



OPEN LETTER

REVISED Exploring the experiences of minoritised groups at life sciences conferences in the UK: new perspectives and actions to improve inclusivity in the sector

[version 3; peer review: 1 approved, 2 approved with reservations, 1 not approved]

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Abstract

Attending and participating in scientific research meetings and conferences is a key mechanism for researchers to share information and knowledge, build networks, and establish relationships and collaborations to support career development. In the UK, researchers from minoritised or underrepresented groups may have a different experience at a conference than their peers. As a high profile provider of genomics-focussed life science conferences, Wellcome Connecting Science is committed to ensuring that our events are as inclusive as possible. Here we summarise the findings of a project to explore the experiences of minoritised groups, with a focus on race and ethnicity, and discuss how we are seeking to improve access and inclusion at our conferences.

Plain Language Summary

Research conferences, symposia, and meetings form a key part of academic life across all subject areas from the life and physical sciences to the arts and humanities. Conferences provide a platform for sharing the latest knowledge in a specific research field, networking with colleagues, and building the personal connections that enable career development, or could lead to the creation of new projects and funding applications. Wellcome Connecting Science, part of the Wellcome Sanger Institute, is a leading provider of scientific conferences in the UK, with a focus on topics relating to genomics,

Open Peer Review

Approval Status

	1	2	3	4
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1. **Sara Lil Middleton** , University of Oxford, Oxford, UK
2. **Lyn Horn**, University of Cape Town, Rondebosch, South Africa
3. **Susanne Beck** , Warwick Business School, Coventry, UK
Thomas Palfinger, LBG Open Innovation in Science (OIS) Center, Vienna, Austria
4. **Martin Thomas Falk** , University of South-

health, and disease. Connecting Science has always been interested in the experiences of delegates at our meetings. We know, both from individual feedback, and longer-term analysis, that our conferences provide excellent opportunities for sharing knowledge and networking; and have led to a number of positive outcomes for event delegates. This is great news if you are 'in the room' and actively participating in these events; but what about those who are not in the room, and why might they be absent? We were aware that our delegate base is broadly equal in relation to gender but is not particularly diverse in relation to race and ethnicity. We worked with Sea-Change Consultancy, to explore the views and perspectives of researchers from racially minoritised backgrounds on their experiences of scientific conferences in the UK. Although there were many similarities in the barriers researchers from all backgrounds faced in accessing conferences, there were some specific issues that appeared to impact researchers from minoritised groups more than others. Based on these findings, Connecting Science is implementing an action plan to improve our conference offer, and encourages other organisations and individuals to consider how they could also improve the research conference experience for everyone.

Eastern Norway, Gullbringvegen, Norway

Any reports and responses or comments on the article can be found at the end of the article.

Keywords

Conferences, Research Meetings, Inclusion, Networking, Career Development, Knowledge Sharing, Equity

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Author roles: **Dutta I:** Conceptualization, Project Administration, Supervision, Validation, Writing – Original Draft Preparation, Writing – Review & Editing; **Bishop M:** Conceptualization, Project Administration, Supervision, Validation, Writing – Review & Editing; **Rayner JC:** Conceptualization, Funding Acquisition; **Creavin T:** Conceptualization, Project Administration, Validation; **Ahmed S:** Conceptualization, Project Administration, Validation; **Clissold H:** Conceptualization, Project Administration, Validation, Writing – Review & Editing; **Cornish T:** Formal Analysis, Investigation, Methodology, Project Administration; **Wilson K:** Formal Analysis, Investigation, Methodology; **Christoffersen A:** Formal Analysis, Investigation, Methodology; **Prentice J:** Formal Analysis, Investigation, Methodology, Project Administration; **Penda V:** Formal Analysis, Investigation, Methodology

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REVISED Amendments from Version 2

We have updated this article to confirm that this work was service evaluation, and not research.

Any further responses from the reviewers can be found at the end of the article

Disclaimer

The views expressed in this article are those of the authors. Publication in Wellcome Open Research does not imply endorsement by Wellcome.

A note on language: Where we use the terms Black and White in this article, we intend this to mean ‘racialised as Black’ or ‘racialised as White’ to counter the perception of White as a neutral baseline. People of colour form the global majority, and in many contexts this descriptor is relevant and helpful. However in the context of the UK, and for the purposes of this article, we use the term ethnically minoritised researchers to describe researchers who self-identify their ethnicity as other than the majority group in the UK (‘White English/Welsh/Scottish/Northern Irish or British’). Where relevant we describe specific minority communities, and also recognise that minoritised communities in the UK are not a homogenous group.

