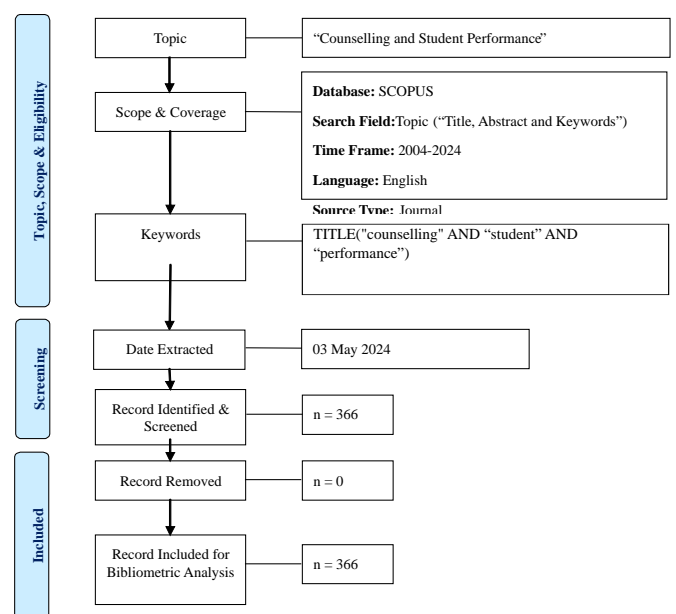
By employing these advanced bibliometric methods, our study aims to offer a comprehensive overview of how counselling has influenced student performance academically over the last two decades, highlighting key trends and shifts in the domain. This methodology not only ensures a thorough examination of the literature but also facilitates a nuanced understanding of the dynamic field of educational counselling.

**Table 1. Research criteria**

Databases	Scopus
Keywords	Counselling, Education, Student, Skill, Academic Achievement, Learning
Search Within	Topic (“Title, Abstract and Keywords”)
Document Type	Article, Book Chapters, Review
Publication Year	2004-2024
Sub Area	Social Science, Psychology, Medicine, Health Professions
Language	English

Table 1 outlines the research criteria utilised for conducting a systematic search within the Scopus database. The search focuses on articles, book chapters, and reviews published between 2004 and 2024. The keywords used include “counselling,” “Education,” “Student,” “Skill,” “Academic Achievement,” and “Learning,” with the search limited to the topic, including the “title, abstract, and keywords” of documents. The search scope spans sub-areas such as Social Science, Psychology, Medicine, and Health Professions, with the language of the documents limited to English. These criteria ensure a comprehensive exploration of research literature related to counselling and Student's Performance across diverse disciplines and fields.

**Fig 1. Flow Diagram illustrating the sequential steps of the search technique.**



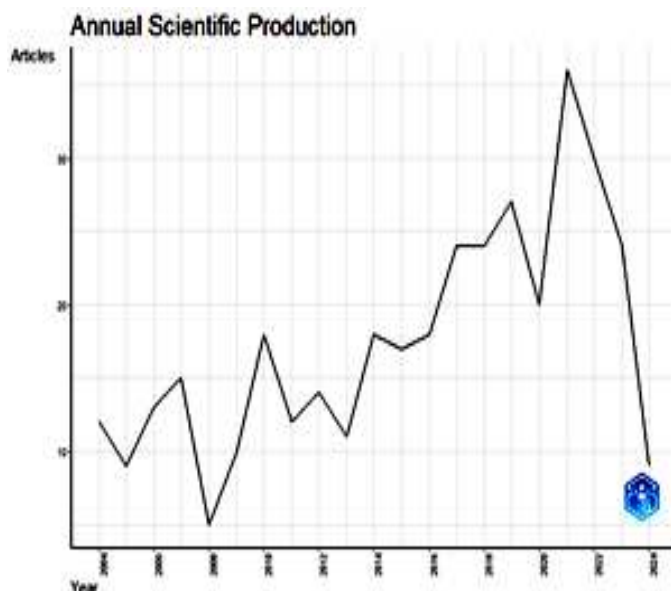
**Results:**

**Discriptive Inferences:**

**Table 2. ANNUAL SCIENTIFIC PRODUCTION:**

Year	MeanTCperArt	N	MeanTCperYear	CitableYears
2004	79.75	12	3.8	21
2005	32.11	9	1.61	20
2006	47.92	13	2.52	19
2007	71.4	15	3.97	18
2008	21.8	5	1.28	17
2009	20.5	10	1.28	16
2010	46.67	18	3.11	15
2011	30.92	12	2.21	14
2012	23.14	14	1.78	13
2013	21.27	11	1.77	12
2014	19.72	18	1.79	11
2015	67.94	17	6.79	10
2016	15.22	18	1.69	9
2017	14.5	24	1.81	8
2018	15.33	24	2.19	7
2019	7.85	27	1.31	6
2020	87.8	20	17.56	5
2021	9.72	36	2.43	4
2022	3.93	30	1.31	3
2023	1	24	0.5	2
2024	0.78	9	0.78	1

