

THE TOP 100 HIGH-IMPACT PAPERS IN COLOMBIAN PSYCHOLOGY: a bibliometric study from WoS y Scopus

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ABSTRACT

The goal of this research is to identify the top high-impact papers in Colombian psychology and to analyze their characteristic in order to supply information about the development of the discipline in the last decades. The research was performed with the analysis of the academic production in Colombian psychology found in the journals specialized in the discipline. The impact of the Colombian academic production is determined from the results given by the data bases WoS and Scopus. There is a low consumption index from the academic community of psychologists in Colombia. The impact of the academic production in Colombian psychology is the result of a network made up of national researchers with the international academic community located in USA and Europe. 82% of these publications are done in international journals and 77% of these are in English. The Colombian psychology fields generating the highest impact in academic productions are: Neuropsychology, Clinical, Social, Education, Experimental, Organizational, and Cognitive. The network created between the national academic community and the Latin American is very incipient. This illustrates weaknesses which require strengthening from institutional structures and the improvement of the quality of the fundamental Colombian psychology journals in order for the discipline to move forward in our country. The development of the academic production in Colombia is very recent and it finds itself in the consolidation stage. A more substantial networking infrastructure is required by the academic community in our country to achieve a far-reaching academic production with a high impact.

Keywords: Psychology. Academic production. Psychological research. Bibliometry.

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I INTRODUCTION

The interest of researching the academic production is an essential element for knowing the constitutive dynamics of every discipline in the frame of a historical, political, and social context (YEDAIDE; ÁLVAREZ; PORTA, 2015). It is known that the most relevant aspects in the progress of science "depends directly on

the scientific community which produces, spreads, and «consumes» them" (LASCURAIN, 2006, p. 9). This study aims to characterize the academic production of psychology in Colombia and know the top 100 cited papers with the purpose of proportioning information about the accomplishments and developments in the Colombian psychological research in the last decades using some of the tools of the

bibliometric methods (AGUDELO; BRETON-LÓPEZ; BUELA-CASAL, 2003).

The bibliometric indicators are a fundamental tool in assessing the quality and the impact of the research activity, revealing the production indexes, circulation, collaboration and citation, they also make the tendencies which are founded on the different scientific fields and show substantial information in each discipline known (MINGERS; LEYDESCDORFF, 2015; VELASCO; EIROS, PINILLA; SAN ROMÁN, 2012). The bibliometric methods do not guarantee –with accuracy and precision- a complete picture of the research activity; nevertheless, they grant feasible methodological elements to develop and perform assessments on a large scale of the science (ABRAMO; D'ANGELO, 2011).

1.1 Historical development of the academic production in colombian psychology

The history of psychology in Colombia shows a process of change and consolidation, from a discipline which starts “to transit the steps as a science and also to act as a profession” (ARDILA, 1973 p. 11). The consolidation of diverse application fields and research of psychology in Colombia, from the beginning of the 50s, represented an important development for the academic community of the discipline in our country (ARDILA, 2004).

The role of the academic journals in Colombian psychology is fundamental in the development and consolidation of the academic community of psychologists in Colombia. The history of academic publications of Colombian psychology has been in existence for sixty years with the appearance of the first specialized academic publishing of the discipline in 1956.

To show the historical development of the academic productions in Colombian psychology, the same as Jaraba-Barrios, et al. (2011) three significant phases in the history of academic productions of the discipline will be distinguished. Table 1 summarizes the sixty years of psychology journals in Colombia. These phases are divided by 20-year periods with the purpose of knowing the development of the editorial projects which have marked and shaped the history of academic publications in Colombian psychology.

Table 1: Sixty years of Colombian psychology journals

Period	Publications	
	Started	Ended
1956-1976	5	3
1977-1996	12	8
1997-2016	32	10
Total	49	21

Source: Ascofapsi Report (Jaraba & Guerrero, 2010) and consultation in Publindex (2016)

The time between 1956-1976 represents the beginning of the specialized publications of Colombian psychology. Historically, the first serial publication in our country appeared in 1956 with the name *Revista de Psicología*, directed by Mateo Mankeliunas in Universidad Nacional, constituted a referent in the beginning and development of specialized publications in the discipline in Colombia (ARDILA, 1969; 1973; DOMÍNGUEZ; DUQUE, 1999). During this time, there were five specialized publications of the discipline in our country which emerged and constituted the starting point in the history of academic publications in Colombian psychology. During this time, psychology publications were scarce (ARDILA, 1986). Following this publication, in this period, four more journals emerged: Archivos de Estudios Psicoanalíticos y de Psicología Médica (1964), Revista Latinoamericana de psicología (1969), Revista de la Sociedad Colombiana de Psicoanálisis (1976), and Cuadernos de Psicología (1976).

The time between 1977-1996 represents an important moment in the history of academic productions in Colombian psychology. During this time, twelve publications specialized in the discipline were born. This confirms a significant historical record in the academic production of the discipline. Nevertheless, eight of these publications are currently extinct. Seven of the publications that were extinct during this time show a very short-term existence, this refers to publications which did not exist for more than five years (JARABA-BARRIOS, et al., 2011).

Ending this period there is a historical sum of forty years. In these forty years, six academic publications specialized in the discipline manage

to sustain themselves. This provides a concerning overview to the inside of the academic community of Colombian psychology and in particular to the editorial projects of our country as a means of academic and scientific diffusion. During this period, the academic publications in Colombian psychology had precarious and rudimentary levels according to the minimum requirements of a scientific publication (CANO, 1995; GÓMEZ-MORALES; ANDUCKIA; RINCÓN, 1998).