Introduction and context

Research conferences, symposia, and meetings form a key part of academic life across all subject areas from the life and physical sciences to the arts and humanities. Conferences provide a platform for the sharing of the latest knowledge in a specific research field; networking with colleagues and collaborators; and building the connections which enable career development, the creation of novel projects, and new funding applications. As opportunities for poster and spoken presentations are usually limited, for those selected to appear on a conference programme, this spotlight on their work can be a pivotal moment in their careers¹.

However, it is also clear that not everyone who attends a research conference will have the same experience, whether due to gender, disability, race and ethnicity, or the intersection of any of these, and other, characteristics². Recent studies, examining different areas of science, have indicated that women have less visibility at conferences³; those from minoritised groups are less likely to be selected to present their work⁴; and women from minoritised groups are the least likely to feel very welcome at scientific meetings, with White men as the most likely to feel this way⁵.

In the UK, where there is a lack of diversity amongst senior leaders in research and academia, we see that people of colour (the global majority), and those specifically from a Black background are particularly disadvantaged, along the whole of the academic pipeline⁶. There are degree awarding gaps at undergraduate level – students from minoritised backgrounds at UK universities are less likely than their White counterparts to graduate with a higher classification from undergraduate programmes⁷; there are proportionally fewer Black people at postgraduate and professorial levels⁸; and

Black researchers have lower success rates with funding councils and granting agencies⁹. In addition, specific British South Asian communities of Pakistani and Bangladeshi heritage, encounter similar disadvantage. A fact recently recognised by the funder, Wellcome, through a new funding award scheme targeted at these groups¹⁰.

These known structural barriers can be further compounded when specific groups miss out on the full research conference experience.

Aims

Wellcome Connecting Science is a high-profile provider of life science conferences in the UK. As part of the Wellcome-funded organisation, the Wellcome Sanger Institute, our goal is to enable everyone to explore the impact of genomics on research, health, and society. Connecting Science sought to understand more about how its research meetings could positively contribute to addressing the lack of academic equity in the UK, and influence change in this sector. We undertook this work, not as a research project, but as an insights-based activity that could be directly translated into operational actions.

The Connecting Science conference attendee base is broadly gender balanced, with the majority of attendance from institutions in the UK and Europe. But there is likely to be a lack of representation of researchers from minoritised groups based on race and ethnicity. So, this cohort of researchers is not only potentially missing out on scientific content, but also the career enhancing impact conferences can have through the contacts, ideas and collaborations that are generated there.

The conference delegate feedback Connecting Science receives for its events is overwhelmingly positive. It indicates a high-level of satisfaction with the overall experience; with events meeting expectations around knowledge sharing, collaboration, and career development. But we acknowledge that this only reflects the perspectives of those who are ‘in the room’ and attending meetings. This activity was therefore centred on the conference experiences of researchers from minoritised groups in the UK, with a particular focus on race and ethnicity. The activity had two main objectives:

- i) For researchers in the UK minoritised in relation to race and ethnicity, who had **not** attended a life science conference – to provide information and insights into the factors and barriers that prevented their attendance.
- ii) For researchers in the UK minoritised in relation to race and ethnicity, who **had** attended a life science conference – to provide information and insights into their experiences at these events.

For both of these objectives, we were interested in experiences and insights that were based on our own events, and the broader scientific conferencing sector in the UK.

Our goal was to use these insights to reduce barriers which may prevent or discourage attendance; enhance factors which might improve the conference experience; and to influence

change in the wider UK conferencing sector, adding to prior thinking in this area¹¹.

For clarity, it should be noted that as this work was conceived, developed and delivered within the scope of service evaluation, it did not utilise the frameworks expected of a research project involving research participants; this was agreed with the Wellcome Sanger Institute Research Governance team. The project is shared today not in a research article (with novel research data), but as an Open Letter, with insights that may be beneficial to others who work in this sector.

However, ensuring the appropriate treatment of the time and information given by the research professionals who contributed their views, was an important consideration. Contributors who took part in interviews were reimbursed for their time, and any personal information provided was used for only the agreed purpose of communication by the Sea-Change Consultancy team, and was managed in line with GDPR requirements.

Summary of insights

In order to obtain an independent perspective on researcher experiences, Connecting Science commissioned Sea-Change Consultancy, a group focussed on equality, diversity and inclusion in an organisational change context, to explore the following questions between February - November 2022.

- What are researchers' experiences at conferences? Is there a difference between the experiences of minoritised researchers and majority groups?
- What are the barriers to attending a research conference? What elements support attendance, especially attendance of researchers from minoritised groups?
- What are the positive impacts of attending a conference? Are the impacts the same for minoritised researchers and majority groups?
- What practical steps have conference organisers taken to improve experiences for minoritised researchers?

