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A global language for hearing research

Experts in hearing loss at the University of Nottingham have solved an important conundrum in their field of research – how to accurately translate results from patients' hearing questionnaires carried out in different languages and cultures across the world.

The team at the NIHR Nottingham Biomedical Research Centre has led an international project to examine clinical questionnaires and guidelines from non-English speaking hearing research centres and summarise them for the global audiology community.

The resulting Good Practice Guide produced for the International Collegium of Rehabilitative Audiology will be a vital tool in helping researchers across the world to compare clinical diagnoses and outcomes of clinical trials. The guidelines are published in the International Journal of Audiology.

Leading the research, Professor Deborah Hall, said: "More than 5% of the world's population – 360 million people – has disabling hearing loss. Up to now there has been no internationally standardised process for how to translate and adapt hearing-related questionnaires for different languages and cultures. Lots of different types of hearing questionnaires exist across the work and in order to make global research into hearing loss meaningful it is vital that we have a tool to interpret questionnaire responses from patients and extrapolate results in an accurate way.

For example, one hearing questionnaire developed in the UK asks: 'You are outdoors in an unfamiliar place. You hear someone using a lawnmower. You can't see where they are. Can you tell right away where the sound is coming from?', but this question does not readily transfer to places like Hong Kong and Singapore where most people don't have a garden.

The guidelines help to identify these 'problematic' questions and to help researchers work out a good alternative.

The research involved teams from all over the world including USA, India, Spain and China. Also taking part was Nuffield Research Placements student, 17 year old Leila Hamdache, a sixth form student at Carlton Academy in Nottingham. Leila said:

"Through research and discussion with academics, I helped develop the recommended translation guidelines and even got the chance to write a section for the final manuscript. Being part of an academic manuscript whilst I was still an A-level student was an amazing experience that taught me step-by-step the way scientific work is produced, and also persuaded me to successfully apply for a Maths degree at the University of York. A Nuffield Research Placement is something which I honestly recommend for any student interested in STEM subjects."

More follows...

Sharmila Metcalf, Head of Nuffield Research Placements at the Nuffield Foundation said: “We are delighted that Leila has made such a valuable contribution to this project, which will benefit the audiology community worldwide. Her experience demonstrates how talented our students are, and what a difference they can make to high-impact research projects. Providing a Nuffield Research Placement is a great way for employers to forge strong links with local schools and colleges, and we are grateful to the NIHR Nottingham Biomedical Research Centre for giving Leila this opportunity.”

The project was supported by the European research network TINNET and the International Collegium of Rehabilitative Audiology (ICRA).

—Ends—

More information is available from **Professor Deborah Hall**, NIHR Nottingham Biomedical Research Centre, on **+44 (0) 115 823 2644** or email deborah.hall@nottingham.ac.uk or **Emma Rayner** in the Communications Office at The University of Nottingham, on **+44 (0)115 951 5793**, emma.rayner@nottingham.ac.uk

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Notes for editors:

The **NIHR Nottingham Biomedical Research Centre (BRC)** was established in April 2017 to improve the health of millions of people by translating world-leading research into breakthrough treatments, innovative technologies and new medicines. It is carrying out research into six areas of health:

- hearing
- gastrointestinal and liver diseases
- musculoskeletal (muscle and joint-related) disease
- mental health and technology
- respiratory (lung) disease
- Magnetic Resonance Imaging (MRI) which supports all areas of research

The Nottingham BRC is a partnership between Nottingham University Hospitals NHS Trust and the University of Nottingham, supported by Nottinghamshire Healthcare NHS Foundation Trust and Sherwood Forest Hospitals NHS Foundation Trust. It is funded by the National Institute of Health Research (NIHR) – the research arm of the NHS. It is one of only 20 centres around the country set up to translate research into life-saving treatments for the future.

The University of Nottingham

The University of Nottingham is a research-intensive university with a proud heritage, consistently ranked among the [top one per cent in the world](#). Studying at the University of Nottingham is a life-changing experience and we pride ourselves on unlocking the potential of our 44,000 students — Nottingham was named [University of the Year for Graduate Employment](#) in the *2017 Times* and *Sunday Times Good University Guide*, was awarded gold in the [TEF 2017](#), and features in the top 20 of all [three major UK rankings](#). We have a pioneering spirit, expressed in the vision of our founder Sir Jesse Boot, which has seen us lead the way in establishing campuses in China and Malaysia — part of a globally connected network of education, research and industrial engagement. We are ranked eighth for research power in the UK according to [REF 2014](#). We

have [six beacons of research excellence](#) helping to transform lives and change the world; we are also a major employer and industry partner — locally and globally.

Nuffield Research Placements are funded by the Nuffield Foundation as part of its mission to improve educational opportunity and social well-being across the UK. Each year, over 1,100 post-16 students undertake research projects designed to develop their skills and confidence in quantitative and scientific methods. Placements take place in the summer holidays, and are available across the UK, in universities, commercial companies, voluntary organisations and research institutions. Find out more at www.nuffieldfoundation.org/nrp