The time between 1997-2016 marks an important change of direction in the historical development of academic publications in the discipline in our country. Serial publications start to emerge as promising editorial projects in Colombia (GUTIÉRREZ; PÉREZ-ACOSTA; PLATA-CAVIEDES, 2009). New editorial projects, which include several journals, start to appear and are still in existence. This period historically records a significant rise in the academic production as never seen before. Thirty-two publications emerge and ten of these die out. However, these editorial projects do not only emerge as an important phenomenon in the academic community of Colombian psychology but also in our country's scientific community in its different disciplines (ANDUCKIA; GÓMEZ; GÓMEZ-MORALES, 2000).

Given the importance of the significant rise of scientific publications in Colombia recorded in this period, the need to create a National Indexation System to measure and classify the journals in our country arises. In 1996, Colciencias -through Publindex¹- conducts the first calling for scientific journal editors in our country aiming to collect information which would allow the classification of the journals (GÓMEZ-MORALES; ANDUCKIA; RINCÓN, 1998).

The national and international indexation processes of psychology journals in Colombia begin to consolidate at the beginning of the 2000s. As proof of this, it is known that in recent years formalized work of the academic publication practices in our country's indexed scientific journals has allowed a broader visibility of the Colombian scientific production in national and

international academic communities (USGAME; USGAME, 2010).

The seventy-year period of academic productions in Colombian psychology allows us to consider several aspects to be taken into consideration. Firstly, the development of academic production of the discipline in our country is relatively recent. From the beginning, the editorial projects were portrayed as an unknown event and at the same time promising for the development and strengthening of the discipline in the academic community of our country's psychologists. Secondly, while it is true that in the last twenty years academic publications in Colombian psychology reveal a substantial improvement in a more standardized editorial structuring (JARABA-BARRIOS et al., 2011) it is also true that the history of academic production in Colombian psychology is still developing. Out of forty-nine journals recorded in history, only twenty-eight of the academic publications in Colombian psychology have survived. Thirdly, the reach of the academic publications in Colombian psychology have accomplished important goals such as editorial infrastructure reaching a well-deserved and significant visibility point in the international academic community (CARDOSO; ZOQUI, 2012). Thus, the importance of the analysis of the impact that the scientific production is generating in the national and international academic communities of psychology.

1.2 Internationality and impact of the academic production of psychology in colombia

The academic community of Colombian psychology starts to have important achievements in an international context thanks to the visibility and diffusion of the diverse researches realized in national territory (ARDILA, 1999; CALDERÓN-PRADA; CUARTAS-ARIAS, 2012). This visibility is a result of the important role of academic journals which generate scientific communication networks (GALLEGOS; BERRA; BENITO; LÓPEZ-LÓPEZ, 2014).

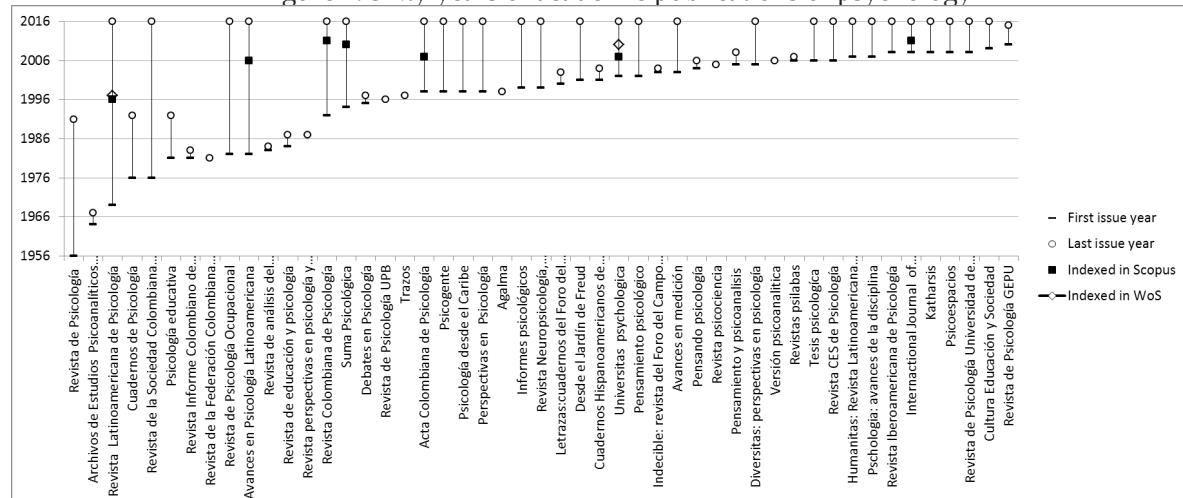
Currently, out of the twenty-eight surviving journals specialized in the discipline, seven academic publications of psychology in Colombia are indexed in Scopus and only two

¹ Publindex is the "Permanent Indexation Service" of serial publications in Colombia.

of them are indexed in WoS. This clearly shows that the amount of academic publications in Colombian psychology indexed in WoS and Scopus is not equal to the total of academic publications specialized in the discipline which are currently registered in Publindex. Figure 1 shows the indexation process for journals in WoS and Scopus. Also, the figure

presents in detail a summary of the sixty years of the academic publications of psychology in Colombia. The forty-nine journals of the discipline are made known with the starting and final year of publishing according to the previously characterized periods of the history of academic productions of psychology in our country.

Figure 1: Sixty years of academic publications of psychology



Source: Ascofapsi Report (Jaraba & Guerrero, 2010) and consultation in Publindex (2016)

As seen in Figure 1, there is a historical exponential rise in the academic production in Colombian psychology in the last decades (PUCHE-NAVARRO; OSSA, 2012). The academic production in Colombian psychology has increased and this rise is a result of the transformation of its structure (JARABA-BARRIOS, et al., 2011). This transformation is characterized by the consolidation of the scientific community which makes the development and the strengthening of the discipline possible (OSSA; PUCHE-NAVARRO, 2015).

