

## 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>	<b>A review of content, quality and readability of websites addressing fibromyalgia.</b>
<b>AUTHORS</b>	Daraz, Lubna; MacDermid, Joy; Wilkins, Seanne; Gibson, Jane; Shaw, Lynn

### VERSION 1 - REVIEW

<b>REVIEWER</b>	<b><i>Bruce Mason</i></b> Research Fellow, University of Edinburgh No competing interests.
<b>REVIEW RETURNED</b>	17-May-2011

<b>THE STUDY</b>	<p>Study design: I answered no for a fairly technical reason. The authors have focused purely on written content as if the web were a published book. This technically answers their research question but the research question is itself inadequate. No consideration has been taken of issues beyond textual content. E.g.:</p> <ul style="list-style-type: none"><li>usability - how easy is the site to navigate</li><li>Accessibility - does the site use appropriate colour schemes, fonts and so on.</li><li>Linking - does this follow best practice?</li><li>Web standards - how well does the site conform to w3c standards</li></ul> <p>Furthermore this means that they are not assessing multimedia - e.g. use of video, images, diagrams</p> <p>It also means that they are not assessing whether the site has peer to peer feedback (aka web2.0) components and so on.</p> <p>Finally, the web is a dynamic medium so a content analysis performed at one time may be invalid shortly afterwards.</p> <p>The methods thus are really only really adequate to certain types of website and this makes it hard to sustain their conclusion. After all readers do not necessarily read the web as if it were book checked out from the library.</p> <p>Finally the self-acknowledged weakness of the search strategy (using just google just once) could be easily addressed with some supplemental searches to assess how common the top 25 sites are across different search engines.</p> <p>The supplemental documents question is confusing. No details need adding to the ms.</p> <p>Note that many of the questions don't pertain to this ms.</p>
<b>GENERAL COMMENTS</b>	I think this is an interesting and well-conducted piece of research. The issue of the content online for patients and carers is in my

	<p>opinion crucially important. That said, I think there is an important missing element here which is that a simple content analysis of the text of a web site captures only part of how usable a website is. This article does not perform any sort of usability analysis (e.g. fonts, colours, web standards compliance, linking practices) nor does it seem to engage with media other than text (images, video) nor any peer-to-peer feedback via the site.</p> <p>Although the material here is top class as far as it goes, I don't think it goes far enough. There's also no handling of the dynamism of web pages, especially user-generated sites like Wikipedia. A text content analysis done on one day's version of the site may be invalid the next day.</p> <p>For these reasons I would like to see one of two things. If the original research can answer the questions about usability then I think that would be great. Otherwise a statement about how these issues might bear upon the findings listed in the article is necessary in my opinion. Doing neither risks, if you pardon the cliché, comparing apples and jellyfish.</p>
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<b>REVIEWER</b>	<p><b>Sue Childs</b>          Research Fellow          Northumbria University          UK          No competing interests</p>
<b>REVIEW RETURNED</b>	23-May-2011

<b>THE STUDY</b>	<p>Are the participants adequately described, their conditions defined, and the inclusion and exclusion criteria described? Not applicable          Are the patients representative of actual patients the evidence might affect? Not applicable          Are the methods adequately described? More information on the quality appraisal tools could have been given. The URL of the DISCERN website is not provided. On page 6 line 57 the authors state that the Quality Checklist was available in Appendix C. This was missing from my review copy. It was not clear how the figures for the Quality Checklist in Table 1 was arrived at. The authors could have discussed further their point on page 15 lines 10-12. There would seem to be a difference in comprehensibility between a website that uses medical terminology and then defines these terms in simple lay language and websites that use medical terminology without such explanation. But would this difference be reflected in the 'Flesch Reading Ease' test?          Are the statistical methods described? These are only noted briefly on page 8 line 15-16, but no further details are provided.          Do any supplemental documents e.g. a CONSORT checklist, contain information that should be better reported in the manuscript, or raise questions about the work? Not applicable</p>
<b>REPORTING &amp; ETHICS</b>	<p>Is the article reported in line with the appropriate reporting statement or checklist (e.g. CONSORT)? Not applicable          Are research ethics (e.g. consent, ethical approval) addressed appropriately? Not applicable</p>
<b>GENERAL COMMENTS</b>	<p>A concern with the methodology was the lack of validation of the authors' own Quality Checklist.</p>

**VERSION 1 – AUTHOR RESPONSE**

Reviewer 1: Bruce Mason, Research Fellow, University of Edinburgh.

No competing interests.

Study design: the authors have focused purely on written content as if the web were a published book. This technically answers their research question but the research question is itself inadequate. No consideration has been taken of issues beyond textual content. E.g.:

usability - how easy is the site to navigate

Accessibility - does the site use appropriate colour schemes, fonts and so on.

Linking - does this follow best practice?

Web standards - how well does the site conform to w3c standards

Furthermore this means that they are not assessing multimedia - e.g. use of video, images, diagrams

It also means that they are not assessing whether the site has peer to peer feedback (aka web2.0) components and so on.

Finally, the web is a dynamic medium so a content analysis performed at one time may be invalid shortly afterwards.

