



Commentary

Ethnic inclusivity and preventative health research in addressing health inequalities and developing evidence base.

Christopher N. Osuafor^{a,b,*}, Rajna Golubic^{c,d}, Sumantra Ray^{d,e,f}

^a Department of Clinical Neurosciences, University of Cambridge, Cambridge, United Kingdom

^b Department of Medicine for the Elderly, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

^c Wellcome Trust, MRC Institute of Metabolic Science and Department of Medicine, University of Cambridge, Cambridge, United Kingdom

^d NNEdPro Global Centre for Nutrition and Health, St John's Innovation Centre, Cambridge, United Kingdom

^e School of Biomedical Sciences, Ulster University, Coleraine, Northern Ireland

^f School of Humanities and Social Sciences, University of Cambridge, Cambridge, United Kingdom

ARTICLE INFO

Article history:

Received 23 September 2020

Accepted 18 November 2020

Available online 5 December 2020

Keywords:

Ethnicity

Health research

Health inequalities

Covid-19 has exposed the existing deep-rooted health and wider inequalities that persist in our society, especially amongst those living in the most deprived neighbourhoods and people from Black and Minority Ethnic communities [1–2]. We now have an unprecedented opportunity to foster a research culture which will proactively engage participation from those at greatest risk of adverse health outcomes, yielding much needed data and evidence to articulate unmet needs. This can potentially mitigate under-representation in population-level risk assessments as well as the planning, delivery and utilisation of health interventions and healthcare services sensitive to the needs of such minority groups.

Ethnicity is a complex construct which acts as a proxy for chronic disease phenotypes and therapeutic response, reflecting the differences in disease pathophysiology and drug metabolism [3]. Some of the well-studied examples include type 2 diabetes and hypertension. Meta-analyses of published randomised controlled trials concluded that Sodium-glucose co-transporter-2 (SGLT2) inhibitors and Dipeptidyl-peptidase-4 (DPP4) inhibitors are more effective in lowering HbA1c amongst Asians than amongst White individuals [4]. Recently, it has been highlighted that Black and Minority Ethnic populations are at a greater risk of various micronutrient deficiencies, which may underpin the mechanisms contributing to a higher risk of adverse outcomes associated with COVID-19 [5].

Under-representation of ethnic minority groups in clinical research has been widely reported [6]. The reasons for under-representation of these groups in research are complex and could be attributable to hesitancy on the part of participants, lack of inclusion by healthcare staff or researchers, often on the pretext of linguistic barriers, and other socioeconomic factors as well as entrenched structural inequalities [7]. Navigating these complexities requires considerable planning. In the planning process, we should consider that in the UK, 20.7% of the healthcare workforce comprises of non-White ethnicities [8]. In the US, 34.8% of the health workforce is made up of Hispanics, Blacks or African Americans, Asians and individuals reporting Multiple and Other races [9]. This diversity in the healthcare workforce needs to be better reflected in the leadership roles, especially in research.

Inclusive and diverse healthcare research, therefore, can be strengthened by exploring five domains. Drawing from these domains, we hereby propose a Health Research Inclusivity Model (Fig. 1) which is centred around increasing Research Participation and developed through Research Leadership, Research Policy, Research Funding and Research Reporting.

Addressing ethnic complexities in research should start with improving Research Participation by involving under-represented groups in all primary research, which will inadvertently lead to developing evidence for clinical practice. Improvements like targeted outreach programs are required to increase participation of all groups within the population in research. These improvements will help create an inclusive health service agenda and treatment guidelines

* Corresponding author.

E-mail address: co400@cam.ac.uk (C.N. Osuafor).

