

## **Publishing standards for promoting excellence in autism research**

Sue Fletcher-Watson, Sven Bölte, Catherine Crompton, Desi Jones, Meng-Chuan Lai, William Mandy, Liz Pellicano, Aubyn Stahmer, Julie Taylor, David Mandell

We are living through transformational times. Persistent structural injustices are currently being called out in every part of academia—especially, but not exclusively, with regard to gender and race (Andoh, 2021; Buchanan & Wiklund, 2020). In wider society, discussion about the rights of minority groups forms a prominent strand of socio-political discourse. At the same time, increasing understanding of the concept of intersectionality is drawing attention to the unique experiences of those with multiple marginalised identities (Crenshaw, 1990). All of this is acutely pertinent to autism research. Our field is not immune to the problems associated with under-representation of specific groups in academia. Furthermore, the autistic and autism communities that we aim to serve are subject to discrimination and barriers to inclusion in decision-making fora (Fletcher-Watson et al., 2021). Not only do autistic people in general tend to be underserved by formal systems, but those who are from marginalised racial and ethnic groups are particularly underserved (Mandell et al., 2009; Travers & Krezmien, 2018). Autistic people are also more likely to identify as non-heterosexual and outside the gender binary (George & Stokes, 2018), and to experience co-occurring mental health problems or physical disability (Baeza-Velasco et al., 2018; Hossain et al., 2020) making them subject to intersectional pressures.

All of this begs the question: how can we, as a journal, play our part in dismantling structural inequalities and promoting better representation of marginalised groups? In a “publish or perish” culture that also values evidence-based practice, we are an influential part of the system that is currently failing many sectors of society. Despite pushback against publishing metrics like h-index and impact factor (Moher et al., 2018), a strong track record of peer-reviewed journal articles is pivotal to research career success across many countries – perhaps second only to grant income. In this sense, publishers and funders wield a significant amount of power in the autism research community.

One way to make a positive contribution to socio-political change might be to consider the focus of research that gets published. We already know that the balance of funding distribution does not align with community priorities (Cervantes et al., 2020; den Houting & Pellicano, 2019; Harris et al., 2021; Pellicano, Dinsmore & Charman, 2014). There has been relatively little scrutiny of whether research publishing is similarly out of step, but evidence suggests that funding and publication topics are closely aligned (Pellicano, Dinsmore & Charman, 2013).

However, shaping the content of research is only one possible way to think about using our influence positively. How research is done may matter to people even more than the topic of that research (Fletcher-Watson et al., 2019). Indeed, influencing the research culture and process, rather than its disciplinary affiliation, could be more relevant to the structural inequalities that are motivating us to make changes. In this editorial, we lay out three ways in which we aim to use our position to promote a positive culture in autism research.

### **Inclusion and Leadership**

A hallmark of excellence in research is inclusivity. At its inception, our journal was founded in partnership with the National Autistic Society – a UK charity and campaigning organisation, providing support to autistic people and their families. Today, we are proud to promote inclusive dissemination via lay abstracts for every paper, our podcast series<sup>1</sup> and video summaries<sup>2</sup>. Our language statement emphasises community perspectives on the English language used to talk about autism; we review and update this as thinking evolves (Botha, Hanlon & Williams, 2021; Bottema-Beutel et al., 2020). Inclusion is about more than sharing the end results of research though. Autism research is also higher quality if it is led by people who reflect the communities that research aims to understand and help (Jones & Mandell, 2020). We recently invited an international guest editorial team to lead a special issue featuring papers by authors and recruiting participants from non-WEIRD (Western, Educated, Industrialised, Rich, Democratic; Henrich, Heine & Noranzayan, 2010) backgrounds. The specific dimensions of this issue are yet to be determined but we are excited about the opportunity to showcase high-quality research from settings beyond those most represented in our journal.

Another way to deliver inclusion in autism research is to seek diversity among our editorial board and our pool of reviewers. Editorial board members commit to reviewing at least five papers per year and so, between them, have capacity to shape a high proportion of content in the journal. A number of factors are relevant – including gender, ethnicity, language and cultural background but also sexual orientation, social class, disability, neurotype and of course autism diagnosis specifically. Minority or marginalised status on all of these dimensions shape autistic people’s lives (Cascio, Weiss & Racine, 2020) and can create barriers to academic career success (Nichols & Stahl, 2019). We are currently in the process of refreshing our editorial board, explicitly providing opportunities for early career researchers who have already contributed substantially to the journal. We are also open to adjusting the expected annual review rate for editorial board members who work part time or otherwise have reduced capacity due to personal circumstances, so that the expected contribution does not become a barrier to inclusion. However, these steps alone will not guarantee diversification of the editorial board. One challenge to this is our reluctance to seek personal data – we currently hold no information about the personal characteristics of our editorial board members. We will continue to work with existing board members and other autism researchers to find ways to deliver on our goal to improve representation of minority identities in this influential group.

