

Researchers study differences in the prevalence of headaches worldwide

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Researchers around the world are working in a joint effort to create an international research tool for understanding and combating headaches. Led by researchers from the Norwegian University of Science and Technology, the group has developed a new questionnaire designed to provide comparable results across nations and cultures.

"There are huge differences in the prevalence of [headaches](#) worldwide, but we don't know if this is due to genetic, cultural or economic differences," says Lars Jacob Stovner, head of the Norwegian Advisory Unit on Headaches at St. Olavs Hospital and the Norwegian University of Science and Technology (NTNU) in Trondheim.

Researchers need results that are as exact and comparable as possible to answer questions about the prevalence of headaches and their causes. This has proven to be difficult, however.

Research results about headaches have been collected from all over the world. But because the questions vary or they are asked in different ways, the results are not comparable. Also, the results must be interpreted in the context of each country. Researchers have now addressed this issue with the publication of a questionnaire in the *Journal of Headache and Pain*.

"The purpose of this project was to develop a standardized and better approach than what is currently used," says Dr Timothy J. Steiner at Imperial College in London. He is also a professor at the Department of

Neuroscience at NTNU.

Patients answer questions about their family situation, health, perception of the quality of life and a variety of other matters. The answers are designed so that researchers can compare results regardless of the countries surveyed.

Common social problem

Headaches affect people everywhere. In addition to causing severe pain for some sufferers, they represent an economic burden. Headaches can lead to reduced work capacity, work absenteeism, a reduced ability to study and a variety of other effects that have consequences for society.

Migraine alone is probably the seventh most common cause of disability, according to the latest figures in the WHO report "Global Burden of Disease (GBD) 2010 study", where Stovner and Steiner provided data for the section on headaches. The GBD 2010 results were recently presented in a whole issue of the renowned medical research magazine the *Lancet*.

The project is part of a global campaign against headaches, led by the non-profit foundation "Lifting the Burden", which has an official connection to the World Health Organization (WHO).

Culturally neutral is impossible

The purpose has been to develop approaches that provide results that are as comparable as possible.

But Steiner says it is impossible to create a completely culturally neutral method for evaluating headache prevalence.

There is simply too much variation between the conditions in countries such as Norway and Ethiopia.

If you ask someone in Norway if they have been absent from work because of headaches, you will probably get far more yes answers than in Ethiopia.

"As one colleague put it: If you have to plow the fields, then you have to plow the fields," says Steiner.

In Norway, you get paid sick leave if you are away from work, which means the threshold for staying at home is low. In Ethiopia, you go to work in the fields because you have to.

But the researchers have come a long way in their efforts to make the procedure as uniform and culturally neutral as possible. Thus they are likely to get far more comparable results than using other methods.

A question is not a question

The way you ask a question is also crucial. If you ask a Norwegian whether headaches have affected family planning, this would be perceived as a more or less voluntary choice. But the same question might be perceived differently if asked in a country where female fetuses might be aborted for cultural reasons, or in a country where contraception is not allowed.

Thus the new questionnaire is supplemented by a series of recommended approaches to be used in the survey. There are many factors that have to be considered.

If you go canvassing and ask people directly how they feel, you may get completely different results than if you phone them. In some countries it

is impossible to contact people by knocking on doors. When you use the phone, you only get in touch with people with phones and those who are able to answer them.

If you ask someone if they have a headache on a Saturday morning, you may get very different answers than on a normal working day. A phone survey in the morning in some countries may give you answers from the mothers who are staying at home, but you will not contact the men who are at work.

There are many factors to consider.

Learning process

The questionnaire and the recommended approaches are the result of reviewing many other surveys and available literature. While the researchers are very experienced, there has been a lot of trial and error. In 2011 they held a 3-day conference in Trondheim with an international group of experts where they discussed the earlier versions of the questionnaire. They then developed an improved version.

"Representatives from all six regions of the World Health Organization have participated," says Stovner.

Steiner and Stovner have worked together on the project for ten years. They have projects in 30 countries that will continue for three to four years. "It has been a [learning process](#)," says Steiner.

The international tool will be used by all of the research groups involved, but the goal is for the questionnaire and the recommended approaches to be used throughout the world so that it is possible to obtain comparable results.

The questionnaire has been translated from English into a number of different languages, Urdu (for a study in Pakistan), Arabic (Saudi Arabia and Morocco) , Mandarin (China), Kannada (Southern India), Spanish (Spain, Peru and Guatemala), Amharic (Ethiopia), Tonga, Bemba and Nyanja (Zambia), Nepalese (Nepal), Russian (Russia), German (Germany and Austria), Lithuanian (Lithuania), Dutch (Netherlands), French (France) and Italian (Italy).

The answers will be useful for both specialists and epidemiologists, but most of all, for headache sufferers.

More information: "Diagnosis, prevalence estimation and burden measurement in population surveys of headache: presenting the HARDSHIP questionnaire." Timothy J. Steiner et al. *Journal of Headache and Pain* 2014, 15:3 [DOI: 10.1186/1129-2377-15-3](https://doi.org/10.1186/1129-2377-15-3)

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