Researchers from ethnically minoritised and non-minoritised groups, with a range of seniority and institutional affiliations in the UK, participated in this project, contributing their views and experiences. These were gathered via an online survey and a series of interviews. The survey generated 55 responses, and of these 16 participants were interviewed in further detail. We acknowledge that these 'traditional' approaches can vary in effectiveness, perhaps reflected in the small survey sample, and risk response bias. However, we believe that the perspectives drawn from this group provided pertinent insights.

Full details of the approach are included in the final report which can be downloaded from the Wellcome Connecting Science website: <https://www.wellcomeconnectingscience.org/news/new-insights-into-the-experiences-of-different-groups-at-research-conferences-in-the-uk/>

Broadly, there were many similarities in discussion within research role or career stage groups. For example, institutional

barriers relating to funding, lack of time, or varying levels of support from supervisors were consistent themes. But what also emerged was the intersection of identities, amplifying or adding to challenges experienced by ethnically minoritised researchers, for example when they were also women, and/or early career researchers. And there were some notable areas of difference between groups.

- Access to financial support and caring responsibilities as barriers to conference attendance, appeared to disproportionately impact researchers from ethnically minoritised backgrounds, in comparison to their White peers.
- A lack of knowledge and awareness of research meetings was also a possible barrier, with proportionately more White researchers finding out about conferences from colleagues and through word of mouth. This potentially supports a general pattern of exclusion of those who are not part of these formal and informal networks.
- Some researchers described uncomfortable experiences based on their ethnicity and/or gender; with some feeling that the intersection of these rather than a specific attribute may have been a factor; others described the sense of isolation felt when they were the only woman, or Black person, in the room.
- Ethnically minoritised researchers were less likely to agree that they felt welcomed and included at life science conferences compared to White researchers.

The full report detailing the findings can be downloaded from the Wellcome Connecting Science website: <https://www.wellcomeconnectingscience.org/news/new-insights-into-the-experiences-of-different-groups-at-research-conferences-in-the-uk/>

Next steps, recommendations and actions

It is clear from the findings of this work, the existing literature, and anecdotal feedback from peers, colleagues, and our programme participants, that attendance and participation in a research conference can be a highly positive and beneficial experience. It is also evident that not everyone is always able to access conference events, or experience these events in an equitable manner. The experiences of different groups of researchers can vary significantly, and barriers often disproportionately impact researchers who are from ethnically minoritised backgrounds in the UK. Many common themes around access also emerged, based on the shared experience of being an early career researcher or a woman. By recognising and acknowledging these different types of experiences, Connecting Science aspires to enhance its own conference offer; making improvements to inclusion and participation that will benefit not just groups minoritised in relation to race and ethnicity in the UK, but everyone in the research community.

This work delivered 24 recommendations, which are available in the full report. We highlight below the recommendations that we have prioritised as part of a Diversity and Inclusion Action Plan. Our focus, presented in the table below, has been on addressing areas of difference between those minoritised in relation to race and ethnicity and their White peers, with relevant actions to reduce these differences.

Area of difference identified between majority and minority researchers	Recommendation	Connecting Science action
Financial support and caring responsibilities	Provide and promote targeted bursaries for researchers from ethnically minoritised groups to attend. Promote the support available for researchers with caring responsibilities.	We provide several financial and caring responsibility support options available, but ensuring that these are pro-actively and consistently communicated to target groups, will become a priority.
Knowledge and awareness of research meetings	Include content that is specifically designed to attract and address the priorities, concerns, and needs of ethnically minoritised individuals. Increase the proportion of images of ethnically minoritised individuals, attending to the intersectionality between race and gender when choosing images.	Ensuring Connecting Science marketing and communication uses inclusive approaches - both imagery and language - will be regularly reviewed to ensure it is inclusive and comprehensible.
Uncomfortable experiences based on ethnicity and/or gender; and feeling welcome and included	Produce guidelines for the organisation of diverse and inclusive conferences, making compliance with these guidelines a prerequisite for being part of the WCS conference programme.	Creating a new and intersectional inclusion policy to support conference participation - by clearly articulating our strategic goals and commitments, this policy will set the ethos of the Connecting Science conference offer, and will be visible on our website and other materials, for all conference participants, speakers, and committee members. Enhancing the Connecting Science Conference Code of Conduct – setting clear expectations around acceptable and unacceptable behaviour, and how to access help and support, will contribute to conference attendees feeling safe and comfortable in this environment. The Code of Conduct will be clearly visible on our website and other materials, and our team will be trained and supported in its implementation.