### **Transparency in Reporting**

Autism research can and should involve communities under study in the research process – not just as participants but as contributors to the design and implementation of the research and the analysis, interpretation and dissemination of its findings. There is a growing presence of autistic researchers in the field, leading projects, authoring papers, and shaping the research agenda. However, even when projects are led by autistic academics, co-production with representatives from outside academia can be important to ensure that their research is shaped by a range of autistic voices, experiences and perspectives (Fletcher-Watson et al., 2021). Community engagement often involves significant effort from all parties, with carefully designed methodologies and innovative practices. Traditionally, journals do not invite or

---

<sup>1</sup> <https://journals.sagepub.com/page/aut/podcasts>

<sup>2</sup> <https://journals.sagepub.com/page/aut/videos/video-abstracts>

require reporting of this aspect of research, which diminishes its importance and makes it hard to share best practice. To address this issue – and inspired by the foundational work of the *British Medical Journal*<sup>3</sup> – we recently introduced an expectation that all papers reporting original research include a community involvement statement in the methods section. This is a chance for academics to explain how they have engaged with representatives of the community and share their methods for doing so. All of us, as authors ourselves, are acutely aware of how tiresome it may be to comply with new, journal-specific formatting and reporting requirements. Nonetheless, this section is a unique opportunity to promote – and trace – the practice of community involvement in autism research. While papers will not be penalised if they report no community involvement, there is already anecdotal evidence that having to write a statement shapes authors’ plans for autistic involvement in future research.

We take this further in our most recent call for papers on Community-Partnered Development and Implementation of Evidence-Based Practices. This special issue will examine “mechanisms necessary for the successful uptake of evidence-based practices into routine care.” It will showcase work that directly addresses barriers to access to evidence-based practice experienced by people from marginalised communities and examples of successfully, and productively, including stakeholders in all aspects of the research process. An essential component of the effort to include marginalised and minority participants is the need to know who is taking part in autism research, in order to understand how representative it is of the population. This is why we have also outlined strict expectations in our guidelines<sup>4</sup> that authors will report comprehensive information about sampling strategies and data on demographic characteristics, where these are available.

Other aspects of transparency have also recently been emphasised in a series of systematic investigations of the autism early intervention literature, showing that conflicts of interest and risks of harms are both under-considered and under-reported (Bottema-Beutel et al., 2021a; 2021b). These findings have led us to re-examine our reporting requirements and renew the editorial commitment to enforcing them. As a member of the Committee on Publication Ethics<sup>5</sup>, our journal expects comprehensive reporting, using materials such as the CONSORT and PRISMA checklists to report on trials and systematic reviews respectively. Recently, we have adjusted our author guidelines to reference the *International Committee of Medical Journal Editors’* disclosure of interests form<sup>6</sup> and we encourage authors to complete and upload this with their submission when reporting on intervention evaluations in particular. Editors are committed to being vigilant and strict in applying this requirement and we value our reviewers’ support on this issue.

Another source of conflicts of interest recently discussed (Bishop, 2020) is editors publishing “in their own journals”. What this debate has sometimes missed is the fact that editors are often recruited because they have already published widely in said journals. In particular, for a journal like ours with a relatively narrow focus and clear identity, denying editors the right to contribute their work could result in us missing out on key discoveries which are central to

---

<sup>3</sup> <https://blogs.bmj.com/bmjopen/2018/03/23/new-requirements-for-patient-and-public-involvement-statements-in-bmj-open/>

<sup>4</sup> <https://journals.sagepub.com/author-instructions/AUT#ReportingGuidelines>

<sup>5</sup> <https://publicationethics.org/>

<sup>6</sup> <http://www.icmje.org/disclosure-of-interest/>

our editorial vision. More importantly, the junior authors publishing with those editors would be denied the opportunity to publish with us, too. Therefore, rather than making a blanket commitment regarding editors' own work appearing in the journal, we are taking two steps to ensure we apply rigour to the issue. First, we commit to sending all papers with an editor as a co-author out to at least three external reviewers instead of the usual minimum two. Second, we are monitoring the number of papers published by editors in the journal each year and identify and act on any cases where this seems to be excessive relative to that individual's general rate of publication.

