

Collaboration Research on Psychology in India and South Africa with Other Countries: A Comparative Study

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ABSTRACT

This study examines the collaborative research interests of Indian and South African sources that support the advancement of research in the field of psychology. This investigative study using primary essential data sources gathered from the Web of Science (WoS) period 2001 to 2020, India published 12543 papers with 96871 citations and South Africa published 9938 papers with 121385 citations in the discipline of psychology. Both countries experienced all years with relatively low publication numbers but high citation counts; notably in the year 2010, both countries received high citations. This suggests that both countries have produced influential research, even with limited output in certain years. Both countries saw a significant decline in publications in the year 2020, which may have been caused by a number of factors like the COVID-19 epidemic or other outside impacts. The 133 nations produced collaborated published articles with India, and while 28 countries non-cited papers published. According to the findings and 139 countries collaborated with South Africa to publish research papers and 59 countries published non-cited papers. India and South Africa both countries with Collaborated USA nation most published highly cited articles and United Kingdom second position place in highest papers cited papers published.

KEYWORDS: Collaboration, Collaborative, Highly Cited, Library Science, Psychology, Scientometric, Web of Science, (WoS), Country, India, and South Africa, Global.

1. INTRODUCTION

The most trustworthy method of monitoring science and technology activities is to read scientific publications, and Scientometrics is a crucial statistic for assessing scientific performance. Scientometric analysis has been utilized extensively over the past fifteen years to evaluate the advancement of different scientific fields as well as the academic performance of researchers.

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The study of the mind, brain, and behavior and their interactions is known as psychology. It is an experimental and biological science that studies human nature through scientific means. Understanding how individuals think, act, and feel as well as why their cognitive processes influence their behavior is possible with the aid of psychology. A wide range of fields, including healthcare, education, business, and industry, can benefit from the use of psychology. Among the professions that psychology can lead to are Clinical psychologist: Offers assistance in therapy. An industrial-organizational psychologist influences the dynamics of the workplace.

Market researcher analyzes consumer behavior by using psychology and a human resources professional analyzes employee behavior using psychology. Understanding human thought, behavior, and emotion is made easier by psychology. It investigates how perception, memory, attention, and problem-solving are all influenced by cognitive processes. It explores the emotional realm, looking at how we feel about love, hate, grief, and happiness. Additionally, it looks into the social elements that affect our interactions, viewpoints, and actions.

India: India, a vast and vibrant country, is nestled in the heart of South Asia. Known for its rich cultural heritage, diverse landscapes, and ancient civilizations, India has captivated the world for centuries. India population is the world's most populous democracy, with a population of over 1.4 billion people. India economy is a rapidly growing economy, known for its IT industry, pharmaceutical sector, and agricultural production. India democracy is the world's largest democracy, with a vibrant political system and a commitment to human rights.



Figure-1: Key areas of Psychology

Source: https://www.freepik.com/premium-ai-image/creative-graphic-art-brain-psychology-concept_140213566.htm

South Africa: South Africa is a country with a bright future. It is a young and dynamic nation with a lot of potential. The country is well-positioned to become a major economic and political power in Africa. South Africa is a country with a complex past. It was the site of apartheid, a system of racial segregation that was in place from 1948 to 1994. Apartheid was ended in 1994 with the election of Nelson Mandela, the country's first black president. Since then, South Africa has made significant progress in terms of racial reconciliation and economic development. However, the country still faces challenges such as poverty, inequality, and crime.

2. METHODOLOGY

In India and South Africa, a variety of outlets contribute to the research production in the field of psychology subcategory subjects like cognitive psychology, social psychology, educational psychology, counseling psychology, and clinical psychology, among others. This study used of primary necessary data materials collect from the Web of Science (WoS) and analyzed. The study during the period from 2001 to 2020 is selected as the database that is available. The search string INDIA: CU = India AND SU=(Psychology OR Psychiatry OR “Mental illness” OR Mental OR Neurobehavioral OR Psycho diagnostics OR Mental OR Psycho Surgery OR Behavior OR Behaviorism OR Psychoanalyst OR Psychodynamic OR unconscious) and SOUTH AFRICA: CU = South Africa AND SU=(Psychology OR Psychiatry OR “Mental illness” OR Mental OR Neurobehavioral OR Psycho diagnostics OR Mental OR Psycho Surgery OR Behavior OR Behaviorism OR Psychoanalyst OR Psychodynamic OR unconscious) AND (Indexes=SCI-EXPANDED, SSCI, A&HCI, ESCI Time span=2001-2020). Totally twenty years data downloaded the records based on the above strings. A total of India 12543 papers with 96871 citations and South Africa 9938 articles with 121385 citation records were downloaded, and examined using the “Histcite” software program and tab-delimited in “Micro Soft Excel” in accordance with the study's goals.

