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The *h* index of the presidents of the American Psychological Association (APA) through journal articles included in the Web of Science database[1]

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ABSTRACT. The current descriptive study analyzes the *h* index of the presidents of the American Psychological Association (APA) since 1940 to the present. The *h* index is calculated from the number of articles published in journals included in the Web of Science (WOS) database and the citations received by the articles in the same database. There was no established period of time for the search and thus, all the results included in the WOS were analyzed. The total number of results was of 16 676 from which 3 734 were of the presidents of the APA. The results are shown as a rank-ordered list. It was found that Albert Bandura and Alan Kazdin are the presidents with the highest *h* indexes and that there is an important difference between those and the rest. The results of the study lead to speculate that the productivity in scientific articles was not the most important criterion to take into account for the election of the presidents in the history of the APA.

KEYWORDS. The presidents of the APA. The *h* index. American Psychological Association. Descriptive study.

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RESUMEN. El presente estudio descriptivo analiza los índices *h* de los presidentes de la *American Psychological Association* (APA) desde 1940 hasta la actualidad. El índice *h* se calcula teniendo en cuenta el número de artículos publicados en las revistas de la *Web of Science* (WOS) y las citas recibidas por los mismos en dicha base de datos. No se estableció un periodo de búsqueda y, por tanto, se analizaron todos los resultados incluidos en la WOS. El número total de resultados analizados fue de 16.676, de los cuales 3.734 fueron de los presidentes de la APA. Los resultados se presentan en forma de ranking y ponen de manifiesto que Albert Bandura y Alan Kazdin son los presidentes con un índice *h* más elevado, y en entre estos y los demás existe una diferencia considerable. Los resultados hacen especular que el criterio de productividad en artículos científicos no fue el criterio más importante para presidir esta institución.

PALABRAS CLAVE. Presidentes de la APA. Índice *h. American Psychological Association*. Estudio descriptivo.

The American Psychological Association (APA) is the biggest scientific and professional psychological association in the world. It was founded in 1892 by a small group of psychologist, counting only with 31 members. The association grew rapidly and currently it has 150 000 members, of which more than 6 000 are international associated members or live outside the United States. Since the foundation, it had 119 presidents who changed yearly. The APA is a scientific-professional association with 54 divisions, which publishes 60 journals. It has 5 databases and has published hundreds of books. Its importance grew to the point that it has even designed its own APA editing style which is followed by most of the psychology journals. Although in 1937, some of the members of its clinical section and other organizations created American Association of Applied Psychology (AAAP) to represent the applied part of the profession, the APA is still the most important psychological association.

The governance structure of the APA has been modified throughout more than one hundred years together with the process of electing the presidents. Currently, the election consists of various rounds until the president is elected between the two final candidates by the majority of votes (American Psychological Association, 2010).

Without any doubt, the president of a scientific association is the figure who represents it and is also the image of the association. Thus, it is interesting to analyze if the presidents of the APA were more oriented to the academic or professional field or whether there were temporal tendencies toward the former or the latter.

The most popular measure of the quality of the scientific publications and the productivity of the researchers, at the international level, is the number of articles published in journals included in the Web of Science (WOS) and the number of citations received by the articles (Buela-Casal, 2003; Garfield, 2003). These measures are interpreted as indicators of quality (Buela-Casal and Zych, 2010), and utilized to evaluate doctoral programs (Castro *et al*., 2010; Guillén-Riquelme, Guglielmi, Ramiro, Castro, and Buela-Casal, 2010; Musi-Lechuga, Olivas-Avila, and Buela-Casal, 2009), institutions (Betz, 2010; Buela-Casal, Gutiérrez, Bermúdez, and Vadillo, 2007; García-Berro *et al*., 2010), university professors (Olivas-Avila and Musi-Lechuga, 2010a, 2010b) or even countries

(Arana Uli, 2010; Navarrete-Cortes, Fernández-López, López-Baena, Quevedo-Blasco, and Buela-Casal, 2010; Navarrete-Cortes, Quevedo-Blasco, Chaichio-Moreno, Ríos, and Buela-Casal, 2009). Moreover, the objective quantitative measures are gaining importance in the academic and scientific fields, and they are used in different studies (Bengoetxea and Arteaga, 2009; Bermúdez, Castro, Sierra, and Buela-Casal, 2009; Buela-Casal *et al.,* 2009; Zych and Buela-Casal, 2009, 2010).