### **Open Science**

Open Science is the natural extension of both inclusion and transparency in research reporting. It starts with making papers available on an open access basis. We are proud that our publisher, SAGE, is committed to facilitating openness, transparency and reproducibility of research. SAGE is a signatory to the Centre for Open Science's Transparency and Openness Promotion (TOP) Guidelines<sup>7</sup>, is a member of the STM Research Data Group<sup>8</sup>, and supports the Joint Declaration of Data Citation Principles<sup>9</sup>. In addition, SAGE allows authors to post the Author Accepted Manuscript of their article (sometimes called post print or post-peer-review) on their own personal website, department's website or the repository of their institution, on acceptance and without restriction. We also encourage authors to publish their data, and this can be done either as a supplementary file accompanying the article or in an external repository. At the same time, we note that in many cases the data reported in our journal, such as interview transcripts, video observations, may not be suitable for sharing. In such cases, we encourage sharing of meta-data and a contact to request access to further information about the data.

Another key aspect of open science is pre-registration of analyses. Authors can self-publish their analysis plans through sites such as the Open Science Framework, which provides excellent template protocols for both quantitative and qualitative analysis plans. However, the current gold standard for pre-registration is the Registered Report. Registered Reports are now offered by a range of journals. They involve authors submitting a manuscript protocol with background literature review, research questions and hypotheses, methods and analysis plans, all before the data have been collected. The protocol is peer-reviewed, revised and if accepted, the journal is committed to publication of the final results, provided that the protocol is followed. Deviations and additional exploratory analyses are permitted, but these must be justified and explained in the final report. This format protects against publication bias and rewards good research design, above and beyond 'exciting' results (Chambers & Tzavella, 2020). Following recent calls for autism journals to consider offering Registered Reports (Hobson et al., 2021), we are now seriously considering this option. Next steps involve us seeking guidance from other journals who have recently introduced the format, and targeting new editorial board members with suitable expertise to support the review process.

### **Conclusion**

All of the editors of *Autism* are also authors and reviewers. We understand that it is tiresome when each journal wants a new format for their articles, or when author guidelines change.

---

<sup>7</sup> <https://www.cos.io/initiatives/top-guidelines>

<sup>8</sup> <https://www.stm-researchdata.org/>

<sup>9</sup> [force11.org/datacitationprinciples](https://force11.org/datacitationprinciples)

We are profoundly grateful to our authors for their patience and contribution to the journal, and to our reviewers for their commitment. At the same time, journals wield significant influence over the way research is done, as well as how it is reported. We want to leverage that position in a positive way. Autism research has a history of pioneering new ideas and techniques that influence wider science and practice. We can continue that tradition by delivering publication practices that promote excellence, value integrity and shape a positive research culture. Our progress is far from clear and we cannot easily predict what is coming next or the changes that we are likely to need to consider. What is clear, however, is that the status quo is unsustainable. While we do not claim to have all of the answers, we hope that the efforts described here indicate a strong commitment to be a part of the agenda for positive change.

## References

Andoh, E. (2021, April). Psychology's urgent need to dismantle racism. *Monitor on Psychology*, 52(3). <http://www.apa.org/monitor/2021/04/cover-dismantle-racism>

Baeza-Velasco, C., Cohen, D., Hamonet, C., Vlamynck, E., Diaz, L., Cravero, C., ... & Guinchat, V. (2018). Autism, joint hypermobility-related disorders and pain. *Frontiers in Psychiatry*, 9, 656.

Bishop, D.M. (2020) PEPIOPs – prolific editors who publish in their own publications. Downloaded at <http://deevybee.blogspot.com/2020/08/pepiops-prolific-editors-who-publish-in.html>

Botha, M., Hanlon, J., & Williams, G. L. (2021). Does language matter? Identity-first versus person-first language use in autism research: A response to Vivanti. *Journal of Autism and Developmental Disorders*, 1-9.

Bottema-Beutel, K., Crowley, S., Sandbank, M., & Woynaroski, T. G. (2021a). Research Review: Conflicts of Interest (COIs) in autism early intervention research—a meta-analysis of COI influences on intervention effects. *Journal of Child Psychology and Psychiatry*, 62(1), 5-15.

Bottema-Beutel, K., Crowley, S., Sandbank, M., & Woynaroski, T. G. (2021b). Adverse event reporting in intervention research for young autistic children. *Autism*, 25(2), 322-335.

Bottema-Beutel, K., Kapp, S. K., Lester, J. N., Sasson, N. J., & Hand, B. N. (2020). Avoiding ableist language: Suggestions for autism researchers. *Autism in Adulthood*, 3(1), 18-29.