OBJECTIVES OF THE STUDY

To find out the year wise growth of Publication Indian and South Africa Country.

To find out the India and Indian and South Africa Collaboration with others countries research on Psychology papers.

To the analyzed India and South Africa with top five collaborated counties highly cited publications

RESULTS AND DISCUSSION

4.1 Year Wise Growth of Publication Indian and South Africa Country

This data provides a snapshot of the publication and citation trends in Indian psychology research area over a 20-year period. The overall trend shows a general increase in publications and citations over the 20-year period. Total produced 12543 psychology paper publications with 96871 citations, and in the year 2019 saw the 1632 highest number of publications and a relatively 2299 number of citations. The following year 2020 experienced a notable decrease in both publications and citations this could be attributed to various factors such as the COVID-19 pandemic or other external influences

In year 2010 while the number of publications was relatively low only 355 publications and the number of citations was surprisingly high 8726 received. This suggests that a small number of highly impactful papers were published that year. Conversely, in another year with a low number of publications in the year 2001 only 102 papers with citation count was also relatively high 2579 received. This could indicate that even with fewer publications, the research produced was of high quality and garnered significant attention.

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Table-1: Country Wise Growth of Publications

Year	India		South Africa	
	Papers	Citations	Papers	Citations
2001	102	2579	151	4600
2002	119	4363	156	4141
2003	162	4008	192	4122
2004	241	3127	262	5557
2005	183	5182	186	5921
2006	234	4172	245	5775
2007	227	4159	284	6784
2008	378	5456	494	7046
2009	242	4864	318	5863
2010	355	8726	472	11200
2011	341	8695	375	6080
2012	506	4666	1201	8133
2013	670	6314	561	8507
2014	856	5939	617	8877
2015	1204	5112	629	6945
2016	1333	5495	766	7340
2017	1066	5014	649	6209
2018	1319	4180	715	5092
2019	1632	2299	729	2197
2020	1373	2521	936	996
Total	12543	96871	9938	121385

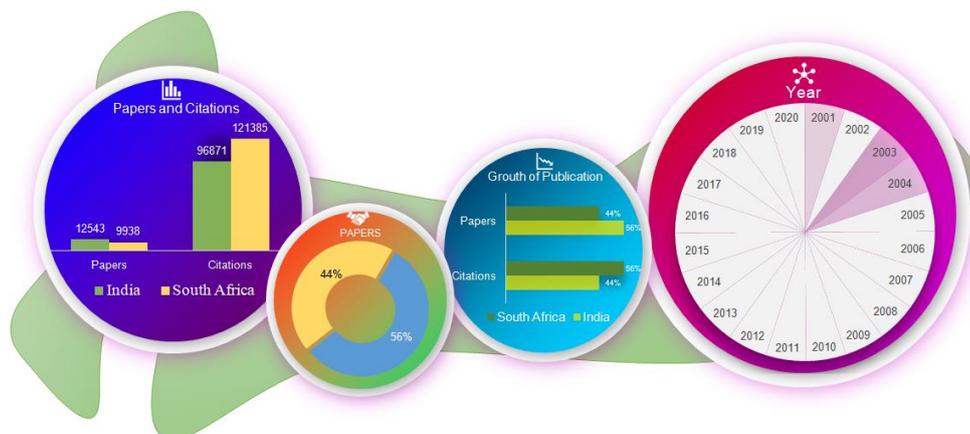


Figure-2: Country and Year Wise Growth of Psychology Research Publications

The South Africa country total 9938 papers published with 121385 citations received, notice that South Africa country less papers published compare to India nation but more citation received. This is good indicating that South Africa County published good quality papers. In the year 2012 total 1201 highly papers published with 8133 citations and in the year 2001 only 151 papers with 4600 citation received. Observed that in the year 2010 South Africa 472 papers published and the number of citations was surprisingly high 11200 received, South Africa focused on quality research impact, especially when compared to India.

India and South Africa both countries in the year 2010 few papers published but highly citation received that year. South Africa research community appears to prioritize quality over quantity, producing a relatively small number of papers but generating a significant impact in terms of citations. This trend has been consistent over time, with

notable years like 2010 highlighting the potential for high-impact research even with fewer publications. However, Indian and South Africa both countries there are significant fluctuations from year to year, indicating shifts in research activity and interest and both the countries were displayed in the table.