In addition, we will seek to reduce the impact of ‘gatekeeping’ on decisions around abstract selection and conference poster presentations, by introducing a requirement for decision-makers (for example scientific committee members) to participate in unconscious bias training. A new registration platform will underpin many of these actions, enhancing our capability to capture and analyse diversity and inclusion-related data, in a manner that has not previously been possible.

Connecting Science acknowledges that the impact of these actions may be challenging to identify, but through event-specific evaluation and feedback, we will actively monitor change in the participant experience, and the composition of the conference delegate base. Connecting Science is not proposing that its actions provide a solution that will fully address current differences in experience, but is sharing its plans to prompt further thought and reflection across the sector.

As a programme that is strongly linked to Wellcome Sanger Institute science, we have a significant degree of influence as well as the ability to shape and alter our conference offer. This article aims to act as a call to action to everyone involved in research conferences, whether as organisations or participants. Connecting Science also recognises the influential role that

individual research professionals can have in this sphere. As committee members on conference organising committees, research and healthcare professionals are generally responsible for the provision of intellectual input and ideas, and play a pivotal role in creating engaging and stimulating meetings. As conference attendees, research and healthcare professionals are able to influence how meetings are delivered - making decisions on where to allocate their registration fee budget. We encourage all research professionals to consider how conference providers (including Connecting Science itself) ensure that their events are equitable for all participants, and where appropriate, to challenge the conference sector to do better.

Data availability

No data are associated with this article.

Acknowledgements

We would like to thank everyone who participated in this work, sharing their views and experiences; and the networks and organisations who shared this initiative to support participation from a diverse group of research professionals. We also acknowledge and thank Laura Wyatt for the provision of data and other materials relevant to this work.

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[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)

Open Peer Review

Current Peer Review Status:    

Version 3

Reviewer Report 12 February 2025

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 **Martin Thomas Falk** 

University of South-Eastern Norway, Gullbringvegen, Norway

I understand this is not a research article but an open letter with insights that may be useful to others in this field. Please see my comments.

Main comments

1. The literature review must be updated. There are very few references from academic journals
2. What about online conferences? Online conferences allow minorities easy access. This should be discussed.
3. More information on the data collection is needed (consent of the respondents, characteristics of the respondents). The survey is small and not representative.
4. Compare the empirical findings of your survey with the previous literature
5. Avoid self-promotion of your research. Why do you only focus on the initiatives of "Wellcome Connecting Science"? Many scientific associations organising conferences have changed their statutes towards gender representation and inclusion of minorities.

Minor comments

A. " Conferences provide a platform for the sharing of the latest knowledge in a specific research field; networking with colleagues and collaborators; and building the connections which enable career development, the creation of novel projects, and new funding applications. "

A citation is required here

B. Perhaps you use the term WEIRD (Western, Educated, Industrialized, Rich, and Democratic)

C. Consider a link to the sustainable development goals .

Is the rationale for the Open Letter provided in sufficient detail?

No

Does the article adequately reference differing views and opinions?

No

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

No

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Quantitative research methods, Social Sciences

I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Reviewer Report 10 February 2025

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Susanne Beck 

Warwick Business School, Coventry, UK

Thomas Palfinger

LBG Open Innovation in Science (OIS) Center, Vienna, Austria

The authors have done an excellent job in revising their open letter. It has significantly improved, and we sincerely appreciate the effort and thought that went into the revisions. The purpose and objectives of the letter are now much clearer, making it a stronger and more compelling piece.

Before changing the status, we have a few suggestions that could further enhance the impact of your work:

- You mention (in version 2) that gender is not a primary focus, yet the results suggest it plays

a role. Have you considered including women in the category of “minoritized” individuals as well? This might strengthen your argument and ensure broader inclusivity. You may have already made this change in Version 3.

- The recommendations could benefit from additional specificity. For instance, you mention support for researchers with caring responsibilities—could you provide concrete examples of how this support is structured? Similarly, what processes are in place to determine what content aligns with the “priorities, concerns, and needs of ethnically minoritized individuals”? Additionally, how was the Code of Conduct developed to actively foster a welcoming environment for these groups?
- More broadly, it would be helpful to understand the mechanisms through which your recommendations address the identified challenges. For example, how does increasing the representation of minoritized individuals in images contribute to improving “Knowledge and awareness of research meetings”? Likewise, how does the presence of a Code of Conduct make a tangible difference for minoritized groups?
- Regarding data collection, you propose gathering more information at submission to capture diversity and training decision-makers in unconscious bias, rather than anonymizing all identifiable data. Could you expand on the rationale behind this approach and provide further justification?