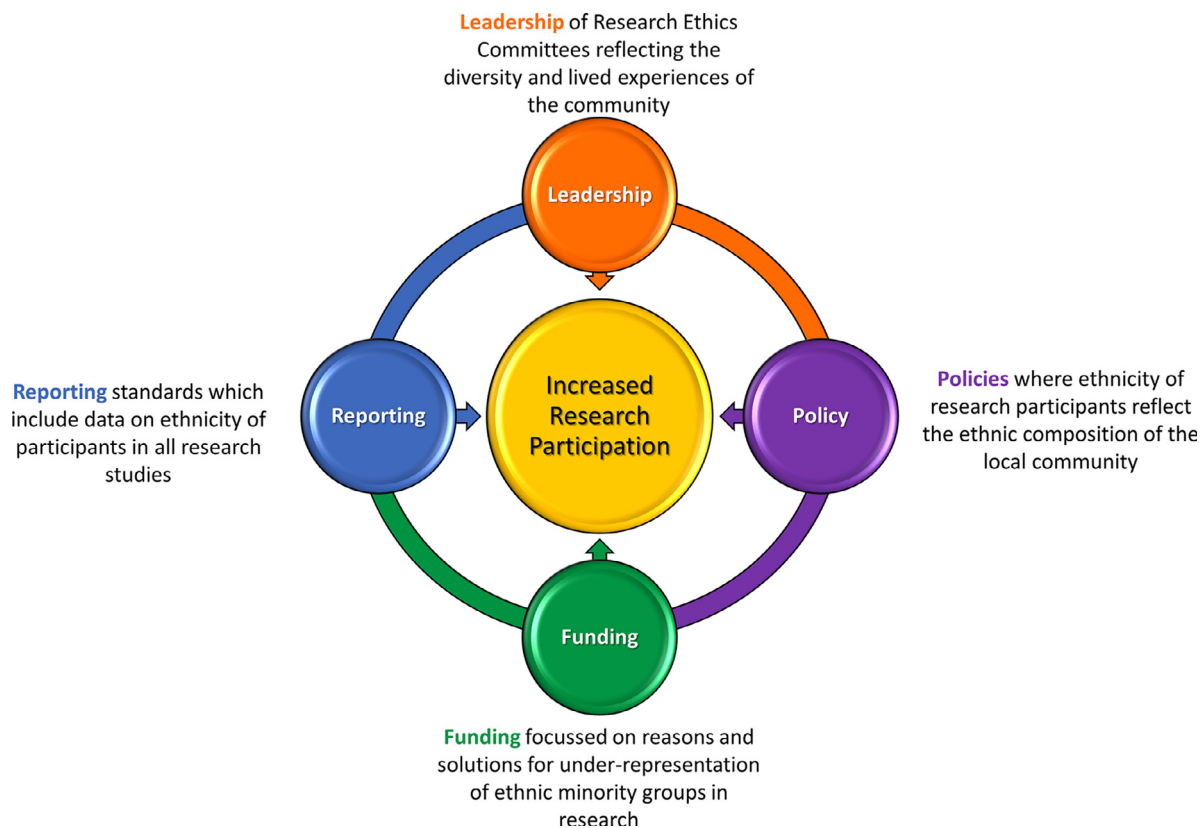


Fig. 1. Health Research Inclusivity Model.

which would consider ethnicity-specific risk of health outcomes and provide the best possible support for all service users.

In relation to Research Leadership, there should be promotion of practices that ensure regional Research Ethics Committees' staffing reflects the diversity of the community. Those in senior management roles and leadership in these committees should take into consideration the lived experiences of the ethnic minorities in this section of the workforce. This leadership should also lay emphasis on preventative health research that will target behaviour, social and physical factors and health-related policies that negatively affect these communities.

We call for research institutions to have a Research Policy where researchers are mandated to aim for the participants in their research to match, at least in percentage terms, the overall ethnic composition of its local community. This should be backed up by training sessions on how to reach out to minority ethnic communities and those from most deprived neighbourhoods to invite them to participate in research. To ensure its implementation, independent Research Ethics Committees should provide oversight, ensuring that these under-represented groups are considered at planning and recruitment stages of research development. To ensure that there is no discrimination based on language, standard regulatory approval should explore actions researchers and research organisations take to include non-English speakers who would otherwise meet their proposed inclusion criteria.