4.2 India and South Africa with Collaborated others Countries Publications Productivity

A total of 1,430,700 psychology research papers were published globally during the 20-year period. India contributed 12,543 papers (0.88%) to the global research output, garnering 96,871 citations and South Africa contributed 9,938 papers (0.69%), generating 121,385 citations. The top ten countries with the highest number of published psychology research papers are identified and analyzed.

4.2.1 India with Top 10 Collaborated Countries Publications

Indian country total papers 12543 with 96871 citations and ACPP (Average Citations per Paper) 7.72% this result research study during the period from 2001 to 2020.

Table-2: Top 10 Collaborated Countries with India Publications

	Collaborated Countries	Papers	%	Citations	%
India: 7015 (55.93%) Papers, 64072 (66.14%) Citations and Others Countries: 5528 (44.07%) Papers, 32799 (33.86%) Citations	USA	898	7.16	7494	7.74
	United Kingdom	524	4.18	4062	4.19
	Australia	292	2.33	2063	2.13
	Canada	199	1.59	1942	2.00
	China	175	1.40	1504	1.55
	Netherlands	148	1.18	1245	1.29
	Germany	143	1.14	1120	1.16
	Japan	127	1.01	879	0.91
	Italy	126	1.00	871	0.90
	Brazil	125	1.00	821	0.85
	Others Countries	2771	22.09	10798	11.15
	Total	12543		96871	

Table-2 illustrates the top 10 nations with which India collaborated internationally between 2001 and 2020. During the time depicted in figure 3, India's share of worldwide collaborative publishing in the field of psychology research output with other nations reached 5528 (44.07%) articles with 32799 (33.86%) citations published of their total production. It was noted that India obtained near 66% of the citations, while other nations worked together to get near 44%. According to (Hulloli & Venkatesh, 2021) "...research on Electric Vehicles publications research output India with other countries achieved 831 (26.54%) papers with 12,298 (58.40%) citations publication of their total output during the period".

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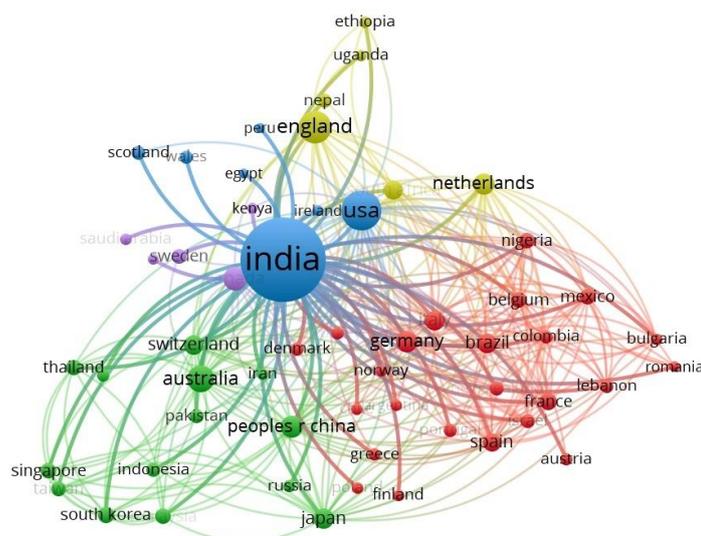


Figure-3: Top 10 Collaborated Countries with India Publications Network Mapping

The United States accounted for the greatest number of India's collaborative publications in this study, with 898 (7.16%) papers with 7494 (7.74%) citations share, followed by the United Kingdom 524 (4.18%) with 4062 (4.19) citations share, Australia 292 (2.33%) with 2063 (2.13%) citations share, Canada 199 (1.59%) with 1942 (2%) citations share, and the remaining countries with the lowest numbers of papers published with India below 2% of output.

4.2.2 South Africa Collaborated Top 10 Countries Publications

Between 2001 to 2020, a total of 9938 articles were published in South Africa, with 121385 citations and an average citation per paper (ACPP) of 12.21%. The top ten nations that South Africa collaborated with internationally between 2001 to 2020. The percentage of international collaborative publications in psychology research output that South Africa and other nations produced during that time was 5278 (53.11%) articles and 32799 (59.40%) citations.