Overall, the letter serves as a strong call to action, but some areas could benefit from additional clarity regarding implementation. We see two possible ways forward:

1. Minor revision: Adjust the table so that the problem (column 1) is more explicitly stated, the recommended measure (column 2) is made more concrete with a clear rationale for its effectiveness, and the concrete actions (column 3) are elaborated in more detail.
2. Major revision: You could reduce the space dedicated to describing the problem—since this is an important issue most researchers would agree on—and focus more on actionable solutions. Specifically, which problems need to be addressed, what measures do you propose, and why do you believe they will be effective?

We appreciate the work you’ve put into this revision and look forward to seeing how you further refine this important publication!

Is the rationale for the Open Letter provided in sufficient detail?

Partly

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Partly

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Susanne's research focuses on the organization of science, managing open and collaborative scientific knowledge production, Open Innovation in Science, and the role of AI in Science; Thomas has experiences in designing co-creation processes and foster public involvement in science. In addition, We have substantial experience in organizing scientific conferences.

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.

Reviewer Report 17 January 2025

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Sara Lil Middleton 

University of Oxford, Oxford, England, UK

I have now read version 3 of this article, and I am really pleased with the changes the authorship team have made with regards to research ethics in the Aims section. The last two paragraphs of the Aims section now clearly communicate the steps taken to ensure ethical standards were met.

I am satisfied that the points raised in my first and second reviewer report have been addressed and can now confidently approve the paper!

Is the rationale for the Open Letter provided in sufficient detail?

Partly

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Partly

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.**Reviewer Expertise:** Justice, equity, diversity and inclusion in STEM and academia; intersectionality, bias, discrimination in academia with focus on race, gender, disability, and neurodiversity.**I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.****Version 2**

Reviewer Report 03 December 2024

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**Sara Lil Middleton** 

University of Oxford, Oxford, England, UK

The revised version is much improved in terms of clarity, particularly in the use of language and the addition of the table in “Next steps, recommendations and actions” section. Well done to the authors!

The only point that was not fully clarified in both the author response or revised version is a statement about research ethics. A clarifying statement is needed as to how the authors followed ethical research practices given personal information from participants was gathered from surveys and interviews (even if data were anonymized for report/summary article).

Very often studies involving human participants have a short statement like this: Ethical approval was obtained by [.....] ethics panel for this study (approval [.....]). All participants provided written informed consent. Personal information obtained from surveys and interviews were anonymized and stored securely.

The article needs to have explicit mention of how the authors followed ethical research practices or a statement that ethical approval was not required for the study. This can be written in the “Summary of insights” and a separate “Consent” statement at the end of the article. For guidance,

please see section 4 of Ethical Policies, Research involving humans:
<https://wellcomeopenresearch.org/about/policies/#ethpol>

I did also notice two typos that need fixing:

Abstract: At the end of the abstract “, We” appears (remove or complete the sentence)

Next steps, recommendations and actions: “and barriers” needs a space.

The article is much stronger now and I commend the authors for their work on taking on board reviewer feedback. I would like to see the point about research ethics addressed before I change the approval status of the article. Looking forward to seeing the revised version in due course.

Is the rationale for the Open Letter provided in sufficient detail?

Partly

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Partly

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Justice, equity, diversity and inclusion in STEM and academia; intersectionality, bias, discrimination in academia with focus on race, gender, disability, and neurodiversity.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Version 1

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Susanne Beck 

Warwick Business School, Coventry, UK

Thomas Palfinger

LBG Open Innovation in Science (OIS) Center, Vienna, Austria

The timely and relevant open letter explores barriers to access and participation in academic conferences for minoritized groups, specifically focusing on racial and ethnic minorities. It aims at examining existing challenges and proposes actionable strategies to enhance inclusivity in scientific gatherings. The open letter aims to provide guidelines and an action plan to improve conference experiences and opportunities for underrepresented researchers.

The well-written article addresses relevant topics but would benefit from further revisions to enhance clarity and impact. In particular, based on our reading, there are two main aspects that would deserve more attention and which are detailed in the following comments. First, the objectives presented in the frontend are not consistently reflected in the remaining letter. Second, the insights presented in the letter do not align well with the actions outlined in the end. Given the importance of the topic, we hope our comments detailed below encourage discussions among the authors to achieve the best possible outcome for the community.

We understand that the format necessitates a concise presentation of messages and knowledge. However, in some sections, such as "Summary of Insights" and "Next Steps and Actions" (refer to Lyn Horn's review), significant content reduction harms the message and can sometimes lead to apparent contradictions. Simultaneously, other aspects, like the general importance of conferences for scientists, are repetitively covered, occupying a disproportionate amount of space. The letter could focus more clearly on practical applications to provide the potential target audience (e.g., conference organizers) with clear messages and actionable recommendations.