In the last years, the *h* index (Hirsch, 2005) has become one of the most commonly utilized measures in the evaluation of scientific productivity of researchers (see for example Radicci, Fortunato, and Castellano, 2008; Salgado and Páez, 2007). Although the number of articles, mean citation per document and the total number of citations are commonly utilized, the *h* index seems to be a better measure of individual scientific productivity. Moreover, it was found that the *h* index is the best predictor of the future achievements of the scientists in comparison to the rest of indicators (Hirsch, 2007). The most important advantage of the indicator consists of the possibility of showing a balance between the number of articles and the number of citations. The comparison of the *h* index and other indexes can be seen in Buela-Casal (2010).

The objective of the current study is to analyze the number of articles, the number of citations and the Hirsch's *h* index of the presidents of the American Psychological Association (APA), since 1940 to the present. For better understanding of the results, the same indicators are analyzed for the most eminent psychologists in the 20th century, taken from Haggbloom *et al.* (2002).

Method

Design

The current work is a descriptive study by means of the analysis of documents (Montero and León, 2007; Ramos-Álvarez, Moreno-Fernández, Valdés-Conroy, and Catena, 2008). The elaboration followed the rules of the International Ranking Expert Group (2006).

The unit of the analysis

- The list of the presidents of the APA since 1940 to 2010.
- Journal article records of the APA´s presidents in the Web of Science (WOS) database.
- The citations received by each article published by the APA´s presidents in the Web of Science.
- Journal articles of the most eminent psychologist included in the WOS together with their citations.

Materials

- Web of Science database including its entire sub-databases (Science Citation Index Expanded, Social Science Citation Index, Art & Humanities Citation Index, *etc.*)

- The list of 71 of the presidents of the American Psychological Association (American Psychological Association, 2010) from 1940 to 2010.
- The list of the most eminent psychologists of the 20th century (Haggbloom *et al*., 2002).

Procedure

The collection of data was conducted by means of the Web of Science database. First, the tab <*General Search*> was entered, and the <*Author*> case was utilized to perform the search. The surname and the initials were entered utilizing truncation and Boolean Operators to guarantee obtaining all the articles per author, all the time following the list of the presidents of the APA.

For the calculation of the *h* index (Hirsch, 2005), the original idea of its creator was utilized. First, the articles were sorted in ascending order according to the number of citations. Then, the citations were sorted in descending order. Thus, two lists were generated, one referred to the number of citations per article and the other referred to the position occupied by each article in the citation ranking. This indicator was calculated according to the distribution of the citations received by the scientific articles published by each researcher. It is established that the *h* index is assigned if the *h* of their articles receives at least *h* citations each. For example, a scientist with the *h* index of 20 has at least 20 articles with 20 citations or more each, but he does not have 21 articles with at least 21 citations each. Thus, the *h* index is calculated using the number of articles and their citations (Hirsh, 2005).

The results for the articles were sorted in the following way: The option "Search" which shows all the results of an author was chosen, <Document Type> was clicked, and the cases "Articles", "Reprint" and "Review" were checked to ensure that the results corresponded only to articles, reprints and reviews. To obtain a list of articles sorted by the number of citations, the option "Sort by" was chosen and the option "times cited" was selected. All the results were reviewed to guarantee their authorship and were selected using the option "Add to marked list" to obtain the final list of sorted results for the analysis. Once the two lists of numbers, one in ascending and the other in descending order, were obtained, the *h* index was calculated by crossing the two (Hirsh, 2005). Therefore, the index is defined as the number of articles with the highest number of citations of *h* and can be used to describe the scientific productivity of a researcher (Hirsch, 2005).

