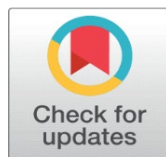


A BIBLIOMETRIC ANALYSIS ON HAPPINESS USING VISUALIZATION

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ABSTRACT

Happiness is a state of well-being characterized by feelings of joy, satisfaction, contentment, and fulfillment. It is both a fleeting emotion that arises from positive experiences and a deeper sense of life satisfaction and purpose. Happiness is influenced by various factors, including personal achievements, relationships, mindset, and the ability to find meaning in life. In this research, publications on "Happiness" between 2005 and 2025 in the Scopus and WOS database are examined. The bibliometric analysis technique was used in the study. As a result of the bibliometric analysis of 2892 articles evaluated, the following data were obtained: The year with the most written articles was 2021. It has been observed that there has been an increase in the number of articles since 2008. The four documents most cited were Ruggeri (2020), Blanchflower (2021b), Yang (2020) and Yöldöröm (2021b) and the top four authors were found Rafael ravina-ripoll, David G. Blanchflower, Murat Yöldöröm and Shigehiro Oishi. The top four publishing institutions are Springer, Elsevier Ltd, MDPI and Routledge. The four most cited countries are the United States, China, Spain and India.

Keywords: Happiness, Bibliometric Analysis, Positive Psychology, Vos Viewer

1. INTRODUCTION

Psychologists often define happiness in terms of two components: hedonic well-being, which focuses on pleasure and the absence of distress, and eudaimonic well-being, which relates to a sense of purpose, personal growth, and fulfilment (Steptoe, 2019). Happiness is a complex emotional state that is marked by feelings of joy, contentment, and overall well-being. It is a subjective experience that varies from person to person, influenced by individual circumstances, personality traits, and life events. (verill and More, 1993)

Happiness, often linked to subjective well-being and life satisfaction, has been widely studied in psychology, sociology, and economics (Kenny, 1965). Research focuses on factors contributing to happiness, including relationships, health, and economic conditions.

The psychological repercussions of happiness are substantial and far-reaching. Research has consistently demonstrated that happier individuals tend to have greater physical health, stronger immune systems, and longer lifespans (Easterlin, 2003). Additionally, happiness improves cognitive processes, including creativity, problem-solving, and decision-making. On a social level, happy people are more likely to do prosocial actions like volunteering and helping others, build deeper relationships, and show more empathy (Feldman, 2010)

According to Veenhoven, 2003 as per biological standpoint, happiness triggers the brain's reward circuits, which are mostly mediated by neurotransmitters like serotonin and dopamine. These substances are essential for controlling motivation, emotional stability, and mood. Feelings of happiness can protect against stress and lower the chance of mental health conditions like anxiety and depression (Argyle, 2013)

Furthermore, developing happiness via techniques like mindfulness, gratitude, and constructive social interactions can provide a feedback loop that strengthens emotional health and promotes a more upbeat view of the world. In the end, recognizing and fostering happiness can result in a fuller, more satisfying life that benefits the person as well as the larger community (Veenhoven, 2013)

Castillo-Abdul et al. (2022) cite international organization resolutions, including the United Nations-approved resolution, that call for a larger role for happiness in development policy and emphasize its pursuit as a primary goal in accordance with the 2030 Agenda's Sustainable Development Goals (SDGs). Due to the importance that the concept of "happiness" has gained, its management has been taken into account in several national rules and has emerged as a key metric in international economies.

Researchers have had trouble conceptualizing the phrase, nevertheless, and the scientific literature has varying meanings of the same idea (Ravine-Ripoll et al., 2022). Subjective wellbeing is the science of happiness, according to authors like Helliwell and Aknin (2018), and Ravina-Ripoll et al. (2019:196) describe it as a general identification concept that everyone likely aspires to but that presents challenges in defining its characteristics, evaluating its keys, and compiling its recipes for attaining it.

Moreover, happiness in a welfare state has historically been interpreted primarily as the acquisition of economic material things. But according to Robina-Ramírez and Cotano-Olvera (2020), happiness should be built on the capacity to transcend the material through the development of internal resources and values, rather than just the improvement of economic conditions. Because they foster the growth of good emotions, which are closely linked to a feeling of well-being, these values are crucial to the investigation of happiness (Ravina-Ripoll et al., 2022). Lastly, a high degree of life satisfaction and regular good emotions are also considered indicators of happiness (Galván Vela et al., 2021).

