

Tinnitus in 2021. Time to consider evidence-based digital interventions

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The findings on the prevalence of tinnitus in Europe presented by Biswas and colleagues¹ in this issue of *The Lancet Regional Health – Europe* confirm that tinnitus is a very common condition among adults with a point prevalence of almost 15% across 12 European Union member states. As clearly described in the study, most people with tinnitus are not much disturbed by the condition but a significant minority is (at least 1% of the population). It has been long known that severe tinnitus exists across the globe, however, this study highlights that there might be differences in prevalence within Europe even if there are no well-established reasons for why this is the case.

Based on the current knowledge, several important action points can be put forward to improve the clinical management of tinnitus, including diagnostics and rehabilitation. First, consensus on definitions is needed and the study clearly highlights that this has been problematic previously with definitions differing across studies. Second, there is a need to establish a core set of diagnostic procedures as the ones used today most likely vary between countries if present at all. For example, the most feasible way to measure tinnitus distress is in most cases validated questionnaires. Such measures exist e.g.,² but are not yet fully validated for use in different languages and cultures within Europe. Third, while there are several systematic reviews of the literature,³ and examples of treatment guidelines,⁴ there is much variation.⁵ Indeed, there is a need to reach consensus in Europe on how to help persons with tinnitus in terms of assessment and treatment. It is not an overstatement to conclude that access to care is unequal within Europe and overall persons with severe tinnitus have a low chance of reaching specialist care and receive effective treatment in most places in Europe.

The present study adds to the evidence on tinnitus treatments by reporting the low overall proportion of subjects that had at least one clinical visit to address their symptoms (6.8%). Future research needs to add more knowledge on the quality of these clinical visits as they are likely to differ. In other words, visiting a clinic because of tinnitus can in some places result in prescription of a medication that is not evidence-based and there may also be differences in quality with regards to medical

investigations such as hearing tests.⁵ More studies on referral patterns and services available to patients are needed.

The wider use of e-health solutions, also driven by the pandemic, has emerged as a possible way to reduce the treatment-demand gap and to reach less favoured regions and persons with severe tinnitus across Europe. Almost 20 years back researchers in Sweden developed an internet-based treatment for tinnitus distress based on work done on face-to-face cognitive behaviour therapy (CBT).⁶ Following the first controlled studies on internet CBT,⁷ the treatment programme was translated, and has now been tested in Australia, Germany, the United Kingdom, the USA and a Spanish version is available for Spanish-speaking patients around the world. An interesting aspect of the English studies is that the internet CBT treatment has been delivered by audiologist and not clinical psychologists making it more scalable as few clinical psychologists work with tinnitus patients. Systematic reviews of internet CBT suggest significant treatment effects in controlled trials, equal effects as in face-to-face CBT, and that the treatment can work in more regular clinical settings.⁸ The point here is not to review the evidence in favour of internet CBT in general but rather to highlight the possibilities to make an arguably evidence-based treatment (CBT) more scalable for the sufferers of tinnitus across Europe. In light of the still ongoing COVID-19 pandemic the need for digital treatments that can be accessed from home has become more urgent.⁹ There are however some challenges. First legal requirements differ within Europe and it can be hard to provide treatments across country borders in routine care services even if it is technically easy. Second, medical assessment can be difficult even if procedures for online hearing tests and red flag screening measures could be a safe way to assess patients. There are most likely other unresolved issues with providing digital care both within and across borders.

The present study has some important limitations that future research should complement. While the authors describe the methods used and their definitions, they do not comment on the potential problem with self-reported questionnaires versus structured clinical interviews, with more accurate information when interviews complement questionnaires. Another limitation is the lack of medical examinations on for example

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level of hearing loss as there are now online screening procedures for testing hearing. Finally, the cross-sectional design is a limitation as a recent study suggested that persons who report tinnitus may even forget that they have had it four years later,¹⁰ and test-retest procedures could be used to validate prevalence estimates.

To conclude, the now established epidemiological results show that (severe) tinnitus is common. Across Europe services are not well developed and a vast majority of patients do not receive adequate care. Future research on the availability and modes of care are necessary. One possible way to reduce the treatment-demand gap could be to disseminate digital treatments, but more data is needed on their safety and effectiveness in well-controlled trials.

Contributors

GA as the sole author of this comment, contributed to all aspects of this Commentary.

Declaration of Interests

The author has published self-help books on tinnitus. No other COI exist.

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