In many points, we agree with the other reviewers. The methodology could be presented in more detail and more clearly. We align with Lyn Horn's review regarding the difficulty in extracting the sample size (N) from the linked report, and the letter's informative value would benefit from describing the methods. Additionally, we encourage the authors to reflect on the difficulty of reaching the target group (minoritized groups) using traditional methods (surveys or interviews). It's commendable that this was attempted, and sharing this experience with readers would be valuable. For readers, it might also be helpful to include references to existing sources with good/best practices (see suggestions from Reviewer 1 and 2, Sara Middleton & Lyn Horn).

Besides the methodology, the letter would benefit from a clearer formulation of its objectives and more consistent pursuit of these goals. The two abstracts point in different directions, which is reflected in various sections of the article (the short abstract suggests disadvantages for minoritized groups during conference participation while the abstract in plain language suggest barriers to conference participation). It is also unclear who exactly falls under the term "minoritized group" (ethnic, disabled, racial, etc.). The core objective probably is making conferences more inclusive. But issues like the lack of diversity among senior leaders or problems

with inclusion in study programs are also raised, which are societal issues rather than conference-specific ones. These topics are undoubtedly relevant and should be addressed, but perhaps go beyond the scope of this letter. Hence, to emphasize the core message of the letter, it would be helpful to 1) clarify whether the main goal is increase access to conferences (entry barriers) or the accessibility of conference benefits (key mechanisms); and 2) to clearly define what is meant with minoritized groups. Please also note, that there is a large variety across minoritized groups and they should not be falsely considered as one homogeneous group.

The briefly outlined actions at the end of the letter do not sufficiently reflect earlier discussions of the identified (or hinted) problems of minoritized groups. For instance, an inclusion policy or a code of conduct targeting conference organizers was not mentioned as a lever before. Similarly, financial support would benefit everyone equally instead of specifically reducing disadvantages for minoritized groups. Strengthening the link between insights and action plan would provide a more consistent picture.

Overall, the letter should be reviewed for its internal logic (i.e., the line of arguments) to reduce what appears to be contradictions. For example, in the second paragraph of the "Next Steps and Actions" section, the letter states: "Where there are barriers to access, they often disproportionately impact researchers who are from ethnically minoritised backgrounds in the UK", which contradicts the earlier statement "There were broadly no major differences between ethnically minoritised and White researchers in the discussion and responses to these questions, suggesting that there are potentially more differences across role and career stage, rather than ethnic group in relation to conference access and experience." Another example can be found in the two abstracts pointing towards different objectives as mentioned earlier.

We agree with the other reviewers that the letter prompts valuable reflections on organizing scientific conferences differently, which is its purpose. It would be inspiring if the authors could concretize actions and thus, make them more available to other conference organizers and/or test these in their own events. Since we also organize scientific conferences, the letter has prompted us to consider new approaches, and we share these thoughts here in the hope they will be helpful:

- For example, experimenting with an ambassador model where successful representatives of minoritized groups encourage, foster, and substantiate relevant networks during conferences and beyond (e.g., in pre-conference online meetings) could reduce feelings of isolation at major events.
- Another idea is to implement innovative session formats that transfer 'tacit knowledge' from the field, such as identifying relevant target journals and prestigious seminars, which could mitigate disadvantages for scholars not socialized in prominent labs/groups/institutes.
- Lastly, session organizers and committee members, who often serve as gatekeepers to presentations and posters, could be incentivized to ensure better balance.

To further this idea, it would be great to see how future experiments by the author team with different actions in their conferences and how these impact satisfaction and both subjective and objective barriers to accessing and benefiting from conferences.

We hope these suggestions result useful to the authors as well as interested readers. As a final

remark, we would like to suggest that it might also be beneficial to the open review process if a reviewer from a minoritized group were asked for their expertise, experience, and evaluation of this open letter.

Is the rationale for the Open Letter provided in sufficient detail?

Yes

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Susanne's research focuses on the organization of science, managing open and collaborative scientific knowledge production, Open Innovation in Science, and the role of AI in Science; Thomas has experiences in designing co-creation processes and foster public involvement in science. In addition, We have substantial experience in organizing scientific conferences.

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however we have significant reservations, as outlined above.