2. MATERIALS AND METHODS

First, a comprehensive review of the international scientific literature on happiness of Undergraduates is conducted as part of the methodological approach. In order to give the research high-quality evidence, we selected the studies that were published in high-impact journals.

The works on the aforementioned topic, n=2185 (search on March 25, 2024), from the database of bibliographic references - scientific journals, books, and conference proceedings - Scopus, the source selected for the bibliometric analysis and network mapping is extracted. The idea of "happiness" was added to the search results, and the bibliometric study is based on earlier studies that employed the VOS viewer software. (Jambrino-Maldonado et al., 2022, Jiang et al., 2020 and Zhang & Chen, 2017)

Table 1 Scopus Search results for bibliometric Analysis

Date	Search	Publications
26 th March, 2024	TS= ("Happiness")	2892

3. BIBLIOMETRIC ANALYSIS FOR HAPPINESS

Background of the Data Collection

- **Databases:** Scopus, Web of Science
- **Keywords:** Happiness: "Subjective well-being," "Positive emotions," "Life satisfaction"
- **Timeframe:** 2000– 2024
- **Filters:** Journal articles, reviews, conference papers
- **Export:** Extract bibliometric data (authors, countries, citations, journals)

3.1. Types of Documents: When conducting research, different types of documents are utilized to gather information, analyze data, and support conclusions. These documents can be categorized based on their purpose, origin, and content. Such breakdown includes Primary Documents like Research papers, official records, personal documents interview, manuscripts etc. Secondary Documents are those which analyze, interpret, or summarize primary sources. They provide insights or critiques based on existing data which includes Literature Reviews, Meta-Analyses, Academic Books or Textbooks, Critical Essays, Documentaries. Tertiary documents compile and summarize information from primary and secondary sources. They are used for quick reference and provide general overviews like Encyclopedias, Dictionaries, Indexes, Abstracts, Handbooks or Guides. Similarly, there are Quantitative Data Documents, Qualitative Data Documents also and Technical and Scientific Documents. There exist Grey Literature, Archival Documents, Old Manuscripts and multimedia documents also. The use of documents and their categories depends upon the purpose of study and the variable under observation. For the present study the types of documents found under observation are mentioned below (Ding et al., 2017)

Table 2 Types of Documents under observation

Type of Document	Number
Research Papers/Articles	2504
Books/Book chapters and others	133
Conference paper	129
Review	62
Notes and Letter	29
Editorial	21

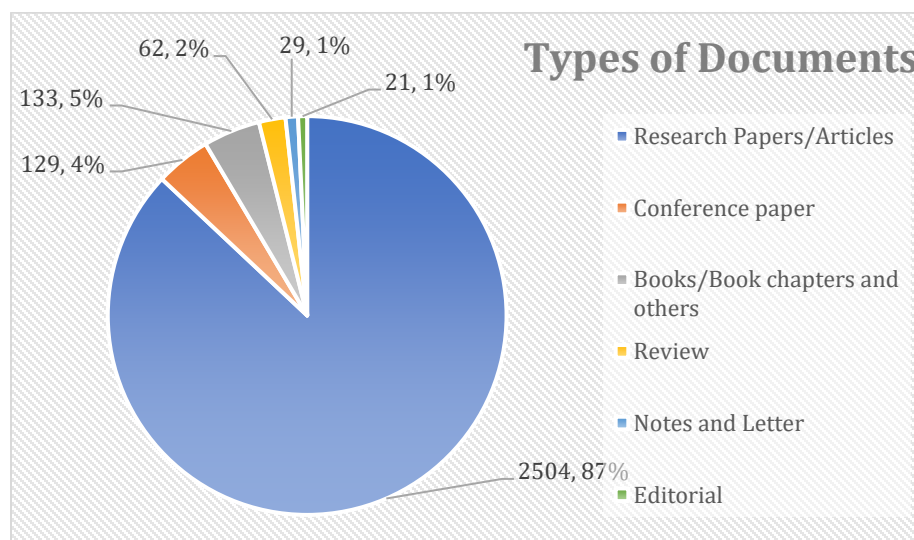


Figure 1 Type of Documents under observation

It can be seen from figure 1 that out of total 2892 documents, number of Research papers/articles consist of 87%, followed by Books/Book Chapters which consist of 5%, Conference papers as 4 %, Review papers as 2 percent and Notes, letters and Editorials as 1 percent.