It is known that the increase in the academic and scientific production in our country is determined by the internal and external financial sources destined for research, the PhD formation programs which make possible the strengthening of the co-authoring networks to make the academic production more visible (BUCHELI, et al., 2012). The co-authoring networks created amongst the different researchers of the psychology community in our country in the academic publications are used as

a bibliometric indicator to present the visibility of the academic production of psychology in Colombia in an international context. For instance, in the dynamics of academic production of psychology in an Ibero-American level, we know the significant collaboration of other countries with the purpose being the visibility of the academic production of psychology in Colombia in an international context (LÓPEZ-LÓPEZ; GARCÍA-CEPERO; AGUILAR-BUSTAMANTE; SILVA, 2010; GARCÍA, 2012; LÓPEZ-LÓPEZ, DE MOYA-ANEGRÓN; ACEVEDO-TRIANA; GARCÍA; SILVA, 2015).

The concept of internationalization has significant relevance in the Ibero-American scientific publications, partially, because it is considered a quality indicator which makes possible the increase and the visibility of the academic production against the dominance of Anglo-Saxon countries (ZYCH; BUELA-CASAL, 2007). Nonetheless, it is a concept which requires attention in the editorial world and particularly in the notion of international journals. It is a

term which has not yet been defined accurately (BUELA-CASAL; PERAKAKIS; TAYLOR; CHECA, 2006).

Few journals of the discipline in the domestic level have reached and maintained an international recognition as a means of academic diffusion. The challenges and demands required by the scientific editorial world for impact and quality of the academic publications are increasingly higher (TRZESNIAK; PLATA-CAVIEDES; CÓRDOBA-SALGADO, 2012).

Despite the low number of academic publications of the discipline in Colombia which have reached visibility in the international indexation systems, it is important to highlight the constant work that these editorial projects have done and their efforts to provide an answer to the criteria and demands generated by the large production industries of world knowledge.

Nevertheless, it is fundamental to know the indicators of impact and consumption that reflect the scientific production in Colombian psychology before the increase in the academic publications recorded in the discipline. A significant visibility of academic publications about our country's psychology in an international context is known (LÓPEZ-LÓPEZ, et al., 2010; ÁVILA-TOSCANO; MARENCO-ESCUDEROS; MADARIAGA, 2014). However, the impact that this production generates in the national and international academic community regarding the quality of the publications is unknown.

Some bibliometric researches have found the impact factor of the Latin American psychology journals recently indexed in WoS (NAVARRETE-CORTES, FERNÁNDEZ-LÓPEZ, LÓPEZ-BAENA, QUEVEDO-BLASCO & BUELA-CASAL, 2010; ZYCH; BUELA-CASAL, 2010; QUEVEDO-BLASCO; LÓPEZ-LÓPEZ, 2010).

When reviewing the bibliometric indicators focused on the academic publications in Colombian psychology, we found an exalted participation of the academic publications in Colombian psychology which does not report anything about the impact of the academic production and the development of the discipline in our country.

This participation takes us to the never-ending debate attributed to the use of the bibliometric indicators to assess the performance,

impact, and quality of the scientific publications in the academic communities of the discipline which trigger a broad controversial aspect. Even though the indicators can be used to know the quality of a publication, many times it can be used to highlight the relative importance of a journal (QUEVEDO-BLASCO; LÓPEZ-LÓPEZ, 2011). Ironically, it can be said that the bibliometric indicators can be used to disguise the academic propaganda by coating research the way the *massive evaluation* can be used as an instrument to show an academic failure (GONZÁLEZ, 2014).

Knowing that the impact factor as bibliometric indicator to measure academic publications in psychology is a factual tool, it is also susceptible to critic, which is why caution must be considered. The practice of citing in psychology differs in a large scale among researchers who work in different areas in the discipline. (OSCA-LLUCH, 2005). However, a wide number of researchers consider of high importance the impact factor for the assessment of the performance of a country's research activity (BUELA-CASAL; ZYCH, 2012).

Quality indicators and the impact of academic publications are aspects that require a greater analytical responsibility, particularly, when other factors that substantially influence the impact of the scientific publications are known (MICHELS; SCHMOCH, 2013).

2 METHOD

This research outlines the results obtained from a descriptive bibliometric analysis applied to the exported information of the academic production in Colombian psychology housed in the databases of Scopus and Wos.

It is important to mention that once the housed information is exported in the databases, we proceeded with a manual refinement of the data because some records of these have indexation errors, therefore, it will be possible to fulfill the selection criteria of determined papers, by the publications made by Colombian authors with national and international institutional affiliation or foreign authors with a national institutional affiliation.

Once the corpus of the registered papers in Scopus and Wos were established, we proceeded

to analyze the impact of academic production in Colombian psychology from the information obtained from the cited papers. Each cited paper was reviewed. The basic information collected includes authors, publications, year of publishing, name of the journal, institutional affiliations, and the fields of study of the discipline.