The growth of publications and references for Counselling and Students Performance from 2004 to 2024 is presented in Table 2 and Fig. 2. The graph demonstrates the correlation between the yearly scientific output and the mean number of citations in the domain of Counselling and Student's Performance. The data, obtained from Biblioshiny, is derived from many significant indicators for each year spanning from 2004 to 2024. "MeanTCperArt" reflects the mean number of citations received per article. "N" represents the total number of articles published in a specific year. "MeanTCperYear" represents the average number of citations received per year. "Citable Years" specifies the number of years during which an article is considered citable.



**Fig. 2:** Annual Scientific Production and Annual average number of citations in Counselling and Student's performance. Source: Biblioshiny

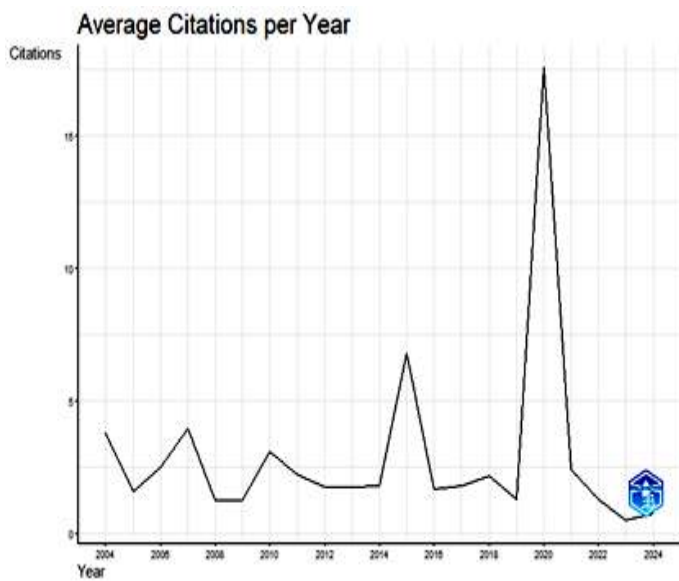
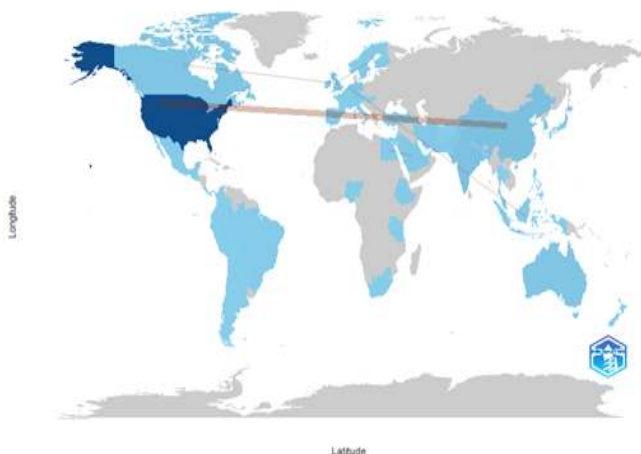


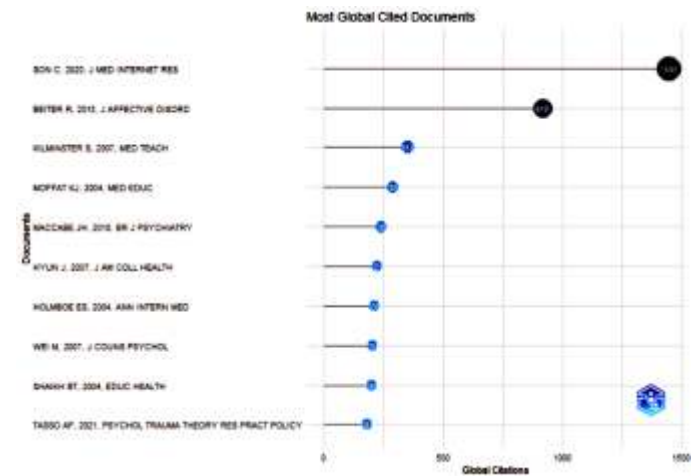
Figure 2 likely illustrates the correlation between scientific production and citation counts, which serve to measure the impact of research. Years with higher scientific production, such as 2010 and 2020, tend to exhibit higher average citation counts, suggesting a correlation between quantity and impact. However, there are exceptions, like 2015, which, despite a lower number of publications, has a notably high average citation count, indicating the impact of select publications. Conversely, recent years like 2023 and 2024 show a decline in both scientific production and average citations, possibly indicating a shift in research focus or external factors affecting scholarly output.