3.2. A publishing house of journals refers to an organization or company responsible for the production, dissemination, and distribution of academic or professional journals. These publishing houses facilitate the peer review process, maintain quality standards, and provide platforms for researchers to share their work. There are Academic Publishing Houses which are dedicated to producing peer-reviewed scholarly journals in various disciplines, including

science, technology, humanities, and social sciences. Open-Access Publishers provide free access to journal articles, ensuring broader dissemination of research. University Presses are affiliated with academic institutions and focus on scholarly works. Professional Organizations and Societies are typically affiliated with professional bodies and focus on advancing specific fields. Regional and National Publishers focus on specific regions or countries, often promoting research from developing nations. Commercial Publishers are for-profit entities that publish a wide range of journals, often partnering with academic institutions. Hybrid Publishers offer both traditional subscription-based models and open-access options. Publishing House for a paper are chosen on the basis of their Reputation, Indexing, Scope, Open Access vs. Subscription, Impact Factor, etc.

As per the present study the following information reflects about the major publishers found and their number of documents

Table 3 Publisher and Number of Document

Publishers	Number of Documents
Springer	455
Elsevier Ltd	224
MDPI	215
Routledge	173
SAGE Publications Inc.	155
Emerald Publishing	135
John Wiley and Sons Inc	114
Frontiers Media S.A.	85
Institute of Electrical and Electronics Engineers Inc.	55
More than 10 Documents (13 Publishing House)	303
Others (545 Publishing House)	959
Total	2873

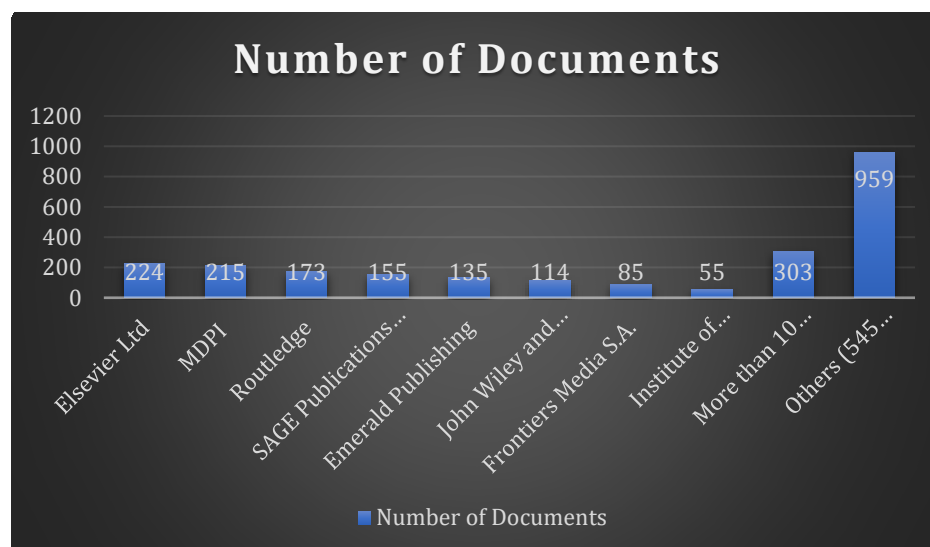


Figure 2 Publisher and Number of Documents

It can be seen from Figure 2 that maximum of documents published under Elsevier Ltd followed by MDPI, Routledge, SAGE Publications Inc., Emerald Publishing, John Wiley and Sons and so on.