One of the new features of the WOS is the possibility to calculate automatically the *h* index. Nevertheless, it is important to take into account that the WOS does not distinguish between the authors with the same surnames and initials that are grouped according to the criteria such as the field of work, address, *etc*. This calculation can be biased as the authors usually vary in their field of work. Thus, the authors of the current study calculated the *h* index manually. The search was conducted before the WOS changed the category of the documents which in some cases used to appear as articles but were actually conference proceedings. These documents were not taken into account. Another important question which should be taken into account are the frequent changes in the WOS. When the search was conducted, the WOS included only documents

since 1945. At presence, also the documents since 1900 were included. Thus, the authors of the current work decided to include the presidents since 1940.

The time limits for the search were not established and thus, the time period was since 1945 to the presence determined by the WOS capacity. The data collection was conducted by two independent researchers. Once the results were obtained by each researcher, the results were compared and in cases of discrepancy, a new search was performed to solve the errors. The reliability between the researchers was of 95%.

The data collection was strictly controlled. Nevertheless, there is a possibility of small variance from the reality for different reasons: the way the names were registered by the WOS, results which authors cannot be identified or possible issues of a journal which were not included.

In case of many authors, the origin, institutions or universities for which they used to work or were still working were unknown. Thus, a search for information was conducted to find more complete profiles. There are different questions to take into account before a result form the WOS can be assigned to an author. Before the second half of the 2006, the names of the authors were not included and the database used to utilize only the initials. After the second half of the 2006, full names were included which makes easier the identification of the authors without confounding them with other researchers with the same surnames but different names. For example, in case of George A. Miller, there are at least 4 other researchers with the same initials and surname. Moreover, it was found that the analyzed authors publish with high frequency in APA journals. Thus, taking into account the origin of the sample, the APA journal abstracts were another source of data verification. An additional criterion utilized to assign results to authors was the institution affiliation. Although the latter not always appear in the results of the WOS, or on the website of the APA journals, it was used as another option to confirm the authorship.

Results

The results show the analysis of data related to the scientific articles included in the WOS, the total number of citations and the calculation of the *h* indexes of all the presidents of the APA. The search included reviewing the total number of 16 676 results of which 3 734 were of the presidents of the APA. Moreover, the results were compared to the *h* indexes of the most eminent psychologists who have never been presidents of the APA. This search produced, 2 491 results of which 1 423 were of the most eminent psychologists. The results are shown as a rank-ordered list of the *h* indexes of the top 20 presidents of the APA. Some descriptive analyses including the mean number of articles, the mean number of citations, the number of articles per president and the *h* indexes were performed. The results were also grouped by decades.

The h index of the presidents of the APA

Table 1 shows the top 20 presidents of the APA with the highest *h* indexes, the year in which they were presidents, the number of articles in the WOS and the number of accumulated citations.

The distribution by decades of the top 20 is: one in the forties, three in the fifties, five in the sixties, three in the seventies, three in the eighties, two in the nineties and three in the first decade of the third millennium. A forth part of the ranking corresponds to the presidents from the sixties.

It is important to mention that the authors of the current study found some difficulties when identifying the authorship of two of the top 20 presidents of the APA. In case of George A. Miller, it was impossible to confirm the authorship of seven of the articles and in case of Donald T. Campbell, the authorship of only one article was not confirmed. Nevertheless, in both cases, these doubts do not affect the *h* index but only the total number of citations and the number of articles.