Author Response 13 Nov 2024

Ireana Dutta

We thank Reviewer 3 (Susanne Beck and Thomas Palfinger) for their detailed feedback and comments, and for their description of this work as timely and relevant. Many of their comments echo those of Reviewer 2, and we have addressed the reasoning for our approach to this project and its communication (via an Open Letter). We have amended the structure of the article, to improve the presentation of the project objectives, and to link specific actions to recommendations; and hope that this will make the article a more useful resource for others. We also thank the authors for sharing their own approaches in this area, and have added additional content to build on some of these potential actions. Outside of this article, we will continue to monitor the impact (if any) of our actions and identify an appropriate route to share these. We are also open to developing a formal

research project in this area. Although our intention was not to undertake original research, the feedback we have received indicates that this may be a relevant next step, and we would be happy to explore opportunities for collaboration.

Competing Interests: No competing interests were disclosed.

Reviewer Report 23 July 2024

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Lyn Horn

University of Cape Town, Rondebosch, Western Cape, South Africa

Exploring the experiences of minoritised groups at life sciences conferences in the UK: new perspectives and actions to improve inclusivity in the sector

This open letter conveys the key findings and recommendations of a research report titled **Experiences of Minoritised Groups at Life Science Research Conferences in the UK** conducted by Sea-Change Consultancy on behalf of Wellcome Connecting Science conferences. The researchers conducted a study that included a desk top review, an online survey of participants identified via the WCS data base and follow up interviews with a selection of survey participants who agreed to be interviewed. The focus of the research was to explore and better understand the experiences of ethnic minority scholars attending conferences in the life sciences and to compare their experiences with those of their white colleagues. The study also aimed at identifying changes to practice that could improve the conference experience of ethnic minorities, if gaps were identified. The study findings are available in a full 60+ page report. A link to the report is provided in the open letter and hence I have also read the report to understand the context of the letter better.

Of note, the requested review is of the open letter rather than specifically the full report. The need for equity and diversity in science was a focus at both previous (7th and 8th) World Conferences on Research Integrity, with the conclusion drawn that a lack of both can undermine research integrity. Much of these discussions have been centered on the roles played by funders, publishers, research teams and institutions. An initiative to bring conferences and conference providers into the discussion is thus important and well timed. However, I do wonder why the researchers have chosen this route, a lengthy report and brief open letter, rather than a succinct research article to present their findings. I think the latter may have been more impactful.

My task is to review the letter not the report (or that is how I have understood the request) but I would like to make a few brief comments on the report that I hope will be useful. I found the first two sections on the desktop and rapid evidence review informative and likely to be of much value

to a wide range of conference organisers.

It would have been very useful to have seen the survey data displayed more comprehensively and graphically, rather than via a narrative. This does seem to have been a relatively small sample. Was there response bias? Also, some of the numbers quoted in the survey narrative are very small and seem to reflect numbers from the interviews? *"All respondents who attended WCS conferences and reported that Funding/bursaries from WCS had enabled them to attend were white (n=2). Whilst all respondents who self-funded their attendance at WCS conferences were from ethnically minoritised groups (n=2), despite being in the PhD/ECR stage of their career"* (4.3.2. Pg22). This may be a misinterpretation on my part but graphs and figures displaying this data would have made the information clearer.

The Aims of the project are clearly articulated in the letter. A short description of the methodology used should be included with a brief statement on how the survey was distributed, to whom and how many, response rate, indication of response bias and recruitment procedures and selection for interviews.

The Summary of Insights section includes a paragraph that is a bit misleading and underplays the insights gained by the study, as it contradicts itself. It does not adequately explain the findings (which are explained in the full report), that often there is an intersection of disadvantage, or a layering that can amplify the problems experienced by ethnic minorities. This is especially so if they are also female and early career researchers. I suggest rewording the paragraph "There were broadly no major differences between ethnically minoritised and White researchers in the discussion and responses to these questions.....However, there were some notable areas of difference between groups" to better capture this nuance and lead into the differences highlighted in the bullet points that follow.

The last section of the letter focuses on Next steps and Actions. Of note the full report contains 24 specific recommendations which have been summarised into four important bullet points. However, it would be valuable in my view, to provide a little more detail in this section, reflecting more closely the report recommendations as these will be most helpful to other conference organisers. This could be achieved by editing down the concluding paragraphs.

In conclusion this letter is a valuable addition to current discussions around diversity and equity in all research contexts and I support its indexing.

Is the rationale for the Open Letter provided in sufficient detail?

Yes

Does the article adequately reference differing views and opinions?