The methods thus are really only really adequate to certain types of website and this makes it hard to sustain their conclusion. After all readers do not necessarily read the web as if it were book checked out from the library.

Finally the self-acknowledged weakness of the search strategy (using just google just once) could be easily addressed with some supplemental searches to assess how common the top 25 sites are across different search engines.

I think this is an interesting and well-conducted piece of research. The issue of the content online for patients and carers is in my opinion crucially important. That said, I think there is an important missing element here which is that a simple content analysis of the text of a web site captures only part of how usable a website is. This article does not perform any sort of usability analysis (e.g. fonts, colours, web standards compliance, linking practices) nor does it seem to engage with media other than text (images, video) nor any peer-to-peer feedback via the site.

Although the material here is top class as far as it goes, I don't think it goes far enough. There's also no handling of the dynamism of web pages, especially user-generated sites like Wikipedia. A text content analysis done on one day's version of the site may be invalid the next day.

For these reasons I would like to see one of two things. If the original research can answer the questions about usability then I think that would be great. Otherwise a statement about how these issues might bear upon the findings listed in the article is necessary in my opinion. Doing neither risks, if you pardon the cliché, comparing apples and jellyfish.

Author response to reviewer 1.

Thank you for your feedback. All of your comments are valid and important. Please see below for our responses to your comments. Where necessary, we have made changes according to your suggestions in the highlighted sections in the article in "yellow". We hope these will be satisfactory for you.

- The Quality checklist has a category to test "usability". We have used that category to evaluate partially the usability of a website.

- We have indicated clearly that websites were evaluated based on two quality tools and the criteria recommended by those tools. The criteria that the reviewer mentioned ( i.e. accessibility, linking) were not unfortunately included in the tools. As a result, we were unable to test these aspects of quality. However, we do believe that using both tools provided a more comprehensive nature of the overall quality of a website. Using one tool may not have produced such results. As indicated in the references, many authors have designed similar studies using one or two tools and we have mentioned that we have consulted those studies for consistency in methodologies.
- As discussed in the limitations, the search strategy was purely based on people's preference of Google as a major search engine. The reviewer's suggestions are valuable and can be incorporated for future studies where we recommend a more detailed evaluation of the websites
- The scope of our study was not only to evaluate usability rather to evaluate overall quality from a lay person's perspective. This was one of the first researches to assess the quality of websites that provide fibromyalgia related information for patients. As a result, we stated that further work is needed before we have a full understanding of the extent of the usability of a website providing fibromyalgia information.
- Finally, on page 7, first paragraph, we have provided clear definition of content, quality and readability. This indicates the scope of our study. However, we have recognized the limitations in our study. We have thus recommended for further studies that would address the concerns by reviewer 1. In fact, we are in the process of designing another study that would address each of the limitations of this present study.
- Please see page 7, 13, 14 and 15 for changes in "yellow" highlighted sections according to your comments.

Reviewer 2: Sue Childs  
 Research Fellow  
 Northumbria University  
 UK  
 No competing interests

More information on the quality appraisal tools could have been given. The URL of the DISCERN website is not provided. On page 6 line 57 the authors state that the Quality Checklist was available in Appendix C. This was missing from my review copy. It was not clear how the figures for the Quality Checklist in Table 1 was arrived at. The authors could have discussed further their point on page 15 lines 10-12. There would seem to be a difference in comprehensibility between a website that uses medical terminology and then defines these terms in simple lay language and websites that use medical terminology without such explanation. But would this difference be reflected in the 'Flesch Reading Ease' test?  
 Statistical methods are only noted briefly on page 8 line 15-16, but no further details are provided.

A concern with the methodology was the lack of validation of the authors' own Quality Checklist.

Author response to reviewer 2.

Thank you for your valuable feedback. Please see below for our responses to your comments. We hope, all the changes would be acceptable to you.

- More information on the quality appraisal tools could have been given.

Response: more than one page (pg 6 to 7) has been dedicated to describe the tools. As well, figure 2 and 3 provides a clear representation of the tools. We are not sure how much detail you would like to see. For a typical article of this nature, provides very short description of the tools used and references are provided for further details.

- The URL of the DISCERN website is not provided.  
 The URL has been added in page 6 and in reference

- On page 6 line 57 the authors state that the Quality Checklist was available in Appendix C. Our apology. This was an error.
- It was not clear how the figures for the Quality Checklist in Table 1 were arrived at. Please see highlight on page 8 in “green”.
- The authors could have discussed further their point on page 15 lines 10-12. Please see page 15 for highlighted conclusion in “green”.
- There would seem to be a difference in comprehensibility between a website that uses medical terminology and then defines these terms in simple lay language and websites that use medical terminology without such explanation. But would this difference be reflected in the 'Flesch Reading Ease' test?  
This has been discussed in “Limitations” on page 15 in green highlight.
- Statistical methods are only noted briefly on page 8 line 15-16, but no further details are provided. Please see highlight on page 8 in “green”.
- A concern with the methodology was the lack of validation of the authors’ own Quality Checklist. This limitation is discussed in “Discussion” on page 13 in “yellow” highlighted section as well in “Limitations” on page 14-15.