If the list is sorted by the number of articles, it can be seen that Robert J. Sternberg is the number one, followed by Alan E. Kazdin, Harry F. Harlow and Albert Bandura. If these positions are compared to the *h* index ranking, it can be observed that the difference is scarce. Only in case of Lee J. Cronbach, if the ranking is sorted by the number of citations, he would occupy the second position while if the ranking is sorted by the *h* index, he is the number 18.

TABLE 1. Top 20 presidents of the APA with the highest *h* indexes.

Rank	*Year*	*President*	*Articles*	*h*	*Citations*
1	1974	Albert Bandura	139	64	21 235
2	2008	Alan E. Kazdin	242	60	11 813
3	1961	Neal E. Miller	128	46	7 254
4	1998	Martin E. P. Seligman	96	41	10 471
5	1958	Harry F. Harlow	166	41	6 215
6	2003	Robert J. Sternberg	265	40	5 830
7	1962	Paul E. Meehl	89	35	8 244
8	1969	George A. Miller	87	34	9 435
9	1965	Jerome S. Bruner	96	33	6 039
10	1989	Joseph D. Matarazzo	104	31	3 159
11	1984	Janet T. Spence	67	31	3 978
12	1975	Donald T. Campbell	99	29	8 841
13	1949	Ernest R. Hilgard	115	28	2 494
14	1963	Charles E. Osgood	70	27	4 034
15	1991	Charles D. Spielberger	112	26	2 079
16	1950	Joy Paul Guilford	102	24	2 427
17	2002	Philip G. Zimbardo	71	23	1 636
18	1957	Lee J. Cronbach	47	22	1 4331
19	1982	William Bevan	115	21	1 357
20	1976	Wilbert J. Mckeachie	74	20	1 291

The mean of the *h* indexes (16.52), the mean number of articles (52.59), number of citations (M = 2 259.13) and the number of citations per article (M = 31.14) of the 71 presidents of the APA are shown in Table 2.

TABLE 2. Mean number of articles, *h* indexes, citations and citations per article of the presidents of the APA (N = 71).

	Minimum	*Maximum*	*Mean*	*Standard Deviation*
h index	1	64	16.52	13.50
Number of the articles	1	264	52.59	51.12
Times cited	2	21 235	2 259.13	3 846.38
Citations per article	1	305	33.14	43.76

Table 3 shows cut-off points which divide the ranking by percentiles according to the number of articles, the number of citations and citations per article. It should be highlighted that 50% of the participants have less than 40 articles. The greatest difference in the number of citations can be observed between the third and the fourth percentile, where the difference is 18 981 citations.

TABLE 3. Percentiles of the articles, citations and citations per article of the presidents of the APA.

Percentils	*Articles*	*Citations*	*Citations per article*
25	16	261	10.23
50	40	751	21.68
75	70	2 254	37.44
100	264	21 235	305

Significant lineal correlations can be observed among the variables: articles, the *h* index and citations (see table 4). The greatest positive correlation can be seen between the variables *h* index and the number of articles (r = .88).

TABLE 4. Correlations between the number of articles, the *h* index and the number of citations of the presidents of the APA.

		Articles	*h index*	*Citations*
Articles	Pearson correlation	1	.88(**)	.63(**)
	Sum of squares and cross products	182 937.20	42 304.11	8714566.68
	Covariance	2 613.39	604.34	124493.81
h index	Pearson correlation		1	.84(**)
	Sum of squares and cross products		12 755.72	3060512.31
	Covariance		182.23	43721.60
Citations	Pearson correlation			1
	Sum of squares and cross products			1 035 622 698
	Covariance			14 794 609.97

Note.** Correlation significant at .01 (bilateral).

Figures 1, 2 and 3 show the mean number of articles, the mean *h* indexes and the mean number of citations grouped by decades. The means increased most from the forties to the sixties when they achieved the highest scores. The only exception is the figure 1 where the highest scores are observed in the 2000´s.

