

Gender differences in the scientific production of psychology in Spain

Abstract

This research has analyzed the scientific production of women and men in psychology in Spain. The objective was to analyze the differences between women and men in scientific production of Spanish psychology. So, we have analyzed in depth from 2014 to 2018, 96 documents published in different journals and documented in Web of Science database. The searching topic was psychology of women.

In order to analyze the data, we selected the following indicators: Number of women and men signatures in Spain during this period. The most productive women authors in psychology. Type of documents. Journals most productive and Spanish Universities with more scientific documents published.

The results of the comparison between women and men in the scientific production of psychology during this period shows that there are not differences in the scientific production. Leire Gartzia and Covadonga Chaves stand out as the Spanish women with more scientific production during this period. Also, the Spanish university with the most scientific production about psychology was *Universidad Complutense de Madrid*.

The Student T and Chi Square statistic tests confirm that there are not significant differences between women and men in scientific production in Spain. In comparison with previous years researches where men had more scientific activity than women, we can see an advance in equality of scientific production between women and men in the discipline of Psychology in Spain.

Resumen

En esta investigación se ha analizado la producción científica de la psicología de las mujeres y los hombres en España. El objetivo fue analizar la diferencia en la producción científica de la psicología española entre mujeres y hombres. Por ello hemos analizado desde el 2014 hasta el 2018 en profundidad 96 artículos publicados en diferentes revistas y recogidos en la base de datos Web of Science. El tema de búsqueda ha sido la psicología de la mujer. Para analizar los datos hemos seleccionado los siguientes indicadores: El número de firmas de mujeres y hombres españoles durante ese periodo. Autoras más productivas en psicología. Tipo de documentos. Revistas donde las mujeres españolas han publicado más y también se ha visto cuales han sido las Universidades de España que más documentos científicos han publicado. Los resultados de la comparación entre la producción científica de la psicología entre mujeres y hombres españoles durante el periodo de tiempo estudiado muestra que no hay diferencias en la producción publicada. Destacan Leire Gartzia y Covadonga Chaves como las mujeres españolas con más producción durante este tiempo También, se observa que la universidad española con más producción científica sobre la psicología ha sido la Universidad Complutense de Madrid. Las pruebas estadísticas t de Student y Chi Cuadrado confirman que no hay diferencias significativas en la producción científica entre mujeres y hombres en España. En comparación con estudios de años anteriores donde los hombres tenían más actividad científica que las mujeres, se aprecia un avance en la igualdad de producción científica entre mujeres y hombres en la disciplina de la Psicología en España.



Introduction

In the XIX century, Psychology was established as a science and women fought with insistence to overcome the barriers and exclusions imposed by their gender to be trained in this new discipline (Scarborough and Furumoto, 1986, Dauder, 2005). At the beginning they couldn't study in the Universities just in Colleges of women. They couldn't work as a psychologist or do a doctoral thesis (Dauder, 2005). These are the barriers that the pioneer women suffered. Today we have another barriers and we try to explain it through a concept called Glass Ceiling. This term first appeared in an article in 1986 by Hymowitz and Schellhardt "The GC: why women can not break the invisible barrier that prevents them from accessing managerial positions" (Hymowitz and Schellhardt, 1986). The metaphor of the glass ceiling wants to show the subtle modalities of action of some discriminatory mechanisms. These mechanisms are what hinder the professional development of women, limiting and creating a difficult ceiling to overcome (Barberá, Sarrió and Ramos, 2000) This barrier is not easy to locate (Berenguer, 1999). Agut and Martin (2007) tries to explain the causes of the Glass Ceiling in a simple and global way, grouping them as personal and social barriers that limit the progress of women.

Mestre et al. (1996) analyzed the differences between men and women in scientific production in Psychology, from 1975 to 1995 in Spain. At the beginning, the difference was very remarkable, but throughout the studied period that difference decreased, being women represented in 1995 by 38,46% on the whole studies and investigations.

Concerning other more recent studies, Olivas et al. (2012) did a similar investigation analyzing these differences from 2000 to 2010. They concluded that men published more studies and investigations than women; from 610, 379 were men and 231 were women.

Nowadays, the data collected in 2018 by the INE shows that 301,954 students who enrolled in the University in Spain were women compared to 248,702 men. As for the teaching staff, there are 40.9% women and 40.3% men. If we talk about doctoral thesis in Psychology, 379 women published their doctoral thesis in comparison to 186 men in all the Spanish State (MECyD, 2017). As we go up the hierarchical scale in the university's research context, we see how the numbers are decreasing since only 1 in 5 professors are women, being 20.9% of the population.