3.3 Authorship: On the basis of Authorship minimum number of documents of per author is kept 5 with minimum citations 5, Out of total 8157 authors of the total publications, 29 authors met the threshold for the same. The largest set of connected items consists of 6 items. It can be seen from the below figure

Table 4 Authorship a per the documents published, citations and their total link strength

Author	Documents	Citations	Total link strength
ravina-ripoll, rafael	25	290	19
blanchflower, david g.	6	241	0
yöldöröm, murat	7	216	1
oishi, shigehiro	7	128	0
cuesta-valiño, pedro	7	114	6
zhang, ming	5	107	0
alsinet, carles	6	105	15
blasco-belled, ana	6	105	15
torrelles-nadal, cristina	5	103	14
galiano-coronil, araceli	11	87	9

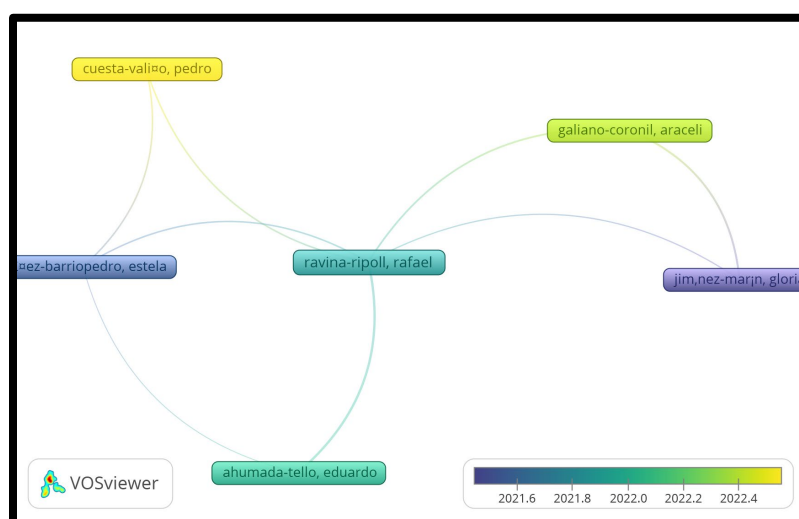


Figure 3 Authorship a per the documents published, citations and their total link strength

Figure 3 reflects about the most influential authors based on their number of studies published, citations and their total links strength

3.4. Citations as per studies

Citations of documents refer to the practice of formally referencing or acknowledging a previously published work within a new piece of academic, professional, or research writing. A citation acts as a credit to the original source and provides readers with the information needed to locate the referenced material. In simpler terms, when an author uses ideas, data, or quotes from another work, they "cite" that work to give proper credit and show the influence of prior research on their own work.

Citations plays an Important role because they are the Acknowledging Sources, Enhancing Credibility, Avoiding Plagiarism, Facilitates Further Research, Measure Influence

The Citation counts represent the number of times a specific document (e.g., a journal article, book, or report) has been referenced by other works. A high citation count usually indicates The document's relevance and significance within its field. Widespread recognition of the document's findings, theory, or methodology.

Citations are tracked by databases and indexing services, such as Scopus, Web of Science, Google Scholar, PubMed, etc. These platforms provide citation counts and metrics like the h-index, which measures the productivity and impact of a scholar or document.

The major reasons for such studies having Maximum Citations are their Foundational Contribution where they introduce novel theories, methods, or discoveries, their Broad Applicability as their findings are useful across multiple disciplines, their High Visibility because of the publications in prominent journals or widely used repositories or Collaborative Efforts or projects which gain more attraction.

Table 5 Studies with maximum number of citations

Studies	Number of Citation
Ruggeri (2020)	360
Blanchflower (2021b)	196
Yang (2020)	187
Yöldöröm (2021b)	172
An (2020)	170
Zhong (2020)	144
Alexander (2021)	136
Pai (2020)	124
Buckley (2020)	119
Kun (2022)	106
Marengo (2021)	100