Funding agencies also have a role to play in addressing health inequalities through Research Funding. The Centre for Black and Minority Ethnic Health supported by the National Institute of Health Research, which aims to address inequalities in health care access and health outcomes of ethnic and migrant communities, is well within this remit [10]. Research themes focussed specifically on exploring the complex reasons for under-representation of ethnic minority groups in research and providing solution to the barriers to participation in research should be priority. Consideration should be given to explore patient, physician or healthcare delivery factors that address any potential delay in diagnosis, delay in treatment initiation

or treatment discontinuation amongst ethnic minorities from child-birth to palliative care.

Finally, standard methods of Research Reporting for all research studies, should mandatorily include data on ethnicity in the table containing socio-demographic characteristics, not just age and sex. Also, reporting by Research Ethics Committees should include data on Blacks, Asians, Hispanics, Multiple and Other races involvement as a percentage of all research approved over a time-period (annually or bi-annually).

In conclusion, encouraging ethnic and socio-cultural inclusivity in the core activities of researchers, research agencies and healthcare organisations is fundamental in addressing health inequalities and improving our evidence base. The Health Research Inclusivity Model described presents recommendations which will help navigate this challenge.

Funding

Christopher N. Osuafor was supported by the Cambridge BHF Centre of Research Excellence (CRE, Centre Code: RE/18/1/34,212). Rajna Golubic was supported by a National Institute of Health Research (NIHR) Academic Clinical Fellowship. Sumantra Ray was supported by NNEd-Pro core funding held with the British Dietetic Association (BDA).

Disclaimer

The content of this commentary is solely the responsibility of the authors and does not necessarily represent the official views of the Cambridge BHF CRE, NIHR, NNEdPro or BDA.

Declaration of Competing Interest

Sumantra Ray is the Founding Chair and Executive Director of the NNEdPro Global Centre for Nutrition and Health. The other authors have nothing to disclose.

Acknowledgement

We would like to acknowledge Dr Anu Obaro for providing advice on the design of the Health Research Inclusivity Model.

References

- [1] Pareek M, Bangash MN, Pareek N, Pan D, Sze S, Minhas JS, et al. Ethnicity and COVID-19: an urgent public health research priority. *Lancet* 2020;395(May 2 (10234)):1421–2.
- [2] Pan D, Sze S, Minhas JS, Bangash MN, Pareek N, Divall P, et al. The impact of ethnicity on clinical outcomes in COVID-19: a systematic review. *EClinicalMedicine* 2020;23:100404.
- [3] Chaturvedi N, Eastwood S. Prescribing by ethnicity: (im)precision medicine? *Diabetes Care* 2020;43(8):1687–9.
- [4] Ramamoorthy A, Pacanowski MA, Bull J, Zhang L. Racial/ethnic differences in drug disposition and response: review of recently approved drugs. *Clin Pharm Ther* 2015;97(3):263–73.
- [5] McAuliffe S, Ray S, Fallon E, Bradfield J, Eden T, Kohlmeier M. Dietary micronutrients in the wake of COVID-19: an appraisal of evidence with a focus on high-risk groups and preventative healthcare. *BMJ Nutrition, Prevent Health* 2020;3(1):93–9.
- [6] Smart A, Harrison E. The under-representation of minority ethnic groups in UK medical research. *Ethn Health* 2016;22(1):65–82.
- [7] Treweek S, Forouhi NG, Narayan KMV, Khunti K. COVID-19 and ethnicity: who will research results apply to? *Lancet* 2020;395(10242):1955–7.
- [8] Gov.uk. Ethnicity facts and figures. NHS workforce: <https://www.ethnicity-facts-figures.service.gov.uk/workforce-and-business/workforce-diversity/nhs-workforce/latest> (accessed August 22, 2020).
- [9] Bhw.hrsa.gov. <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/diversityush-ealthoccupations.pdf> (accessed August 24, 2020).
- [10] Centre for BME Health – Home – The Centre for Black and Minority Ethnic (BME). <https://centreforbmehealth.org.uk/> (accessed August 10, 2020).