Table-3: Top 10 Collaborated Countries with South Africa Publications

	Collaborated Countries	Papers	%	Citations	%	
South Africa: 4660 (46.89%) Papers, 49286 (40.60%) Citations and Others Countries: 5278 (53.11%) Papers, 32799 (59.40%) Citations	USA	890	8.96	14603	12.03	
	United Kingdom	586	5.90	9873	8.13	
	Netherlands	396	3.98	6715	5.53	
	Australia	309	3.11	5723	4.71	
	Germany	191	1.92	3811	3.14	
	Belgium	170	1.71	3139	2.59	
	Canada	169	1.70	3004	2.47	
	Unknown	124	1.25	2933	2.42	
	Spain	123	1.24	2110	1.74	
	Switzerland	116	1.17	1976	1.63	
	Others Countries	2204	22.18	18212	15.00	
	Total		9938		121385	

In this study, South Africa highest number of collaborative publications was with the USA with 890 (8.96%) papers with 14603 (12.03%) citations share first ranked, followed by the United Kingdom, with 386 (5.90%) publications with 9873 (8.13%) citations share, the Netherlands, with 396 (3.98%) publications with 6715 (5.53%) citations share, receiving a third raked, Australia, with 309 (3.11%) total collaborative publications with 5723 (4.71%) citations share, Germany, with 191 (1.92%) papers with 3811 (3.14%) citations share, India, with only 81 (1%) papers with 892 (1%) citations share and 17th ranked, and the remaining countries' papers published with South Africa's lowest numbers below 1% of output.

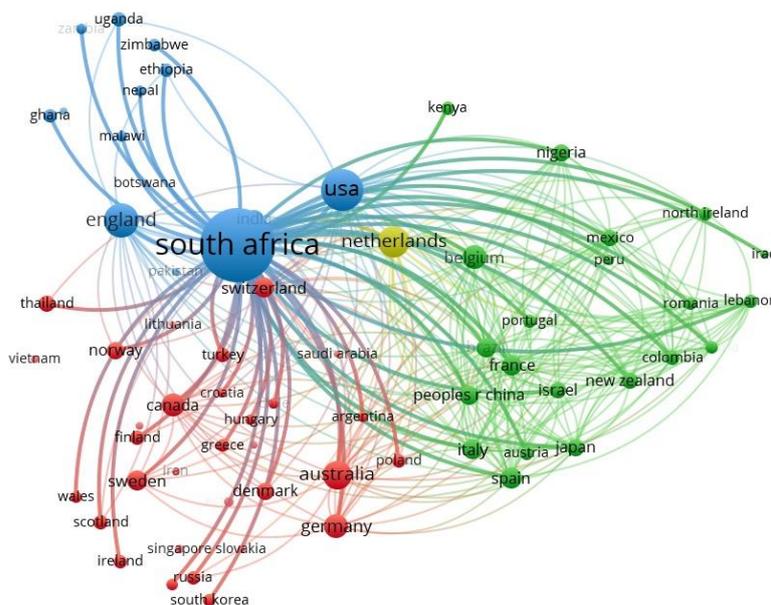


Figure-4: Top 10 Collaborated Countries with South Africa Publications Network Mapping

4.3 India and South Africa with Collaborated Top 5 Counties highly cited publications

Worldwide total involved in total 1430700 research publications on psychology. South Africa and India contributing just 0.69% and 0.88% respectively while other nations worked together. 12,543 publications (0.88%) from India and 9,938 papers (0.69%) from South Africa were included in the worldwide research output, with 96,871 and 121,385 citations, respectively. We only included research studies from the top five nations with the highest number of publications cited between 2001 to 2020.

4.3.1 India with Top 5 Collaborated Counties highly cited publications

India total 12543 papers and 96871 citations with 189976 total cited references received and more than 133 nations published research articles in collaboration with India, while 28 countries produced non-cited papers.

Table-4: India with Top 5 Collaborated Counties highly cited publications

CY	Authors	Article Title	Journal Name	C	CR
USA	Merikangas KR, Jin R, He JP, Kessler RC, Lee S, et al.	Prevalence and Correlates of Bipolar Spectrum Disorder in the World Mental Health Survey Initiative	Archives of General Psychiatry. 2011 MAR; 68 (3): 241-251	1084	43