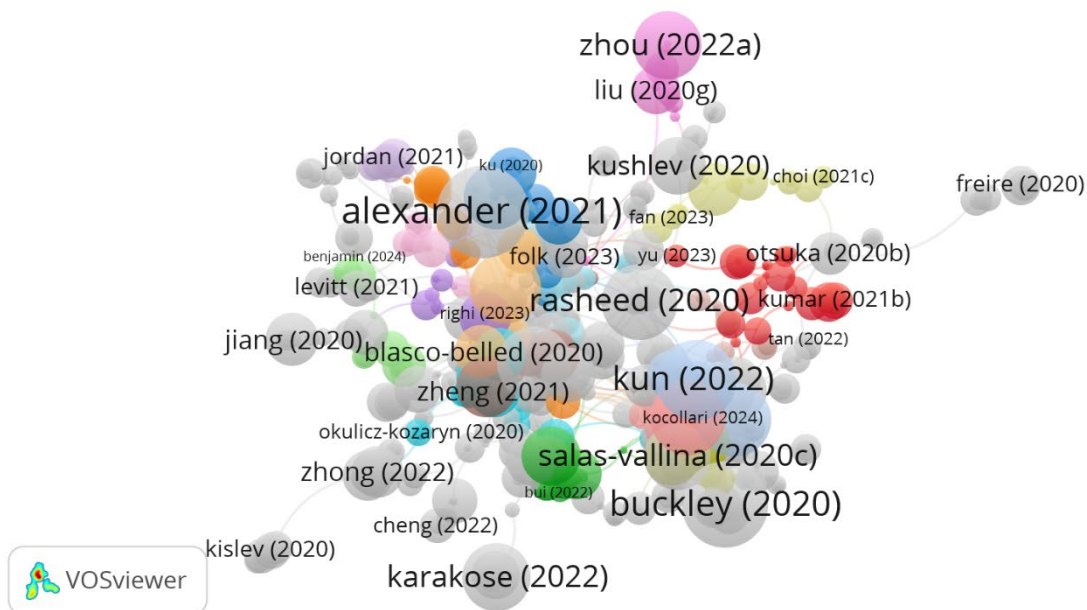


Figure 4 Studies with maximum number of citations

It can be seen from figure 4 that Citations per document can be understood in the sense that out of 2878 documents, 1001 documents are coming under the threshold, where the minimum number of citations per document is kept 5. The largest set of connected documents out of the data of 1001 is 170 items. 17 clusters are prepared for the above data.

3.5 Citations as per country: Citations per country can be understood from the following details, out of 2878 documents, 1001 documents are coming under the threshold, where the minimum number of citations per document is kept 5. The largest set of connected documents out of the data of 1001 is 170 items. 17 clusters are prepared for the above data

Table 6 Citations as per country

Maximum number of citations country-wise	Number of Citations
United States	47
Unites Aram Emirates	8
Turkey	7
Brunei	5
Ukrain	5