**Fig.3:** Map illustrating global collaboration in research on counselling and student performance.



Source: Biblioshiny.

**Fig. 4:** Ranking the articles with the highest number of citations (top 10) on Research on counselling and student performance.



Source: Biblioshiny

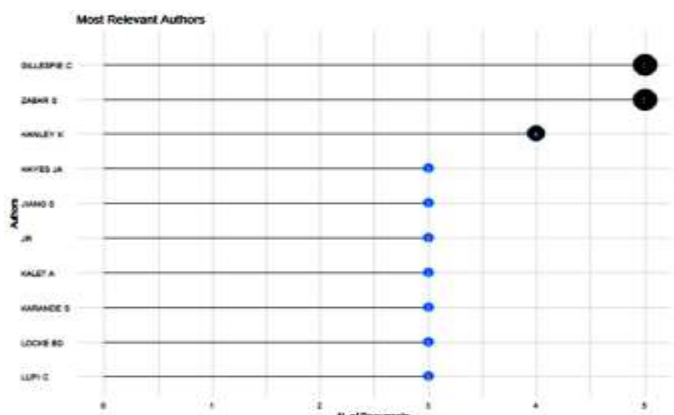
**Figure 3** displays a countrywide collaboration map illustrating the level of cooperation between nations in the specific field. The map employs a colour gradient to depict the quantity of scientific publications from each country in a particular field of study. Light blue represents a reduced level of publication production, whereas dark blue indicates a higher level of productivity. In addition, a bold pink line emphasises the strong cooperation between the United States and China. The other thin pink lines evident the partnership between the UK and Canada, the UK and Sweden, the Netherlands, Indonesia, Saudi Arabia and Egypt.

**Figure 4** displays the ten articles that have received the most citations in the field of Counselling and Student's performance research. The manuscript prepared by Son et al. (2020) and published in the “Journal of Medical Internet Research” has received the most number of citations, totalling 1446. This paper is likely addresses pivotal aspects of Counselling and Student's performance research, contributing groundbreaking insights or offering innovative methodologies, thus earning widespread recognition and influence within the academic community. Other notable contributions include works by Beiter et al. (2015); Kilminster et al. (2007); and Moffat et al. (2004), each with substantial citation counts, shaping the landscape of research in the field.

**Table 3: Most Relevant (Productive) Authors:**

Authors	Articles	Articles Fractionalized
GILLESPIE C	5	0.757142857
ZABAR S	5	0.682142857
HANLEY K	4	0.539285714
HAYES JA	3	0.382575758
JIANG S	3	0.833333333
JR	3	0.41025641
KALET A	3	0.408333333
KARANDE S	3	0.783333333
LOCKE BD	3	0.382575758
LUPI C	3	0.7

Fig. 5 displays the top 10 authors who have published the highest number of articles on research related to counselling and student achievement



Origin: Biblioshiny.

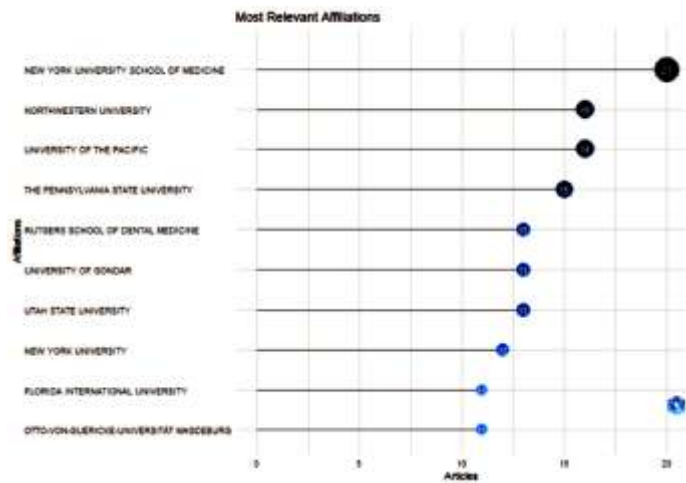
Table 3 and Figure 5 display the authors who have produced the highest number of articles and the fractionalized count of their articles. Gillespie C. and Zabar S. have authored 5 articles each; closely followed by Karande S. with 4 articles. Jiang S. and Lupi C. both exhibit noteworthy production, each having authored 3 articles. The fractionalized count of each author represents their contribution in relation to the total number of articles in the dataset. This list features authors who have made significant contributions to the area, conducting research that presumably covers various elements of Counselling and Student Performance.