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China	Kessler RC, McLaughlin KA, Green JG, Gruber MJ, Sampson NA, et al.	Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys	British Journal of Psychiatry. 2010 NOV; 197 (5): 378-385	946	61
Australia	Ali R, Awwad E, Babor TF, Bradley F, Butau T, et al.	The alcohol, smoking and substance involvement screening test (ASSIST): development, reliability and feasibility	Addiction. 2002 SEP; 97 (9): 1183-1194	738	14
United Kingdom	Wagenmakers EJ, Love J, Marsman M, Jamil T, Ly A, et al.	Bayesian inference for psychology. Part II: Example applications with JASP	Psychonomic Bulletin & Review. 2018 FEB; 25 (1): 58-76	654	73
Canada	Matsumoto D, Yoo SH, Fontaine J, Anguas-Wong AM, Arriola M, et al.	Mapping expressive differences around the world - The relationship between emotional display rules and individualism versus collectivism	Journal of Cross-Cultural Psychology. 2008 JAN; 39 (1): 55-74	327	47
<i>CY: Country, C: Citation, CR: Cited References</i>					

India with Collaborated USA most published highly cited articles was “Prevalence and Correlates of Bipolar Spectrum Disorder in the World Mental Health Survey Initiative” which was publication in the “Archives of General Psychiatry” by Merikangas KR, Jin R, He JP, Kessler RC, Lee S, et al. in the year 2011 and 1084 highly cited with 43 number of cited references occupied 1st ranked and followed by the research article “Review on Control of DC Microgrids and Multiple Microgrid Clusters” which was publication in the “Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys” by Kessler RC, McLaughlin KA, Green JG, Gruber MJ, Sampson NA, et al. in the year 2010 and papers cited 946 with 61 number of cited references got the 2nd ranked from China country collaborated.

In the year 2002 by Ali R, Awwad E, Babor TF, Bradley F, Butau T, et al. have published research paper title “The alcohol, smoking and substance involvement screening test (ASSIST): development, reliability and feasibility” in the journal of “Addiction” and cited 738 with 14 number of cited reference which got 3rd position from Australia country.

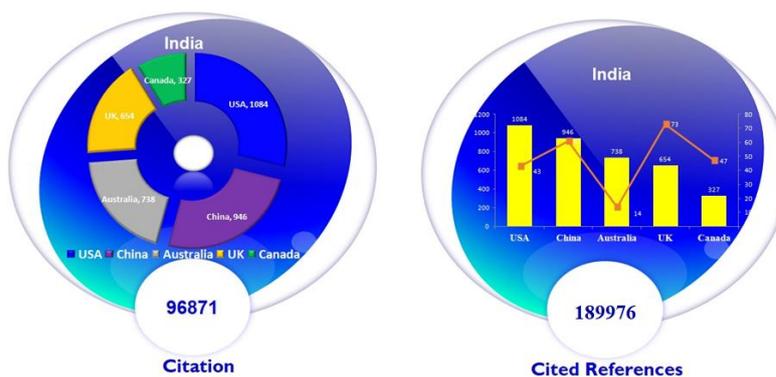


Figure-5: India with Top Collaborated highly cited Counties

In the year 2018 by Wagenmakers EJ, Love J, Marsman M, Jamil T, Ly A, et al. have published article paper title “Bayesian inference for psychology. Part II: Example applications with JASP” in the journal of “Psychonomic Bulletin & Review” and cited 654 with 73 number of cited reference in position 4th ranked from United Kingdom and Canada county collaborated in the year 2008 authors by Matsumoto D, Yoo SH, Fontaine J, Anguas-Wong AM, Arriola M, et al. have published article title “Mapping expressive differences around the world - The relationship between emotional display rules and individualism versus collectivism” in the journal “Journal of Cross-Cultural Psychology” and cited 327 with 47 number of cited reference in position 5th ranked.

4.3.2 South Africa with Top 5 Collaborated Counties highly cited publications

The between 2001 to 2020 South Africa published 9938 papers and h 121385 citations with 229789 cited reference received. Over 139 countries collaborated with South Africa to publish research publications, while 59 countries published non-cited papers.

Table-5: South Africa with Top 5 Collaborated Counties highly cited publications

CY	Authors	Article Title	Journal Name	C	CR
USA	Ruscio AM, Stein DJ, Chiu WT, Kessler RC	The epidemiology of obsessive-compulsive disorder in the National Comorbidity Survey Replication	Molecular Psychiatry. 2010 JAN; 15 (1): 53-63	1054	60
United Kingdom	Elsabbagh M, Divan G, Koh YJ, Kim YS, Kauchali S, et al.	Global Prevalence of Autism and Other Pervasive Developmental Disorders	Autism Research. 2012 JUN; 5 (3): 160-179	975	86
Netherlands	Kessler RC, Angermeyer M, Anthony JC, de Graaf R, Demyttenaere K, et al.	Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative	World Psychiatry. 2007 OCT; 6 (3): 168-176	950	48