Based on the literature reviewed, we wanted to investigate about the following question: **Are there still differences in scientific production in psychology between women and men?** The general objective of this review is to **compare the scientific research of women and men in psychology from 2014 to 2018 and to observe the possible differences and evolution.**

Method

Potential articles based on search in 1 Database: Web of Science

Period time analyzed 2014-2018

Keyword: Psychology of women
Field: Topic

Total Documents: 1063

Refined by category
Country: Spain

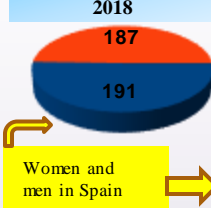
Statistic Analysis with SPSS
- t Student test
- Chi Square test

It was analyzed:
- Number of signatures of men and women per year and in total
- Number of women who sign more than once
- Women more productive
- Type of documents
- Journals with more publication of women
- Universitys where women have more production per year and in total

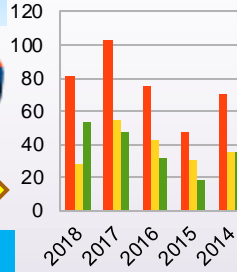
Document analyzed 96

Results

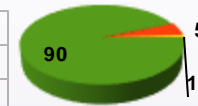
Total Signatures 2014-2018



Total signatures



Type of document



Statistic Analysis

Statistic	Valor	df	Significación asintótica (bilateral)
Student t test			
Chi-cuadrado de Pearson	2,000 ^a	1	,157
Chi square test			
Se asumen varianzas iguales	,293	2,000	1,414
No se asumen varianzas iguales	,293	2,000	1,414

There is no significance

There is no significance

Number of signatures of Spanish women

Women who sign	Number of Women	Number of Signatures	% of signatures
Once	143	143	76.8 %
Twice or more	18	43	23.2 %
TOTAL	161	186	100%

More repeated women in Spain	Signatures	Universities
Leire Gartia	4	U. Deusto
Covadonga Chaves	3	U. Complutense Madrid



Leire Gartia
PhD Social and Organizational

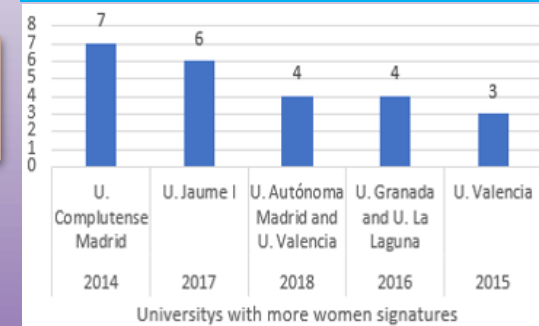


Covadonga Chaves
Predoctoral Fellow in Clinical Psychology

There was 76 journals registered, 20 were excluded for being only of Spanish men. There are 56 Journals that include Spanish women.

Journals with more publications	Article	Women
Sex roles	5	9
Anales de Psicología	4	9
Revistas de Psicología del Deporte	4	9
Universitas Psychologica	4	7
Frontiers in Psychology	3	10
BMJ Open	2	20
Revista Española de la Salud Pública	2	9
Women and birth	1	8
Neuropsychiatric disease and treatment	1	6
Clinical Nutrition	1	5
Pain Practice	1	4
Total publications	76	161

Spanish universities with more women signatures



Conclusion

In this study we don't find differences in the production of psychology documents between Spanish women and men. In this period the signatures of women and men in Spain that appears in the scientific publications are similar.

As for the Spanish women who repeated their signatures there are a few who repeat during this period and only two of them more than twice. Another remarkable datum is that the type of document published the most is the scientific article and the Journal with more publications of Spanish women was Sex Roles.

It is observed that UJI was in 2017 the institution where more Spanish women published articles about psychology. In comparison with the previous studies, the nowadays scientific production has been equalized.

Consequently the conclusion is that there are not significant differences between men and women in scientific production in Psychology in Spain. The statistic analysis confirm this evidence, they show no significance.

One of the limitations of this study is the short duration of the period that has been analyzed. Another one is that the study has been done focusing just in one database and only in one country.

For future investigations, this study can be used as a base to go in depth in the possible differences between men and women concerning to scientific publications.

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