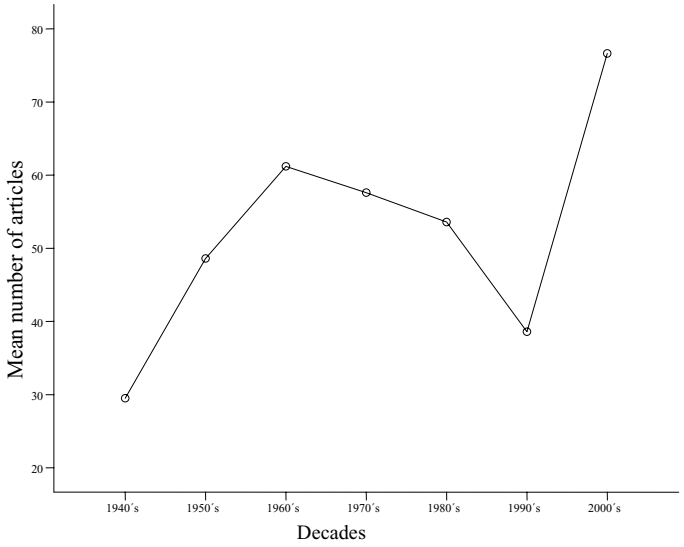

FIGURE 1. Number of articles of the presidents of the APA by decades.

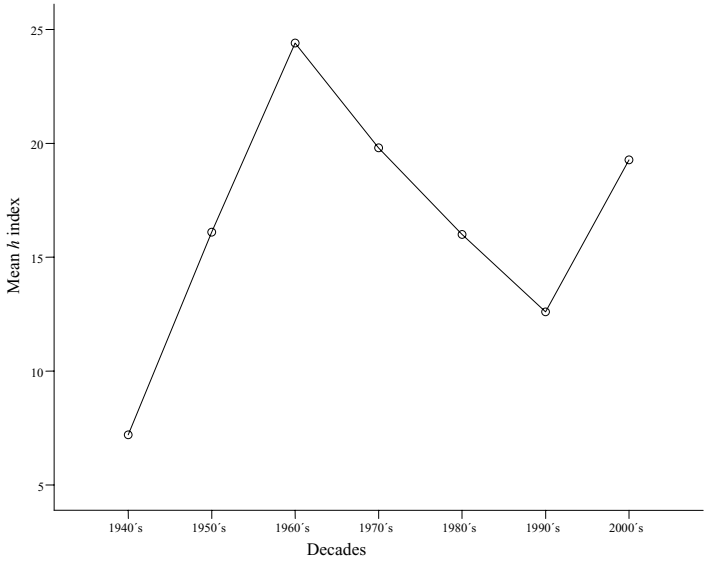

FIGURE 2. The *h* indexes of the presidents of the APA by decades.