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Germany	Rehm J, Baliunas D, Borges GLG, Graham K, Irving H, et al.	The relation between different dimensions of alcohol consumption and burden of disease: an overview	Addiction. 2010 MAY; 105 (5): 817-843	613	277
Australia	Kessler RC, Green JG, Gruber MJ, Sampson NA, Bromet E, et al.	Screening for serious mental illness in the general population with the K6 screening scale: results from the WHO World Mental Health (WMH) survey initiative	International Journal of Methods in Psychiatric Research. 2010 JUN; 19: 4-22	506	65

South Africa with USA country collaborated papers most published highly cited articles was “The epidemiology of obsessive-compulsive disorder in the National Comorbidity Survey Replication” which was publication in the journal of “Molecular Psychiatry” by Ruscio AM, Stein DJ, Chiu WT, Kessler RC, et al. in the year 20210 and 1054 highly cited with 60 number of cited references occupied 1st placed.

Followed by the article “Global Prevalence of Autism and Other Pervasive Developmental Disorders” which was publication in the Journal of “Autism Research” by Elsabbagh M, Divan G, Koh YJ, Kim YS, Kauchali S, et al. in the year 2012 and articles cited 975 with 86 number of cited references got the 2nd ranked from United Kingdom country collaborated.

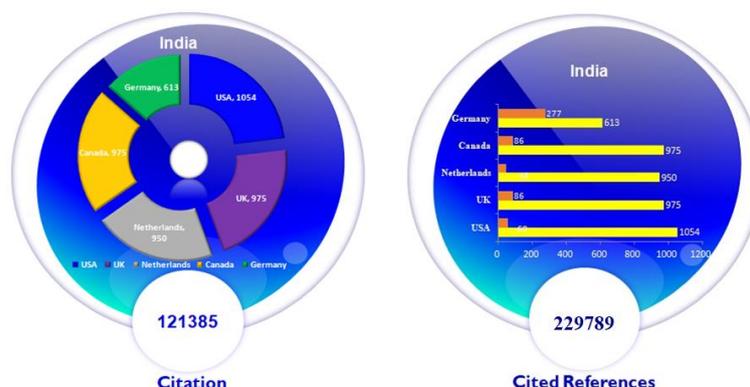


Figure-6: South Africa with Top Collaborated highly cited Counties

In the year 2007 by Kessler RC, Angermeyer M, Anthony JC, de Graaf R, Demyttenaere K, et al. have published research article title “Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative” in the journal of “World Psychiatry” and cited 950 with 48 number of cited reference which got 3rd ranked from Netherlands country.

In the year 2010 by Rehm J, Baliunas D, Borges GLG, Graham K, Irving H, et al. have published an article title “The relation between different dimensions of alcohol consumption and burden of disease: an overview” and cited 613 with 277 number of cited reference in position 4th position Germany and Australia county collaborated in the year 2010 by Kessler RC, Green JG, Gruber MJ, Sampson NA, Bromet E, et al. have published article title “Screening for serious mental illness in the general population with the K6 screening scale: results from the WHO

World Mental Health (WMH) survey initiative” in the journal “International Journal of Methods in Psychiatric Research” and cited 506 with 65 number of cited reference in position 5th ranked and the remaining 134 countries had a minimum below number papers published. USA top collaborated countries contribute network with highly cited network has been displaying in the figure-6 during the research study period. Notice that Germany county only 393 papers with 613 citations published but 277 highest cited references received compare to others country.

CONCLUSION

These paper examine research on psychology research study interests collaborative others countries with Indian and South African. India country published 12543 papers with 96871 citations and South Africa published 9938 papers with 121385 citations in the discipline of psychology during the period 2001 to 2020. The both countries experienced years with relatively low publication numbers but high citation counts, notably in 2010. This suggests that both countries have produced influential research, even with limited output in certain years.

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The 133 nations produced collaborated published articles with India, and while 28 countries non-cited papers published. According to the findings and 139 countries collaborated with South Africa to publish research papers and 59 countries published non-cited papers. India and South Africa both countries with Collaborated USA nation most published highly cited articles and United Kingdom second position place in highest papers cited papers published. Notice that South Africa country less papers published compare to India nation but more citation received. This is good indicating that South Africa County published good quality papers and also South Africa in the year 2012 total 1201 highly papers published with 8133 citations.

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