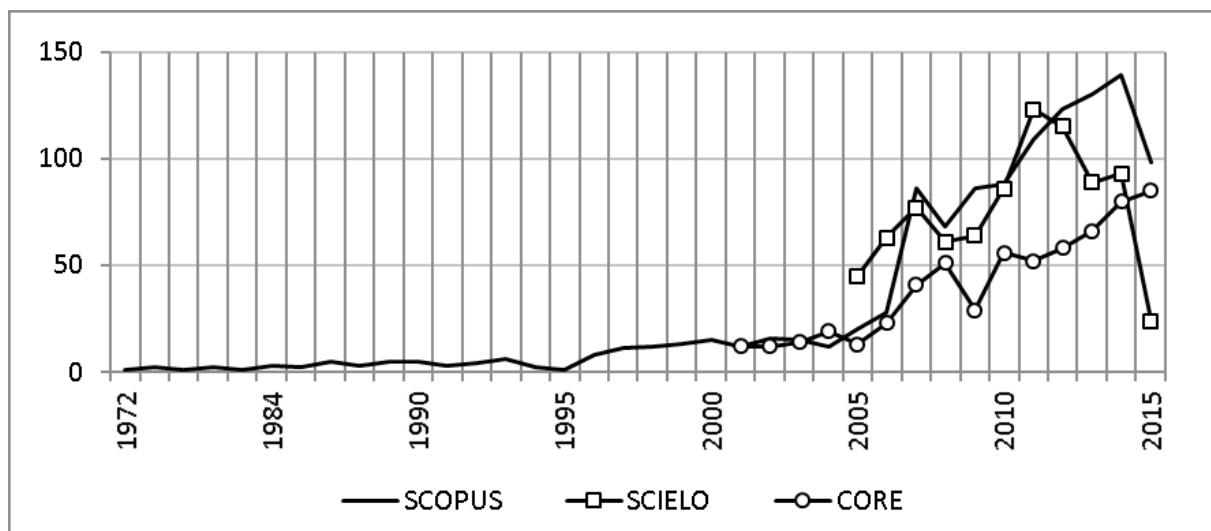
To determine the 100 papers of Colombian psychology it was necessary to apply Spearman's analysis correlation method to establish the difference existing between the paper's year of publishing and the amount of citations received. Finally, with the corpus of the 100 most high-impact papers in Colombian psychology, graphs and maps are made based on the bibliographic data incorporated in VOSviewer 1.63 to conduct the analysis of the networks born with the co-authoring between national and international authors and institutions

3 RESULTS

2593 Colombian psychology papers were analyzed and found indexed in the databases of WoS and Scopus. The papers extracted from WoS contain findings located in the search of two databases: Scielo with a record of n= 840 publications and Core Collection with n= 614 publications for a total of 1452 indexed papers in WoS. The exported papers of Scopus contain n=1139 publications (see Table 1).

The historical period of the publications that were recorded in WoS and Scopus are shown in Figure 1. As can be seen, the period of academic publications recorded in the databases is of forty-four years (1972-2016). It is worth saying that 97% of the academic publications of Colombian psychology emerge after the year 2000 (Guerrero & Jaraba, 2010; Puche-Navarro & Ossa, 2012).

Figure 2: Historical trajectory of the academic production in Colombian psychology in WoS and Scopus



Source: WoS and Scopus

3.1 Consumption indicators of academic production of colombian psychology

When reviewing the academic production of the 2593 papers extracted from the databases, a total of n=1280 (49%)

publications have been cited at least once. The remaining 51% of the papers reviewed have never been cited, this refers to n=1314 publications. Table 2 shows the frequency of publications housed in WoS and Scopus according to the citations received.

Table 2: Academic production in Colombian psychology extracted from Wos and Scopus

Citation frequency	Frequency of citations in Wos				Frequency of citations in Scopus			Total percentage	
	Scielo N		Core Collection N		Scopus N				
	Nat	Inter	Nat	Inter	Nat	Inter			
0	583	44	140	102	279	166	51%		
1	117	11	59	56	109	81	17%		
2-10	69	14	59	114	139	196	23%		
11-50	1	1	2	74	11	126	8%		
51-122	-	-	-	8	-	23	1%		
123-500	-	-	-	-	-	9	0%		
Total	771	70	260	354	538	601	100%		

Source: Wos and Scopus

As seen in Table 2, when reviewing the citation indicators, only a considerable number of papers n=433 (17%) have received a citation. This result, plus the 51% of the papers that have not been cited, represents 68% of the academic production in Colombian psychology.

Table 3 shows the frequency of cited publications recorded in the observed

historical period. There are two aspects to take into consideration. First, the significant rise in the amount of publications that have been cited in the last 20 years from 1997-2016. Second, the undisputable and marked differentiation of the international publications being cited over the national publications.

Table 3: Frequency of cited publications in the recorded historical period in Wos and Scopus

Period	Frequency of publications in Wos				Frequency of publications in Scopus	
	Scielo		Core Collection		Nat	Inter
	Nat	Inter	Nat	Inter		
1976-1996	-	-	-	-	-	41
1997-2016	187	26	120	252	259	394

Source: Wos and Scopus

The increasing growth in the frequency of the national and international cited publications requires a detailed approach to specifically point out the overview of the consumption indicators of the academic production in Colombian psychology.

3.2 Limitations of the research

An initial thorough analysis of the 100 most high-impact papers in Colombian psychology allows us to know other aspects to be taken into consideration. The broad number of publications ($n=62$) recorded in this sample of papers shows hidden characteristics in the practice of scientific publication concerning the academic community of Colombian psychology. On one hand, when realizing a co-authoring analysis among the researchers that sign the list of the high-impact papers we find a significant sample of papers which are being signed by Colombian authors whose field of expertise is not familiarized with psychology. This event, on the other hand, makes us consider that the results extracted from the data bases have indexation errors in the classification of the fields by knowledge areas and the necessary care to perform the development of bibliometric analysis (Leydesdorff & Bornmann, 2015).

Table 4 synthesizes a perspective of the first sample of the 100 most high-impact papers in Colombian psychology.

Table 4: Limitations of the research according to the fields by knowledge areas

Fields	No. Papers
Medicine	47
Technical	5
Other Science	10
Psychology	38
Total general	100

Source: Wos and Scopus

As we can see in the previous Table, even though there is a considerable number of papers associated to the field of the discipline, these do not make part of the work developed by the academic community of psychologists in Colombia. Therefore, the following results show

the 100 most high-impact papers in Colombian psychology and focuses in the work being developed by the researchers in the discipline in our country.

