

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Increase in self-reported migraine prevalence in the Danish adult population: a prospective longitudinal population based study
<b>AUTHORS</b>	Han Le, Peer Tfelt-Hansen, Axel Skytthe, Kirsten Ohm Kyvik and Jes Olesen

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Zaza Katsarava University of Essen, Department of Neurology
<b>REVIEW RETURNED</b>	10/03/2012

<b>THE STUDY</b>	<p>Authors present a large population based prospective investigation in twins. This is a huge sample size, which is a real strength. A real problem is the methodology, which is based on few self reported questions. I assume according to the questions that for migraine specificity is high but sensitivity is low. for visual aura the sensitivity is high but specificity is low. E.g. if you ask do you have migraine this means if someone has been diagnosed to have migraine will report yes, but many people who probably have migraine but did not receive the diagnosis might say no, I contrast if you ask do you have visual disturbances, many people will say yes and they will be considered as having aura, which in reality might not be true.</p> <p>Therefore I think the conclusion of the study is too strong.</p> <p>I think the study is worth be published, but the conclusion and the title should be changed - e.g. like increase in self reported migraine or something like this</p>
<b>RESULTS &amp; CONCLUSIONS</b>	<p>Therefore I think the conclusion of the study is too strong.</p> <p>I think the study is worth be published, but the conclusion and the title should be changed - e.g. like increase in self reported migraine or something like this</p>

<b>REVIEWER</b>	Cristina Tassorelli MD, PhD National Neurological Institute C. Mondino Foundation, University of Pavia, Italy No competing interests
<b>REVIEW RETURNED</b>	10/04/2012

<b>THE STUDY</b>	Outstanding work. It is not clear whether the data from the 1994 study have been published and whether the subjects answering the questionnaire in 1994 are/might be the same as in 2002. It is not
------------------	---

	clear what is the added value of including in the calculation also people aged above 41 years of age in the 2002 sample
<b>REPORTING &amp; ETHICS</b>	A paragraph on research ethics is missing
<b>GENERAL COMMENTS</b>	On page 10, line 5: please check sentence. On page 13, line 1: previous instead of previously

<b>REVIEWER</b>	Prof. Hartmut Göbel Chairman Kiel Headache and Pain Centre Kiel, Germany  There are no competing interests
<b>REVIEW RETURNED</b>	15/04/2012

<b>GENERAL COMMENTS</b>	The study examines the change of migraine prevalence using a prospective longitudinal population-based design. The data, on which it is based, are unique and representative regarding quality and quantity. The methods are described in detail and are precise. The results show a meaningful increase in the lifetime prevalence of migraine in Denmark from 1994 to 2002. This is potentially confounded by the problem, whether the prevalence of migraine as a disorder has actually increased, or whether an increased knowledge and awareness of the population about diagnosis and self-classification was responsible. This potential confound is also considered by the authors, their conclusions are justified and plausible.
-------------------------	--

<b>REVIEWER</b>	Dominique Valade Head of department Emergency headache centre Lariboisiere Hospital 75010 Paris France
<b>REVIEW RETURNED</b>	18/04/2012

<b>GENERAL COMMENTS</b>	Very usefull study to follow the evolution of the desease and to see if there is a decrease of automedication
-------------------------	---

### VERSION 1 – AUTHOR RESPONSE

Reviewer: Zaza Katsarava  
University of Essen, Department of Neurology

Authors present a large population based prospective investigation in twins. This is a huge sample size, which is a real strength.

A real problem is the methodology, which is based on few self reported questions. I assume according to the questions that for migraine specificity is high but sensitivity is low. for visual aura the sensitivity is high but specificity is low. E.g. if you ask do you have migraine this means if someone has been diagnosed to have migraine will report yes, but many people who probably have migraine but did not recieve the diagnosis might say no,

I contrast if you ask do you have visual disturbancies, many people will say yes and the will be considered as having aura, which in reality might not be true.

Therefore I think the conclusion of the study is too strong.

I think the study is worth be published, but the conclusion and the title should be changed - e.g. like increase in self reported migraine or something like this

R: We have included "self-reported" in the title as well as the conclusion. (p.1 l.1; p.13 l.25)

Reviewer: Cristina Tassorelli MD, PhD

National Neurological Institute C. Mondino Foundation, University of Pavia, Italy

Outstanding work. It is not clear whether the data from the 1994 study have been published and whether the subjects answering the questionnaire in 1994 are/might be the same as in 2002. It is not clear what is the added value of including in the calculation also people aged above 41 years of age in the 2002 sample

R: The data from 1994 has not previously been published. We have commented the subjects' participation in both surveys. (p.11,l.23-p12,l.1)

One of the aims of this study was to estimate the age-specific prevalence and since migraine does not cease at the age of 40, we believe it is important to study migraine in the older population as well.

On page 10, line 5: please check sentence.

R: We have corrected the sentence.(p.11, l.5)

On page 13, line 1: previous instead of previously

R: We have corrected the sentence.(p.14,l.2)

A paragraph on research ethics is missing

R: We have commented this.( p.14,l.23-25)

Reviewer: Prof. Hartmut Göbel

Chairman Kiel Headache and Pain Centre Kiel, Germany

The study examines the change of migraine prevalence using a prospective longitudinal population-based design. The data, on which it is based, are unique and representative regarding quality and quantity. The methods are described in detail and are precise. The results show a meaningful increase in the lifetime prevalence of migraine in Denmark from 1994 to 2002. This is potentially confounded by the problem, whether the prevalence of migraine as a disorder has actually increased, or whether an increased knowledge and awareness of the population about diagnosis and self-classification was responsible. This potential confound is also considered by the authors, their conclusions are justified and plausible.

R: Thank you very much for your comments.

Reviewer: Dominique Valade

Head of department Emergency headache centre Lariboisiere Hospital 75010 Paris France

Very usefull study to follow the evolution of the desease and to see if there is a decrease of automedication

R: R: Thank you very much for your comments.