Buchanan, N. T., & Wiklund, L. O. (2020). Why clinical science must change or die: Integrating intersectionality and social justice. *Women & Therapy*, 43(3-4), 309-329.

Cascio, M. A., Weiss, J. A., & Racine, E. (2020). Making autism research inclusive by attending to intersectionality: A review of the research ethics literature. *Review Journal of Autism and Developmental Disorders*, 1-15.

*Autism* editorial, Sue Fletcher-Watson et al.

Cervantes, P. E., Matheis, M., Estabillo, J., Seag, D. E., Nelson, K. L., Peth-Pierce, R., Hoagwood, K. & Horwitz, S. M. (2020). Trends Over a Decade in NIH Funding for Autism Spectrum Disorder Services Research. *Journal of Autism and Developmental Disorders*, 1-13.

Chambers, C. D., & Tzavella, L. (2020, February 10). *The past, present, and future of Registered Reports*. <https://doi.org/10.31222/osf.io/43298>

Crenshaw, K. (1990). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43, 1241.

Den Houting, J., & Pellicano, E. (2019). A portfolio analysis of autism research funding in Australia, 2008–2017. *Journal of Autism and Developmental Disorders*, 49(11), 4400-4408.

Fletcher-Watson, S., Adams, J., Brook, K., Charman, T., Crane, L., Cusack, J., ... & Pellicano, E. (2019). Making the future together: Shaping autism research through meaningful participation. *Autism*, 23(4), 943-953.

Fletcher-Watson, S., Brook, K., Hallett, S., Murray, F., & Crompton, C. J. (2021). Inclusive Practices for Neurodevelopmental Research. *Current Developmental Disorders Reports*, 1-10.

George, R., & Stokes, M. A. (2018). Gender identity and sexual orientation in autism spectrum disorder. *Autism*, 22(8), 970-982.

Harris, L., Gilmore, D., Longo, A., & Hand, B. N. (2021). Short report: Patterns of US federal autism research funding during 2017–2019. *Autism*, doi:[10.1177/13623613211003430](https://doi.org/10.1177/13623613211003430)

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and Brain sciences*, 33(2-3), 61-83.

Hobson, H., Sedgewick, F., Manning, C., & Fletcher-Watson, S. (2021, March 15). Registered reports in autism research - a letter to journals. Retrieved from [osf.io/pcwbn](https://osf.io/pcwbn)

Hossain, M. M., Khan, N., Sultana, A., Ma, P., McKyer, E. L. J., Ahmed, H. U., & Purohit, N. (2020). Prevalence of comorbid psychiatric disorders among people with autism spectrum disorder: An umbrella review of systematic reviews and meta-analyses. *Psychiatry Research*, 287, 112922.

Jones, D. R., & Mandell, D. S. (2020). To address racial disparities in autism research, we must think globally, act locally. *Autism*, 24(7), 1587-1589.

Mandell, D. S., Wiggins, L. D., Carpenter, L. A., Daniels, J., DiGuseppi, C., Durkin, M. S., . . . Kirby, R. S. (2009). Racial/ethnic disparities in the identification of children with autism spectrum disorders. *Am J Public Health*, 99(3), 493-498.

Moher, D., Naudet, F., Cristea, I. A., Miedema, F., Ioannidis, J. P., & Goodman, S. N. (2018). Assessing scientists for hiring, promotion, and tenure. *PLoS biology*, 16(3), e2004089.

Nichols, S., & Stahl, G. (2019). Intersectionality in higher education research: a systematic literature review. *Higher Education Research & Development*, 38(6), 1255-1268.

Pellicano, L., Dinsmore, A., & Charman, T. (2013). A Future Made Together: Shaping autism research in the UK. Downloaded from:

[https://discovery.ucl.ac.uk/id/eprint/10017703/1/A\\_Future\\_Made\\_Together\\_1.2\\_LR.pdf](https://discovery.ucl.ac.uk/id/eprint/10017703/1/A_Future_Made_Together_1.2_LR.pdf)

Pellicano, E., Dinsmore, A., & Charman, T. (2014). What should autism research focus upon? Community views and priorities from the United Kingdom. *Autism*, 18(7), 756-770.

Singh, J. S., & Bunyak, G. (2019). Autism disparities: a systematic review and meta-ethnography of qualitative research. *Qualitative Health Research*, 29(6), 796-808.

Travers, J., & Krezmien, M. (2018). Racial Disparities in Autism Identification in the United States During 2014. *Exceptional Children*, 84(4), 403-419. doi:10.1177/0014402918771337