3.3 The 100 most high-impact papers in Colombian psychology

The appendix shows the 100 most high-impact papers in Colombian psychology according to the range, principal author, number of citations, and year of publishing. The findings obtained from the 100 most high-impact papers in Colombian psychology display important data in accordance with the behavioral patterns of the scientific publications in the academic community of psychology in our country.

First of all, 30 years is the historical trajectory recorded from impact generating papers. The papers reviewed date back to the period of 1984 to 2014. Table 5 exhibits three periods divided by three decades to show the increase in citations being done by the academic community in Colombian psychology. These citations represent 42% of the total of condensed citations in the 100 most high-impact papers in Colombian psychology. It is worth mentioning that this citation percentage is directly proportional to the amount of papers published in each one of the periods.

Table 5: Historical period of the 100 most high-impact papers in Colombian psychology

Period	Total citations	No. papers	Average
1984-1994	687	20	24%
1995-2004	1197	28	42%
2005-2014	956	52	34%
Total	2840	100	100%

Source: Wos and Scopus

In addition, it is important to note that the 100 most high-impact papers in Colombian psychology recorded in Wos and Scopus, 81 % of these papers are publications done by international journals. El 77 % de los cien artículos que se registran son publicaciones realizadas en idioma inglés (Ver Tabla 6).

Table 6: Reach and language of the 100 most high-impact papers

Publications	Language		Porcentage
	Spanish	English	
International	4	77	81%
National	19	--	19%
Total	23	77	100%

Source: Wos and Scopus

Table 7: Top 15 journals where the 100 most high-impact papers in Colombian psychology are found

Journal	No. of Publication	No. of Citations
Revista Latinoamericana de Psicología	10	108
Universitas Psychologica	7	90
Brain and Language	5	150
Brain and Cognition	4	326
Journal of the International Neuropsychological Society	4	115
Archives of Clinical Neuropsychology	3	306
Child Abuse and Neglect	3	99
Journal of Clinical and Experimental Neuropsychology	3	159
Journal of Psycholinguistic Research	3	29
Neuropsychologia	3	113
Aggressive Behavior	2	50
American Journal of Alzheimer's Disease and other Dementias	2	27
Applied Neuropsychology	2	36
Behavioural Neurology	2	32
Interamerican Journal of Psychology	2	20
Total	55	1660

Source: Wos and Scopus

Table 8 displays the frequency of the authors that sign the 100 most high-impact papers in Colombian psychology. This

The 100 most cited papers were published by a total of 58 international journals. Table 7 provides a list of the fifteen journals which predominate in the publications of the 100 most high-impact papers in Colombian psychology. In this list, 55% of the papers corresponding to the 100 most high-impact papers is shown.

Table 8: Frequency of signing authors per paper

Frequency of signing authors	Total papers	Total amount of citations received	Average of citations received	National Inst.	International Inst.
1	10	175	17	100 %	0 %
2 a 4	56	1741	31	68%	32%
5 a 9	18	582	32	56%	44%
10 a 19	9	227	25	21 %	79 %
20 a 28	1	13	13	5 %	95 %
40 a 95	5	102	20	6 %	96 %
Total	100	2840	28	28 %	72 %

Source: Wos and Scopus

In Table 8 we can observe that collaborative signing of papers (between 2-4 and 5-9 authors) represents 73% of the papers. In this margin we find 77% of the citations received. Nevertheless, it is important to highlight in the table the high percentage of authors with filiations in international institutions compared to the ones with filiations in national institutions. Additionally, the extensive signing of authors who are signing papers with a frequency from 10 to up 95 authors.

This phenomenon should not create any type of strangeness owing to the fact that the dynamics of scientific productions in our time have shaped changes in the academic work conditions related to the logic of incentive and recognition (CRONIN, 2001). It has been known that the collaboration between authors generally has a minimum effect on the quality of academic publications, despite the discipline where it is done (SMART; BAYER, 1986). When the 100 most high-impact papers in Colombian psychology are reviewed it is possible to know the strategies unfolded by part of an academic community which contributes to the development of scientific research in our country. The publication of papers in a network and in international journals is part of this strategic deployment to reach the visibility and recognition of academic production in the discipline.

The results allow us to know the research fields strongly consolidated in Colombian psychology. Table 9 shows the areas of the discipline which make part of the 100 most high-impact papers of academic production in Colombian psychology.

Table 9: Fields in Colombian psychology which make part of the 100 most high-impact papers

Field*	N. Papers	Citations
Neuropsychology	34	1448
Clinical	25	561
Social	30	449
Education	3	173
Experimental	2	136
Organizational	3	41
Cognitive	3	32
Total	100	2840

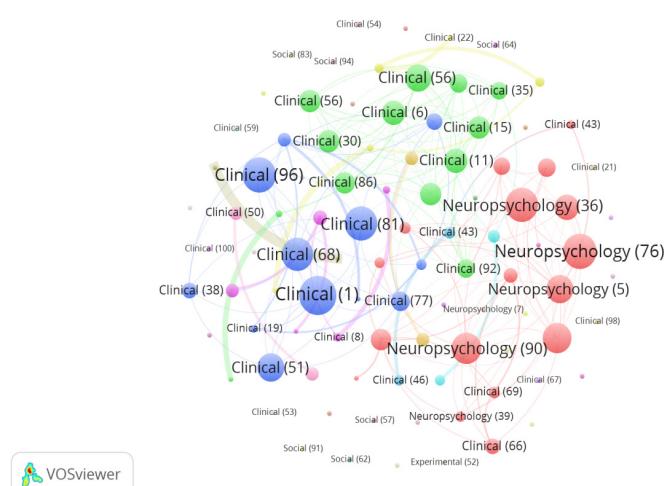
Source: Wos and Scopus

*Classification according to APA

As shown in Table 6, a broad number of papers (n=34), which are generating a high impact in Colombian psychology, are found condensed in the neuropsychology field of psychology, clinical (n=25), and social psychology (30). Only eleven papers are classified in the education (n=3), experimental (n=2), organizational (n=3), and cognitive (3) psychology field.