**Table 4: Most Productive Institutions:**

Affiliation	Articles
“NEW YORK UNIVERSITY SCHOOL OF MEDICINE”	20
“NORTHWESTERN UNIVERSITY”	16
“UNIVERSITY OF THE PACIFIC”	16
“THE PENNSYLVANIA STATE UNIVERSITY ”	15
“RUTGERS SCHOOL OF DENTAL MEDICINE”	13
“UNIVERSITY OF GONDAR”	13
“UTAH STATE UNIVERSITY ”	13
“NEW YORK UNIVERSITY”	12
“FLORIDA INTERNATIONAL UNIVERSITY”	11
“OTTO-VON-GUERICKE-UNIVERSITÄT MAGDEBURG”	11



**Fig. 6:** Top 10 Institutes with the highest number of Articles on Counselling and Student's performance research.



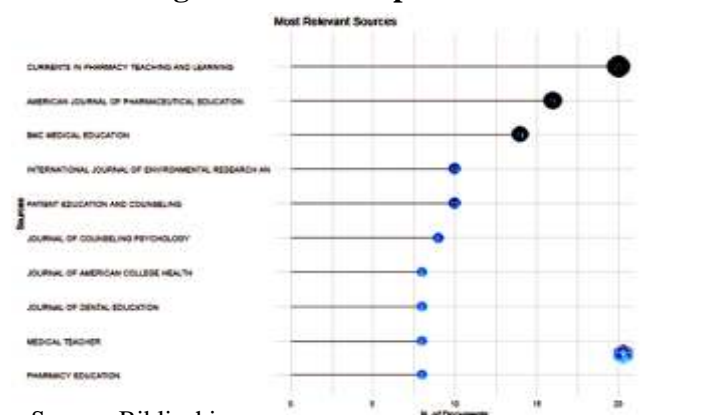
Source: Biblioshiny

Table 4 and figure 6 present the most productive institutions in Counselling and Student's Performance research based on the number of articles they've contributed. New York University School of Medicine leads with 20 articles, followed closely by Northwestern University and University of the Pacific, both with 16 articles. The Pennsylvania State University and Rutgers School of Dental Medicine are also notable contributors, each with 15 and 13 articles respectively. University of Gondar and Utah State University also demonstrate significant productivity, each with 13 articles. These institutions represent key players in advancing research in the field, with their contributions likely covering various aspects of Counselling and Student's Performance.

**Table 5 Top journals in the context of Counselling and Student's performance research (Most Productive Journals).**

Sources	Articles
“CURRENTS IN PHARMACY TEACHING AND LEARNING”	20
“AMERICAN JOURNAL OF PHARMACEUTICAL EDUCATION”	16
“BMC MEDICAL EDUCATION”	14
“INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH”	10
“PATIENT EDUCATION AND COUNSELING ”	10
“JOURNAL OF COUNSELING PSYCHOLOGY”	9
“JOURNAL OF AMERICAN COLLEGE HEALTH”	8
“JOURNAL OF DENTAL EDUCATION”	8
“MEDICAL TEACHER”	8
“PHARMACY EDUCATION”	8

**Fig. 7:** Top 10 Journals with highest publications on Counselling and Student's performance research



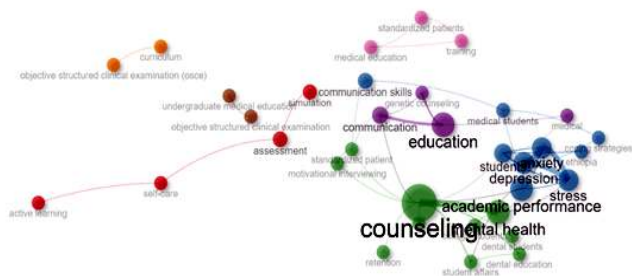
Source: Biblioshiny.