Yes

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Yes

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Health research ethics and research integrity. I was the lead author of the Cape Town statement on Fostering Research Integrity through fairness and equity

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 13 Nov 2024

Ireena Dutta

We thank Reviewer 2 (Lyn Horn) for their detailed feedback and comments around this project, and this article. We find it reassuring that this work is considered part a wider movement focussed on research integrity, and the role of equity and diversity within this. The reviewer asks why we have decided to share information about this work, its motivations and our response as conference developers and organisers, as a report and an Open Letter rather than a research article. We have not amended our Open Letter article in response to this comment, but would like to address it here, to provide further context for both the reviewer and other readers. We did not commission this work as a research exercise, but as a way to understand the views and perspectives of our audience(s), in order to improve our learning and training offer. By choosing a non-research project option, which is based on an understanding of our current systems and processes and the wider operating environment in the UK, we believe the outputs of this work are closer to practical application; and better positioned to deliver positive change. If we had undertaken a research project, we would have approached this differently, and delivered the results via a research publication. Having undertaken this work, primarily to benefit our own audiences, we realised that it may be useful to share our findings with the wider research community. Identifying a platform or journal that is willing to accept submissions of research-related (but not original research) content has been challenging, and we thank Wellcome Open Research for including an article format (Open Letter) that supports this type of content.

Competing Interests: No competing interests were disclosed.

Reviewer Report 15 May 2024

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Sara Lil Middleton 

University of Oxford, Oxford, England, UK

This article seeks to examine the experiences of ethnically marginalised groups attending UK conferences with the aim to identify barriers and work towards greater conference inclusion. The article provides an overview of the report from the Wellcome Connecting Science project commissioned by Sea-Change Consultancy in 2022.

I commend this article for bringing attention an important (and timely) aspect of academic activities. The article as a whole is well written with accessible language and the project goals and action points are generally communicated well. My comments below aim to widen the authors' perspectives on use of language, intersectionality and provide suggestions to improve clarity of key project results.

Abstract:

Reading the title, key words and abstract it is unclear that the project's focus is on race and ethnicity (which is clearly communicated in the "Introduction and context" section). Adding a sentence in the abstract stating the project focus would help with continuity and article indexing/discoverability.

Key result /take home message from the project findings needs to be more clearly communicated. Integrating the key findings into the last sentence "Here we discuss our...." should suffice.

Plain Language Summary:

As with abstract, key results needs to be communicated more explicitly (e.g. what were the key barriers identified?)

Introduction and context:

Consider using 'racialised' before Black and White as this intentionally challenges the perceptions of Whiteness as the neutral baseline.

Consider using "people of the global majority" in place of "people of colour", as this term does not essentialise people or groups and challenges the prevailing racialised White Eurocentric norms ¹.

"In the UK, where there is a lack of diversity amongst senior leaders" - please clarify context of this statement. If specific to academic sector, I suggest restructuring sentence to reflect this.

There are also compounded disadvantages for South Asian researchers in UK academia which would be important to include here and has been recognised by Wellcome's funding scheme for Black, Bangladeshi and Pakistani researchers ².

Summary of insights section:

This section could be improved by adding a couple more sentences about key project methods: Why and how the term "ethnically minoritised" has been used here.

How many researchers participated in the project?

What were the main methods used (e.g. surveys, focus groups)?

Adding a simple summary figure with key project outcomes would help readers easily access key

results and make this section clearer and more of a stand-alone article to the linked full report.

Next steps and actions:

"...but through its event-specific evaluation and feedback, it will actively monitor any potential change in the participant experience, or the composition of the conference delegate base..." This paragraph would benefit from briefly expanding on how monitoring outcomes are to be evaluated (e.g. what is the baseline and threshold of change?) and over what timeframe.

Acknowledgements:

Given the statement "We would like to thank all the researchers who participated in this work, sharing their views and experiences..." an ethics approval statement should be mentioned somewhere as personal information was gathered for this project.

References:

Overall, the article could be improved by citing a wider body of literature. As a starting point, see references 3-7 for some article suggestions that the authors can engage with which can help broaden perspectives for the "Introduction and context" section.

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Is the rationale for the Open Letter provided in sufficient detail?

Yes

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Yes

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Justice, equity, diversity and inclusion in STEM and academia; intersectionality, bias, discrimination in academia with focus on race, gender, disability, and neurodiversity.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 13 Nov 2024

Ireena Dutta

We thank Reviewer 1 (Sara Lil Middleton) for their feedback and positive and constructive comments, particularly around the use of language and additional references, which have fed into our own knowledge base. We agree that language is a powerful tool in relation to inclusion, and should be carefully considered. We have therefore included a new section to reflect the context of our decision-making around the use of language to describe characteristics and identities. We have also amended the structure of the article to improve its clarity, which addresses similar feedback from Reviewer 3.

Competing Interests: No competing interests were disclosed.
