



**TWAS YOUNG
AFFILIATES/ALUMNI
NETWORK**

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Dr Elisa De Ranieri
Editor in Chief
Nature Communications
By email: e.deranieri@nature.com

Dear Editor,

We are writing to express our concerns about the article published in Nature Communications by AlShebli and colleagues titled “The association between early career informal mentorship in academic collaborations and junior author performance”.¹

The methodologies and definitions employed by the authors are inappropriate and subsequent interpretations become elusive due to the well-documented gender biases in research. We noticed many issues that need to be adjusted for potential confounders, and for inferring causal relationships from association analyses that do not provide the basis for the authors to reach the conclusions presented in their article.

The authors’ conclusion that having female mentors is detrimental to the career development of young scientists not only undermines the contributions of female scientists and academics but stands to reverse the recent efforts of numerous academic institutions, funders, and national and world academies in ensuring diversity and gender equality in science.

Science has benefited from the significant advancements and contributions of women scientists in many areas. There is much evidence indicating that the active participation of female scientists in the mentoring process promotes the career growth and success of young scientists (both males and females). Despite these contributions, women continue to be significantly disadvantaged by the unconscious biases that influence the perception of women’s abilities limiting their success in the long run by affecting their job opportunities (and pay scale), grant opportunities, and publication citations. For example, in the field of biology only 1 in 3, and less than 1 in 5 assistant professors and professors respectively are women². Whilst some of the reasons underlying these cumulative disadvantages have been discussed and strategic solutions proposed by institutions globally, misinterpretation and unjust conclusions by AlShebli and colleagues could create a major setback in these global efforts. In particular, the conclusion that being mentored by female mentors or having female mentees could decrease ‘the impact of women who pursue a scientific career’ should be rectified.

The World Academy of Sciences (TWAS) Young Affiliates Network (TYAN) consists of ~300 accomplished young scientists from 68 countries. Many of our members (both male and female) have personally benefited from being mentored by female scientists and therefore feel strongly that the unsupported conclusions of the article by AlShebli and colleagues further exacerbates the gender-related inequalities in science. Whilst we believe that research into understanding the impact of collaboration and mentorship is important, our call is to encourage

¹AlShebli, B., Makovi, K. & Rahwan, T. The association between early career informal mentorship in academic collaborations and junior author performance. *Nat Commun* 11, 5855 (2020). <https://doi.org/10.1038/s41467-020-19723-8>

²Nelson DJ (2007) A National Analysis of Minorities in Science and Engineering Faculties at Research Universities. Available at http://faculty-staff.ou.edu/NDonna.J.Nelson-1/diversity/Faculty_Tables_FY07/FinalReport07.html. Accessed January 20, 2014.

those that will close the gap to encourage diversity and promote gender equality rather than those that drive further divide.

We believe that there is a pressing need to increase not only awareness but also dialogue on addressing gender inequality. To this end, Nature Communications has the responsibility in ensuring that the study by AlShebli and colleagues has been conducted robustly, interpreted appropriately and importantly, contributes constructively to the on-going discussions that address the gender inequalities in the scientific community.

Yours sincerely,

TYAN Executive Committee and members
(Signatories indicated below)

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