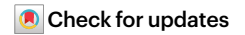


Writing more informative titles and abstracts



We are updating our guidance on how to write titles and abstracts for papers in *Nature Human Behaviour* to ensure that readers are provided with more information about the scope and strength of evidence presented.



What information should the title and abstract of a paper contain? Titles and abstracts are, by their nature, brief. They give a small selection of the many details about a scientific paper. In choosing which details to include and which to omit from the title and abstract, it is important not to create a misleading impression about the generalizability or strength of evidence of a study.

Until recently, our guidance encouraged authors to provide declarative titles: titles that summarize – in 150 characters or fewer – the main finding of the research project¹. However, given length constraints, declarative titles cannot always be sufficiently nuanced. The requirement for titles that encapsulate the main ‘take-home’ message of a research paper may contribute to misleading titles that overstate confidence in the findings². Therefore, we are no longer recommending the use of declarative titles, although authors are still free to adopt the declarative style when they feel that it is justified.

The research papers that we publish are based on data from specific populations. However, these populations are frequently not mentioned in the title. This means that the titles of our papers frequently appear to apply much more broadly than they actually do. In our experience, this tends to be the case more often in manuscripts from large high-income

countries and contributes to a legacy of scientific imperialism.

We believe that clarity about the source of the data is important and that the studied population or populations should always be mentioned in the abstract. In some cases (especially when results from the populations or countries studied are unlikely to be relevant for understanding other populations), it is important to also mention the population or populations in the title. This is particularly important for manuscripts in public health, social psychology, economics and other disciplines where results are likely to differ substantially by cultural and geographical context. A recent example that appropriately mentions the source populations would be ‘Ramadan fasting increases leniency in judges from Pakistan and India’³.

Relatedly, some manuscripts are submitted to us with a title or abstract that claims to present ‘global’ evidence. However, this is rarely – if ever – the case. Going forwards, we will ask that the titles of multicountry studies accurately describe the scope of their evidence – for example, by noting the number of countries from which findings are reported. A recent example of this is ‘Supernatural

explanations across 114 societies are more common for natural than social phenomena’⁴. Claims to global or universal evidence are inaccurate unless representative samples from all the countries and territories of the world are included.

As well as improving the informativeness of titles and abstracts in terms of the source population, we also encourage authors to include more sample and statistical details in their abstracts.

Sample size is an important aspect of any quantitative study, but reporting of sample sizes in our abstracts is inconsistent. Moving forward, we encourage all authors to state the sample size or sizes in the abstract.

In addition to reporting the sample size, the abstract should provide essential statistical details about the evidence for the main claim in the form of effect size and confidence and/or credible intervals. This is especially important when a title makes a declarative claim: if the claim is in the title, details should be provided in the abstract.

Finally, abstracts should not include speculative claims about possible implications of the work (for example, for policy) if the study presents no evidence that is relevant to these implications.

We hope that these guidelines will make *Nature Human Behaviour* titles and abstracts more informative and more accurate for the benefit of all our readers.

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