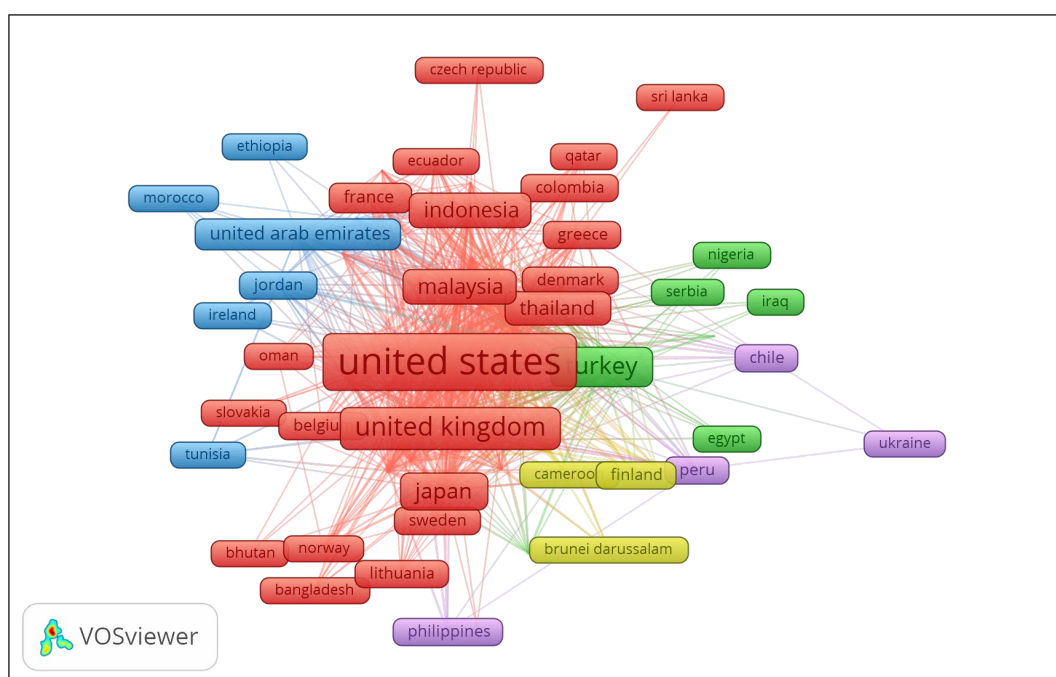


Figure 5 Citations as per country

3.6. Bibliometric Coupling is a method used in bibliometrics (the quantitative analysis of academic literature) to measure the similarity or relationship between two documents based on the number of shared references they cite. When two documents cite the same third document(s), they are said to be bibliometrically coupled.

Bibliographic Coupling as per the country, out of 149 countries 73 countries meet the thresholds. For each of the 73 countries, the total strength of the bibliographic coupling links with other countries is calculated. The selected countries have greatest total link strength. The following is the list of top 15 countries with the details of their documents, citations and total link strength.

Table 7 Bibliometric Coupling

Sr. No	Country	Documents	Citations	Total Link Strength
	United States	456	4749	196155
	China	368	3082	135526
	Spain	214	2164	107031
	India	199	747	106482
	Turkey	161	1092	80284
	United Kingdom	169	2083	79606
	South Korea	162	1131	67211
	Italy	96	879	60921
	Japan	103	603	56830
	Canada	84	862	48306
	Germany	94	1005	48264
	Netherlands	71	637	40387
	Malaysia	82	452	35784
	Australia	79	1190	32253
	Iran	148	509	30469
	Poland	48	459	30358
	Hong Kong	44	401	29787
	United Arab Emirates	47	334	28887
	Pakistan	47	491	27711
	Portugal	59	306	26265

Table 8 Clusters on the basis of countries

Group of Countries	Group of countries on the basis of linked strength
Cluster 1	60
Cluster 2	7
Cluster 3	6

Out of the 73 Countries, 3 Clusters are prepared on the basis of linked strength

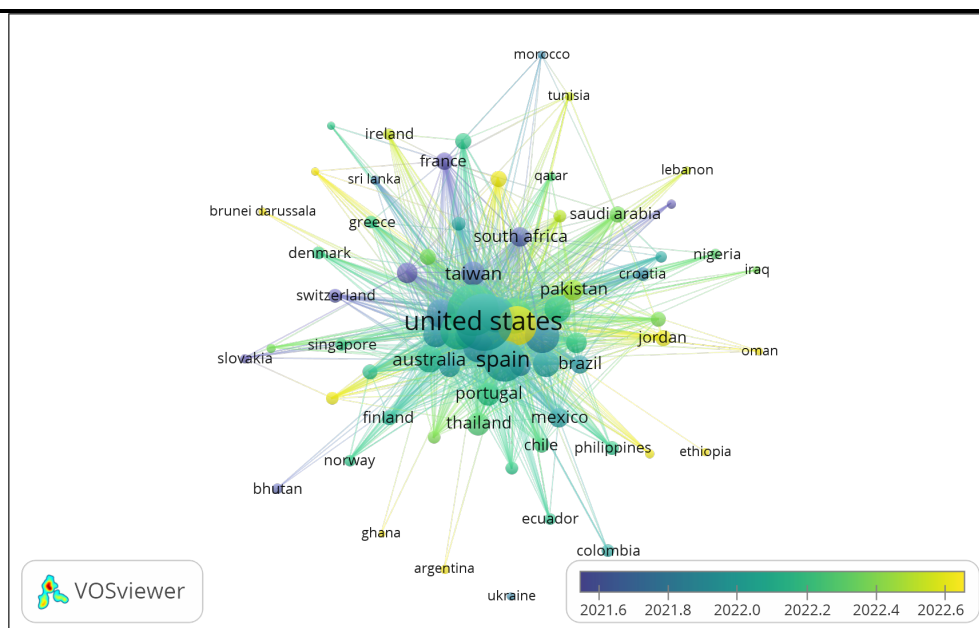


Figure 6 Cluster-wise distribution of Countries on the basis of their linked strength