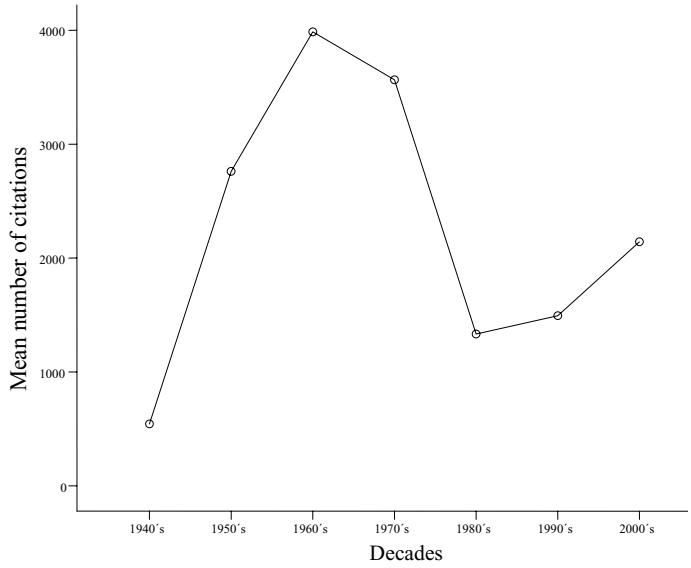

FIGURE 3. Citations of the presidents of the APA by decades

Table 5 shows the number of articles, the *h* indexes and the number of citations of the ten most eminent psychologists and Herbert A. Simon (Nobel Prize) who have never been presidents of the APA (Haggbloom *et al.,* 2002). If the *h* indexes of the eminent psychologists are compared to those of the top 20 presidents of the APA, seven of the eminent psychologists score higher in the *h* index than the 20th president in the ranking. This means that 56 of the 71 presidents of the APA score less in the *h* index than these seven of the 11 most eminent psychologists.

TABLE 5. The *h* index of the most eminent psychologist who have never been presidents of the APA.

Rank		*Articles*	*h*	*Citations*
1	Herbert A. Simon*	209	61	18 517
2	Hans J. Eysenck	424	53	12 284
3	Raymond B. Cattell	350	45	10 738
4	Burrhus F. Skinner	106	33	4 670
5	David C. McClelland	95	30	3 757
6	Leon Festinger	46	26	7 084
7	Stanley Schachter	40	25	5 435
8	Erik H. Erikson	39	16	1 310
9	Jean Piaget	73	14	1 203
10	Kurt Lewin	12	5	962

Note. *Nobel Prize.

Discussion

The results of the current study show the first ranking of the presidents of the APA according to the *h* index. It should be taken into account that the top 20 presidents were elected after the foundation of the Web of Science database. This means that the presidents elected before the foundation of the database have the disadvantage as not all the journals were included in the WOS.

The results lead to speculate that the scientific articles productivity was not the most important criterion in the election of the presidents of the APA. Moreover, the current tendency to give importance to the scientific articles does not reflect in case of the presidents of the APA. Among the top 20, there are presidents from the 40's to the 2000's. Moreover, some of the psychologists considered eminent in other studies (Haggbloom *et al.,* 2002) which utilize different criteria not considered in the current research, do not appear on the top 20 list. This is due to the fact that some of them have never been a president of the APA, others have not outstood in the scientific articles and others have published most of the documents in journals which are not included in the WOS. Additionally, if the two rankings are compared, it can be seen that only three authors appear among the top 20 in both lists. These authors are Albert Bandura, Neal E. Miller and George A. Miller. For better understanding of the results, the top 10 authors of the study by Haggbloom *et al.* (2002) who have never been presidents of the APA were also analyzed. Also the articles and citations of Herbert A. Simon who appears among the most eminent psychologists and has received a Nobel Prize were analyzed. In comparison to the presidents of the APA, the Nobel Laureate H. Simon would occupy the second position and another eminent psychologist, H. J. Eysenck would be the third. Another interesting finding is that B.F. Skinner, obtained 33 and S. Freud scored only 3 in the *h* index. At the same time, it should be taken into account that even some most prestigious psychologists show low scores in the *h* index. Thus, the results of the current study should be utilized with caution, and the *h* index should be seen as another interesting indicator which should be taken into account in a wide context together with other indicators.

There are many presidents who outstood more in the publication of books and not scientific articles. For this reason, although their names are well known in the field of psychology, they do not appear in the top 20 of the current study. Without any doubt, this is not the case of Albert Bandura or Alan Kazdin who occupy the highest positions in the ranking, differing considerably from the rest. On the other hand, there are also some presidents with high number of citations, scientific articles and/or *h* indexes who have not been well known at the theoretical level. Nevertheless, there are also some presidents with relatively low number of articles who have been very well known and thus, are highly cited. For example, Lee J. Cronbach who obtained the position 18 with the *h* index of 22 has only published 47 articles with the total number of citations of 14 331. Thus, it is important to take into account the limitation of the *h* index in discriminating between the authors with low productivity.