Figure 3 shows the map of the disciplines which make part of the 100 most high-impact papers in Colombian psychology. Each field shown in the figure is identified with a number between parentheses. This number refers to the paper in Appendix of the 100 most high-impact papers in Colombian psychology.

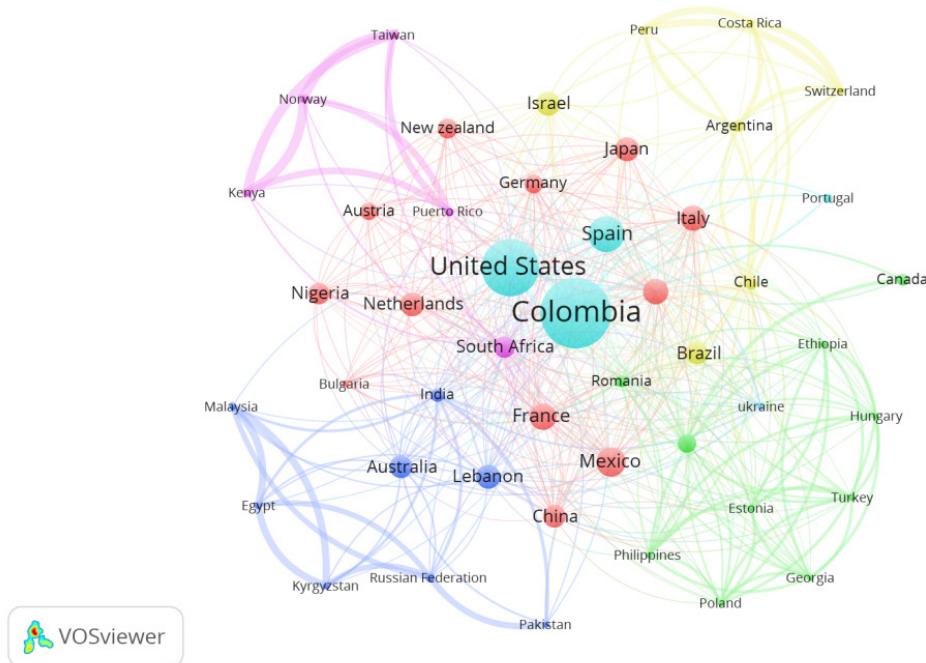
Figure 3: Bibliographic coupling of the 100 most high-impact papers in Colombian psychology



Source: Wos and Scopus

Figure 4 shows the collaborating countries where co-authoring networks are being made for the 100 most high-impact papers in Colombian psychology.

Figure 4: Network of collaborating countries which make part of the 100 most high-impact papers in Colombian psychology

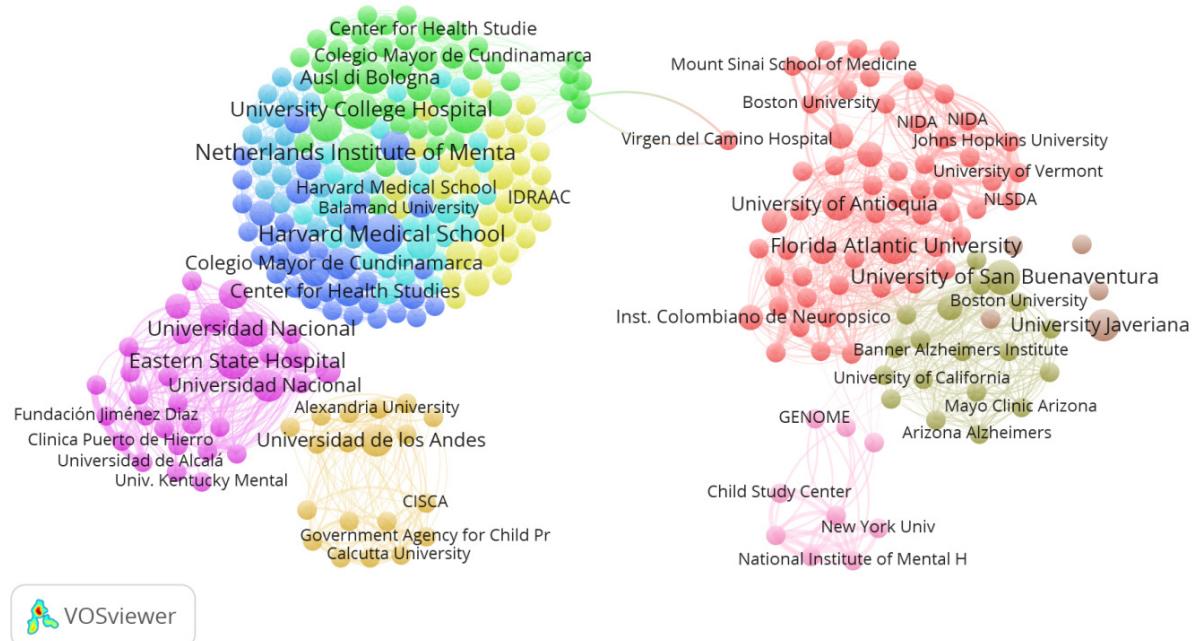


Source: Wos and Scopus

As seen in Figure 4, it is necessary to emphasize the Network of countries which credit an important link to our researchers in international researches. It is important to mention from the map that the generating nucleus of the impact of the academic production in Colombian psychology is a result of the unquestionable collaboration of the US.

Figure 5 allows us to know the relation existing between the international and national academic institutions which make part of the 100 most high-impact papers in Colombian psychology and contribute to the development of the discipline in our country.