3.7. Citations Country-wise: Citations vary by country based on research output, academic culture, infrastructure, and access to resources. Out of 149 countries, 72 countries met the threshold of having citations upto 5 documents atleast. The total strength of the co-authorship links with other countries can be seen from the below graph In total 72 countries formed 8 major clusters as far as citations are concerned

Table 9 Cluster of Countries as per their Citations

Group of Countries with connections of citations	Number of Countries
Cluster 1	26
Cluster 2	18
Cluster 3	10
Cluster 4	6
Cluster 5	4
Cluster 6	3
Cluster 7	3
Cluster 8	2

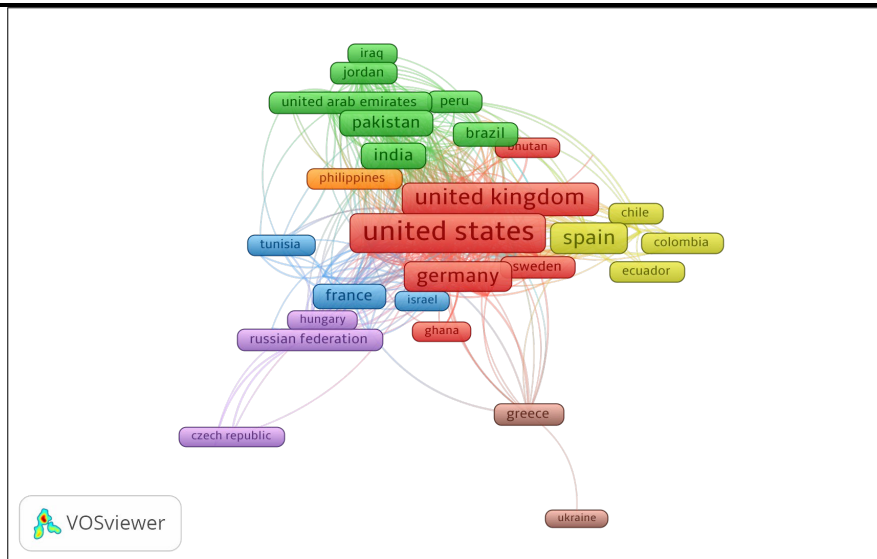


Figure 7 Cluster of Countries as per their Citations

4. KEY FINDINGS

- 1) **Publication Trends** are having Steady growth in publications, with a surge in the 2000s due to positive psychology movements. High publication counts in psychology, behavioral sciences, and public health.
- 2) **Leading Authors & Institutions** are Martin Seligman, Ed Diener, and Daniel Kahneman are leading contributors. Major contributions from the University of Illinois, Harvard, and Stanford.
- 3) **Influential Journals** are *Journal of Happiness Studies*, *Social Indicators Research*, and *Journal of Positive Psychology*.
- 4) **Emerging Areas:** Happiness in digital well-being, workplace productivity, and environmental sustainability.

5. EDUCATIONAL IMPLICATIONS

The following are the main educational implications of research on student happiness:

- 1) A positive and inclusive classroom environment fosters happiness, which in turn enhances engagement, creativity, and academic success
- 2) Social-emotional learning teaches students skills like emotional regulation, empathy, and conflict resolution, which contribute to their happiness;
- 3) Research shows that students thrive when education addresses their cognitive, emotional, social, and physical needs;
- 4) Excessive academic stress negatively impacts students' happiness;
- 5) Education systems should focus on reducing undue pressure by adopting flexible teaching methods, realistic workloads, and alternative assessment systems.
- 6) Research on happiness emphasizes how crucial intrinsic motivation is to maintaining students' attention and contentment.
- 7) Counsellors, peer support groups, and stress-reduction classes are examples of easily accessible mental health resources that schools ought to offer.
- 8) Studies indicate that family participation improves students' academic performance and level of satisfaction.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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