Previous studies show a relationship between the number of articles and the number of citations taking into account the limitations of the indices where the quality is not the same as the quantity (Joy, 2009; Páez and Salgado, 2009) which should always

be taken into account. The current study found a relationship between the number of articles and the *h* index. The relationship between the quality and the quantity should be established with caution, as shown by the authors of the abovementioned studies. There are other factors such as the propagation and the visibility which influence the quantitative indexes. At the same time, the strength of the latter is that they are an objective measure of the scientific productivity. Thus, the results of the current study could lead to speculate that the importance of the scientific articles productivity decreased in the election of the presidents from the seventies to the nineties. At the same time, the productivity increased in the last analyzed decade.

To sum up, it can be speculated that the scientific productivity and the number of citations were not important factors in the election of the presidents of the APA. The APA was founded more than a century ago and the system of electing the presidents has changed throughout its history. It should be emphasized that the APA is a scientific and professional association and the results of the current study show that its professional line seemed to be taken into account more than the scientific one.

References

American Psychological Association (2010). *APA Past Presidents*. Retrieved on February 18, 2010 from http://www.apa.org/about/paspres.html

Arana Uli, L. (2010). La importancia de la educación en la estrategia estatal de innovación. *Aula Abierta 38,* 41-52.

Bengoetxea, E. and Arteaga, J. (2009). La evaluación de posgrados internacionales en la Unión Europea. Ejemplos de buenas prácticas de programas europeos. *Revista de Universidad y Sociedad del Conocimiento (RUSC), 6,* 60-68.

Bermúdez, M.P., Castro, A., Sierra, J.C., and Buela-Casal, G. (2009). Análisis descriptivo transnacional de los estudios de doctorado en el EEES. *Revista Psicodidáctica, 14,* 193-210

Betz, B. (2010). Análisis de las fortalezas institucionales para la contratación de investigadores. *Aula Abierta 38,* 65-74.

Buela-Casal, G. (2003). Evaluación de la calidad de los artículos y de las revistas científicas: propuesta del factor de impacto ponderado y de un índice de calidad. *Psicothema, 15*, 23-35.

Buela-Casal, G. (2010). Scientific journal impact indexes and indicators for measuring researchers' performance. *Revista de Psicodidáctica, 15,* 3-19.

Buela-Casal, G, Gutiérrez, O., Bermúdez, M.P., and Vadillo, O. (2007). Comparative study of international academic rankings of universities. *Scientometrics, 71*, 349-365.

Buela-Casal, G., Vadillo, O., Pagani, R., Bermúdez, M.P., Sierra, J.C., Zych, I., and Castro, A. (2009). Comparación de los indicadores de la calidad de las universidades. *Revista de Universidad y Sociedad del Conocimiento (RUSC), 6,* 9-21.

Buela-Casal, G. and Zych, I. (2010). Analysis of the relationship between the number of the citations and the quality evaluated by experts in psychology journals. *Psicothema, 22,* 270-275.

Castro, A., Guillen-Riquelme, A., Quevedo-Blasco, R. Ramiro, M.T., Bermúdez, M.P. y Buela-Casal, G. (2010). Las Escuelas Doctorales: evolución histórica, características y aspectos relevantes para su consolidación en España. *Aula Abierta, 38*, 17-28.

García-Berro, E., Roca, S., Amblàs, G., Murcia, F., Sallarés, J. y Bugeda, G. (2010). La evaluación de la actividad docente del profesorado en el marco del EEES. *Aula Abierta, 38,* 29-40.

Garfield, E. (2003). The meaning of the impact factor. *International Journal of Clinical and Health Psychology, 3*, 363-369.

Guillén-Riquelme, A., Guglielmi, O., Ramiro, M.T., Castro, A. y Buela-Casal, G. (2010). Rendimiento en el doctorado de los becarios FPU y FPI en el Consejo Superior de Investigaciones Científicas y en las universidades públicas españolas. *Aula Abierta, 38,* 75-82.