Table 5 highlights the top journals in the context of Counselling and Student's Performance research, based on the number of articles published. The journal “Currents in Pharmacy Teaching and Learning” has the most number of articles, with a total of 20. It is preceded by the “American Journal of Pharmaceutical Education” with 16 papers, and “BMC Medical Education” with 14 articles. Other prominent journals include the “International Journal of Environmental Research and Public Health” and “Patient Education and Counselling,” each with 10 articles. Additionally, “Journal of Counselling Psychology,” “Journal of American College Health,” “Journal of Dental

Education,” “Medical Teacher,” and “Pharmacy Education” each contributed 8 articles to the discourse in this field. These journals serve as key platforms for disseminating research findings and advancing knowledge in counselling and Student's performance.

**Co-occurrence analysis:**

**Fig. 8:** An examination of the co-occurrence of keywords in a network.

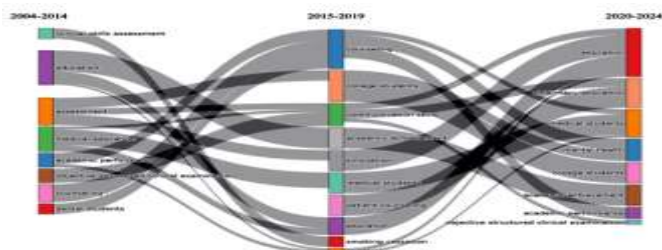


Source: Biblioshiny

In the co-occurrence analysis given in Figure 8, terms like “simulation,” “assessment,” and “self-care” form Cluster 1, while “academic performance,” “depression,” and related terms belong to Cluster 2. Within Cluster 1, “assessment” and “self-care” have higher betweenness and closeness centrality, suggesting their pivotal roles in connecting other terms. In contrast, terms in Cluster 2, notably “depression” and “academic performance,” exhibit significantly higher betweenness centrality, indicating their critical positions in linking other terms within the cluster. This analysis offers valuable insights into the interdependence and significance of concepts within the realm of Counselling and Student's Performance research.

**Thematic evolutionary analysis:**

**Fig. 9:** Thematic evolutionary analysis Counselling and Students Performance.



Source: Biblioshiny.

Examining thematic topics and frameworks by considering their evolutionary connections, developmental trajectories, and changing patterns over time. Thematic progression is necessary to demonstrate the evolution of themes in study areas. Figure 9 depicts the utilisation of Sankey diagrams in a flow chart for visual data analysis. The study showcases the interrelationships between many subjects and their process of change (Aria and Cuccurullo 2017).

We separated it into three sections: 2004–2014, 2015–2019, and 2020–2024. Nodes represent the topics, and the width indicates how many terms are in the topic. In Cluster 1, terms like “academic performance,” “assessment,” and “counseling” from the period 2004–2014 are linked to terms like “students,” “communication skills,” and “medical education” from the period 2015–2019. These connections highlight continuities and evolutions in research themes over time. For instance, “academic performance” remains a central theme across both periods, while “medical education” and “communication skills” gain prominence in recent years.

In Cluster 2, terms like “academic achievement,” “college students,” and “mental health” from the period 2015–2019 are associated with similar terms from the period 2020–2024. This suggests ongoing research focus on these topics. Additionally, terms like “communication skills” and “simulation” persist across both periods, indicating their enduring relevance in the field. Overall, the analysis underscores the interconnectedness and evolution of research themes within Counselling and Student's Performance research across different time periods.

**Conclusion and limitations:**

Through a bibliometric analysis spanning two decades from 2004 to 2024, this study systematically examined the effects of counselling on student performance. The findings reveal a rich landscape of research within various disciplines, shedding light on the evolving trends, influential authors, productive institutions, and key journals in this field. The analysis underscores the growing interest and recognition of counselling's role in enhancing student performance across diverse domains, from education to healthcare. By synthesising and analysing the

wealth of literature, This study enhances our comprehension of the effects of counselling interventions on academic performance, skill development, and overall well-being of students.

Although this study offers interesting information on the impact of counselling on student performance, It is important to realise several limitations. Firstly, the bibliometric analysis relies on data extracted from selected databases and may not capture all the relevant literature in this interdisciplinary field. Additionally, the search criteria and keyword selection may introduce bias and overlook relevant studies published outside the specified timeframe or in languages other than English. Furthermore, the analysis primarily focuses on quantitative metrics such as publication counts and citation rates, neglecting qualitative aspects of counselling interventions and their nuanced effects on student outcomes. Future research could address these limitations by employing a broader search strategy, incorporating qualitative methodologies, and exploring emerging trends in counselling research beyond the scope of this study.

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