Where are the female scientists in research articles?

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The differences between men and women are clear, both in the overall number of articles published and in the count of the most important research positions according to gender. Credit: SINC

A recent research article published in the journal *Scientometrics* by a team from the University of Extremadura (UEX) has proved something that was already obvious to its scientific community - the extreme imbalance between the visibility of its male and female scientists. Only 20% of the university's articles studied had female lead authors, while the percentage of male lead authors stood at 50%. The remaining articles were led by authors from other universities.

"The percentage of documents with female involvement is very low when compared to the overall authorship of scientific production at the UEX", Vicente Guerrero, lead researcher of the study and a professor in the Faculty of Biblioteconomics and Documentation at UEX, tells SINC. The results of this work have been published in the latest issue of the journal *Scientometrics*.

The differences between men and women are clear, both in the overall number of articles published and in the count of the most important research positions according to gender. Women account for between 10% and 15% of overall authorship of the articles studied, between 12% and 20% of lead authors and between 6% and 17% of last-position signatories, while their male counterparts account for between 35% and 50% in terms of the total number of articles produced, between 44% and 62% of lead authors and between 43% and 58% of last-position signatories.

The researchers cross referenced their study with the ISI Web of Science database in the United States to look at all the scientific articles published by UEX in collaboration with different Spanish and international universities between 1990 and 2005. The data were broken down by categories, areas and the gender of the researchers. They then carried out an analysis on the basis of scientific areas and authorship in order to identify the lead authors and the researchers signing the articles in last position, indicating the greatest levels of responsibility.

"Women have experienced a certain lag in getting involved in research in comparison with men, and have produced or are working on their doctoral theses, but still do not have much presence in terms of leading research work, whether because of this delay or other obligations that prevent them from dedicating so much to research", the researcher points out.

When broken down by scientific areas, Health Sciences account for the highest number of women leading the signing of articles, with a percentage of 20%, followed by Basic Sciences, at 18%. However, women account for only 7% of the lead authors of research work in Engineering and Architecture. In terms of the final signatory position, the highest figures for women are once again in Health Sciences, at more than 13%, followed by Basic Sciences (10%) and Engineering and Architecture (9%).

More information: 'Visibility and responsibility of women in research papers through the order of signatures: the case of the University of Extremadura, 1990-2005'. *Scientometrics*. 81 (1): 225-238, Oct 2009.

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