Haggbloom, S.J., Warnick, R., Warnick, J.E., Jones, V.K., Yarbrough, G.L., Russell, T.M., Borecky, C.M., McGahhey, R., Powell III, J.L., Beavers, J., and Monte, E. (2002). The 100 most eminent psychologists of the 20th Century. *Review of General Psychology, 6*, 139-152.

Hirsch, J.E. (2005). An index to quantify and individual´s scientific research output. *Proceedings of the National Academy of Sciences (PANAS)*, *102,* 16569-16572.

Hirsch, J.E. (2007). Does the *h* index have predictive power? *Proceedings of the National Academy of Sciences (PANAS), 104*, 19193-19198.

Internacional Ranking Expert Group (2006). *Berlin Principles on Ranking of Higher Education Institutions*. Retrived on April 14, 2010 from http://www.che.de/downloads/Berlin_Principles_IREG_534.pdf

Joy, S. (2009). ¿Qué debo de hacer y cómo debo hacerlo? Productividad académica de los psicólogos académicos. *Boletín de Psicología, 97,* 93-116.

Montero, I. and León, O.G. (2007). A guide for naming research studies in Psychology. *International Journal of Clinical and Health Psychology, 7*, 847-862.

Musi-Lechuga, B., Olivas-Ávila, J., and Buela-Casal, G. (2009). Producción científica de los programas de doctorado en Psicología Clínica y de la Salud de España. *International Journal of Clinical and Health Psychology, 9,* 161-173.

Navarrete-Cortés, J., Fernández-López, J.A., López-Baena, A., Quevedo-Blasco, R., and Buela-Casal, G. (2010). Global psychology: A bibliometric analysis of Web of Science publications. *Universitas Psychologica, 9,* 553-567.

Navarrete-Cortés, J., Quevedo-Blasco, R., Chaichio-Moreno, J.A., Ríos, C., and Buela-Casal, G. (2009). Análisis cuantitativo por países de la productividad en psicología de las revistas en la Web of Science. *Revista Mexicana de Psicología, 26*, 131-143.

Olivas-Ávila, J.A. and Musi-Lechuga, B. (2010a). Análisis de la producción de los profesores funcionarios de Psicología en España en artículos de revistas en la Web of Science. *Psicothema, 22,* 909-916.

Olivas-Ávila, J.A. and Musi-Lechuga, B. (2010b). Producción en tesis doctorales de los profesores funcionarios de Psicología en España más productivos en la Web of Science. *Psicothema, 22,* 917-923.

Páez, D. and Salgado, J.F. (2009). Indicadores de productividad científica. Implicaciones para la evaluación de la psicología española. *Boletín de Psicología, 97,* 117-136.

Radicci, F., Fortunato, S., and Castellano, C. (2008). Universality of citation distribution: Toward an objective measure of scientific impact. *Proceedings of the National Academy of Sciences (PANAS), 105,* 17268-17272.

Ramos-Álvarez, M.M., Moreno-Fernández, M.M., Valdes-Conroy, B., and Catena, A. (2008). Criteria of the peer review process for publication of experimental and quasi-experimental research in psychology: A guide for creating research papers. *International Journal of Clinical and Health Psychology, 8,* 751-764.

Salgado, J.F. and Páez, D. (2007). La productividad científica y el índice *h* de Hirsch de la psicología social española: convergencia entre indicadores de productividad y comparación con otras aéreas. *Psicothema, 19,* 179-189.

Zych, I. and Buela-Casal, G. (2009). The Internationality Index: Application to Revista Latinoamericana de Psicología. *Revista Latinoamericana de Psicología, 41,* 401-412.
Zych, I. and Buela-Casal, G. (2010). Internacionalidad de las revistas de psicología multidisciplinar editadas en Iberoamérica e incluidas en la Web of Science. *Universitas Psychologica, 9,* 27-34.

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