Figure 5: Network of national and international academic institutions which make part of the 100 most high-impact papers in Colombian psychology



Source: Wos and Scopus

It is important to highlight in Figure 5 the meaningful participation of national institutions with international institutions located in the United States and Europe. It is worth noting the network done from universities in our country with the international academic community. Universities such as: Andes, Nacional, Javeriana, Antioquia, Colegio Mayor de Cundinamarca y San Buenaventura represent the national institutions with the highest impact productions in Colombian psychology according to the data obtained in the data base. It is also important to note the visibility of the research network with academic institutions in Latin American countries.

4 DISCUSSION

The development of the academic production of psychology in our country is recent. When the trajectory of the scientific productions which have shaped the history

of the discipline in Colombia is reviewed we can see the significant transformation in how the editorial projects are being developed in Colombian psychology. The Colombian academic publications have passed from a primitive stage in their editorial structures to one much more standardized (JARABA-BARRIOS, et al., 2011). Because of this, in the last seventeen years an important visibility of academic publications in Colombian psychology has been possible (PUCHE-NAVARRO; OSSA, 2012). It is at the beginning of the new millennium when academic publications of the discipline start their inclusion in Wos and Scopus enabling an important advance to make the scientific work of the academic community of psychologists known in an international context.

The monitoring, regulation, and evaluation policies of the academic productions in Colombia promoted by Publindex emerge and contribute to the improvement and visibility of the scientific production of our country at the beginning of the 2000s (USGAME; USGAME, 2010). It

is also important to take into consideration some indicators of this research to outline a general overview of the academic publications of the discipline which demand attention in the weaknesses present and that are necessary to solve and consolidate the academic practices of the discipline in our country. The first indicator to consider is the network done by the academic community of psychologists in Colombia. The academic production in Colombian psychology with the highest impact in the discipline is a result of the network which has been consolidated by the national researchers with the international academic community located in the United States and Europe. The high-impact academic productions found correspond to 81% of the academic publications done in international journals and 77% of these in English. This overview necessarily makes us think about a reform in how Publindex has been developing the evaluation and monitoring of the Colombian journals to boost and consolidate the impact of national academic production.

The second indicator makes reference to the internal consumption of the scientific production of Colombian psychology. The results show that the top national publications are not generating an impact. The marked differentiation of international publications which are being cited about national publications is an overwhelming fact which requires attention. This event proves that the academic community of psychologists in Colombia is not consuming science. In other words, the academic production in Colombian psychology in the last decades begins to experience a disproportionate growth due to the logic of the incentives mediated by the popularity and prestige (FRANCESCHET, 2009; DING, CRONIN, 2010).

This event poses a greater problem. There is a complex asymmetry between the academic publications in Colombian psychology indexed in Wos and Scopus and the specialized publications of the discipline existing and registered by Publindex. If this asymmetry is related to the low consumption that is being generated by the academic publications in our country indexed in Wos and Scopus makes us consider that in a significant number of academic publications of the discipline in our country are not being recognized and the biggest worry regarding this event is possibly in a great measure a difficulty hard to identify.

We report the low support of the national academic community in favor of contributing to the development of the scientific production of the discipline in our country. The network between the national academic community and the Latin American countries is very incipient which highlights weaknesses that require strengthening in institutional structures and the quality improvement of the fundamental Colombian psychology journals for the progress of the discipline in our country. This explains that the development of the academic production in Colombia is in a consolidation process. A greater network infrastructure is necessary for the academic community in our country for a high and far-reaching impact.

This poses the need to address the academic pedagogical practices of psychology (JURADO-VALENCIA, 2013) to inquire about how these are permeating the academic production of psychology. Knowing the production dynamics of knowledge makes the comprehension of the development and the strengthening of the academic community of Colombian psychologists. The factors having a direct impact of a scientific publications (VAN DALEN, HENKENS, 2001) is an initial aspect to take into consideration. There are diverse elements determining a behavioral pattern for the functioning of the academic publication practices of the community of researchers in the discipline, which are a result of constant bibliometric analysis, for example: co-authoring networks among authors with a distinguished academic trajectory, publications in international journals, and publications in English contribute greatly for the visibility and impact of the academic publications. (EGGHE, GUNS, ROUSSEAU, 2013)

This research is framed in a perspective which introduces the historical and social focuses in the scientific research analysis. This is for overcoming the sophism of objectivism of the cold and hard metrics of bibliometric and to do without the reductionism in social sciences (BLANCO-ILARI, 2015) to end the domestication of bibliometric practices that redound statistical indicators and think about future researches that will integrate in their analysis qualitative research components (BARBA, BARBA-MARTIN, GONZÁLEZ-CALVO, 2015). The historical trajectory of academic publications in

our country has been summarized and the most high-impact papers in Colombian psychology have been detailed to comprehend the dynamics and patterns of the research behavior in the discipline in the last decades. Know these forms of behavior of information and knowledge allows us to understand the scientific and technological development of a country (BARBOSA, NUNES, OLAVO- QUANDT, 2015). The outlined results lead us to the integrated analysis of different factors that provide the possibility to historically understand the way scientific work is developed (MERTON, 1964).

Acknowledgements

The authors want to thank Universidad de San Buenaventura and the Asociación Colombiana de Facultades de Psicología ASCOFAPSI for financing the research project *Bibliometric research on the academic production in Colombia*. We would also like to thank Carmen Elena Urrea, Luis Merchán Paredes, and Martha Restrepo Forero for the support given to the *Bibliometrics Research Group*.

Artigo recebido em 16/06/2016 e aceito para publicação em 21/08/2016

OS 100 ARTIGOS DE MAIOR IMPACTO DA PSICOLOGIA NA COLÔMBIA: um estudo bibliométrico a partir do WoS e Scopus

RESUMO

O objetivo deste estudo é identificar os artigos de maior impacto da psicologia colombiana e analisar suas características, a fim de fornecer informação sobre o desenvolvimento da disciplina nas últimas décadas. O estudo foi realizado com a análise da produção acadêmica da colombiana condensada na revistas especializada da disciplina. O impacto da produção acadêmica colombiana é determinado a partir dos resultados obtidos a partir as bases de dados WoS e Scopus. Foi encontrado que o índice de consumo baixo por parte da comunidade acadêmica de psicólogos na Colômbia. O impacto da produção acadêmica de psicólogos na Colômbia obedece a um trabalho em rede consolidada por pesquisadores nacionais com a comunidade acadêmica internacional localizados nos Estados Unidos e na Europa. O 100% destas publicações são feitas em revistas internacionais e 99% são em Inglês. Os campos da psicologia colombiana que maior impacto estão gerando na produção acadêmica são: Neuropsicologia, Clínica, Social, Educação, Experimental, Organizacional e Cognitiva. O trabalho em rede entre a comunidade acadêmica nacional e de países da América Latina é muito incipiente que mostra debilidades que necessitam de reforço das estruturas institucionais e melhorar a qualidade de revistas da psicologia colombiana fundamentais para o avanço da disciplina no país. O desenvolvimento da produção acadêmica na Colômbia é respectivamente recente e está em processo de consolidação maior obra de infra-estrutura é necessária em rede pela comunidade acadêmica no país para a produção acadêmica de alta alcance e impacto. É necessária uma maior infra-estrutura de trabalho em rede por parte da comunidade acadêmica do país para a produção acadêmica de alto alcance e impacto.

Palavras-chave: Psicologia. Produção acadêmica. Pesquisa psicológica. Bibliometria.

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Range	First author	No. of citations	Year of publication	Range	First author	No. of citations	Year of publication
1	Ardila A.	168	2000	48	Arango-Lasprilla, J	17	2007
2	Ardila A.	162	1989	49	Caballero, C	17	2007
3	Lupiáñez J.	126	2001	50	Caballo, V	17	2008
4	Pineda D.	121	1999	51	Borja-Orozco, H	17	2008
5	Ardila A.	114	2000	52	Arango Lasprilla, J	17	2009
6	Rosselli M.	107	1996	53	Poyer, R	17	2009
7	Rosselli M.	113	1990	54	Maldonado-Carreño, C	17	2011
8	Forman E.A.	97	2004	55	Rosselli, M	16	1993
9	Rosselli M.	64	1989	56	Ardila, A	16	1994
10	Li-Grining C.P.	59	2010	57	Quevedo-Blasco, R	16	2010
11	Ardila A.	43	1998	58	Lansford, J	16	2012
12	Ardila A.	44	1986	59	Perea, C	16	2012
13	Ardila A.	46	2001	60	Ardila, A	15	1991
14	Ardila A.	45	1991	61	Caballo, V	15	2010
15	Zolotor A.J.	47	2009	62	Ardila, A	13	1990
16	Pineda D.A.	37	2007	63	Vinaccia, S	13	2005
17	Palacio J. D.	35	2004	64	Arango-Lasprilla, J	13	2006
18	Kliewer W.	37	2001	65	Gómez, V	13	2007
19	Rosselli M.	32	1990	66	Rentería-Pérez, E	13	2008
20	Chaux E.	34	2009	67	Putnick, D	13	2012
21	Musi-Lechuga B.	31	2005	68	López, W	12	1998
22	Peralta V.	32	2002	69	Flórez-Romero, R	12	2006
23	Carreiras M.	33	2008	70	Contreras, F	12	2007
24	Ardila A.	36	1993	71	Córdoba-Andrade, L	12	2008
25	Becker M.	35	2012	72	Ardila, A	11	1992
26	Dunne M.P.	32	2009	73	Ardila, A	11	1994
27	Mejía S.	32	2003	74	Pineda, D	11	2000
28	Montañes P.	27	1996	75	Ardila, R	11	2004
29	Bryden M.P.	27	1993	76	Gómez, V	11	2006
30	Ardila A.	29	1999	77	Villalobos-Galvis, F	11	2007
31	Couto B.	28	2013	78	Quevedo-Blasco, R	11	2011
32	Ardila A.	27	2000	79	Vera-Villarroel, P	11	2011
33	Ostrosky-Solís F.	25	2007	80	Cardona, J	11	2014
34	Pineda D.A.	23	2000	81	Ardila, A	10	1992
35	Ardila A.	24	2000	82	Lopera, F	10	1992
36	Vaughn B.E.	24	2007	83	Sabucedo, J	10	2000
37	Parra M.A.	22	2011	84	Pérez-Acosta, A	10	2001
38	Rosselli M.	20	1987	85	Lasprilla, J	10	2003
39	Runyan, D	20	2009	86	Steptoe, A	10	2004
40	Cuetos, F	19	2007	87	Buela-Casal, G	10	2005
41	Varela, R	19	2007	88	García Álvarez, C	10	2007
42	Pulido-Martínez, H	18	2007	89	Gutiérrez, G	10	2009
43	Deater-Deckard, K	18	2011	90	Llanos, R	9	1999
44	Owe, E	18	2013				
45	Ardila, A	17	1984				
46	Ardila, A	17	1993				
47	Quenza, C	17	2005				

Range	First author	No. of citations	Year of publication
91	Ardila, R	9	2003
92	Puche-Navarro, R	9	2004
93	Pardo, M	9	2006
94	Barreto, I	9	2009
95	Velásquez, A	9	2010
96	Vinaccia, S	9	2011
97	Ardila, A	8	1989
98	Ardila, A	8	1995
99	López, W	8	2007
100	López, W	8	2010