

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

#### Title (Provisional)

Are plain language summaries published in health journals written according to instructions and health literacy principles? A systematic environmental scan

#### Authors

Gainey, Karen; Smith, Jenna; McCaffery, Kirsten; Clifford, Sharon; Muscat, Danielle

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### VERSION 1 - REVIEW

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<b>Reviewer</b>	<b>1</b>
<b>Name</b>	<b>Gidal, Barry E</b>
<b>Affiliation</b>	<b>University of Wisconsin-Madison</b>
<b>Date</b>	<b>04-Jun-2024</b>
<b>COI</b>	<b>None</b>

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Interesting article. The methods seem quite appropriate, however I do recognize that the authors only sampled a limited number of biomedical journals that have long required Lay Summaries (e.g Epilepsy and Behavior Reports).

In any event, these findings do not surprise me. We clearly do not spend nearly enough time educating trainees to generate PLS.

One topic not addressed by the authors is the possible role of AI platforms in generating PLS.

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<b>Reviewer</b>	<b>2</b>
<b>Name</b>	<b>Lee-Ngow, Zemirah</b>
<b>Affiliation</b>	<b>University of California San Diego, Library</b>
<b>Date</b>	<b>20-Jun-2024</b>
<b>COI</b>	<b>None.</b>

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I'd like to thank the editor for giving me the opportunity to review this manuscript. This three-part systematic environmental scan reviewed 26 health journals for the 1) inclusion

frequency of Plain Language Summaries (PLSs) within these journals; 2) level of compliance (or lack of) PLSs to PLS author instructions; and 3) a health literacy assessment of the PLSs.

Comments:

1) I noted numerous grammatical, spelling, syntax, and citation errors throughout this manuscript that I tried to ignore at the onset but found it more and more noticeable as I progressed. For example a few in the first few pages:

a. P.2 line 54-56 syntax errors “...highlights the need for a better ways to support authors adhere to PLS...”

b. P. 3; line 4 spelling “Artcile Summry”

c. P. 3; line 29 lack of citation for Malick et al. study

2) Inclusion Criteria and Selection of Health Journals. Inclusion criteria is reported (P.4; line 28-40) but not exclusion specifically, except for Cochrane’s Database of SRs because but for a systematic review, a true set of inclusion/exclusion criteria should be defined at the onset. The authors did include a link to their previously published scoping review which also lists inclusion criteria but only creates a header there for “inclusion criteria” alone. Please make these parts more distinctive in this manuscript.

a. Ex. As mentioned earlier on P.3 “strengths and limitations” one of the limitations was that you only included journals published in English—so that was one of your excluding factors which wasn’t mentioned in that specific section.

3) Data collection and analysis. P. 6; lines 17-21 Who was the third person? If none mentioned then does that mean there were no disagreements or inconsistencies?

a. P. 6; lines 39-41 “reviewers accessed journal articles through the library subscriptions held by the U of Sydney, Australia” – does this mean that you only included articles that you had a journal subscription to? Could this potentially be a limitation in the overall articles/subscriptions you reviewed? It’s a given that you access the articles you need through the library and whatever the library doesn’t have access to you have them interlibrary loan to make sure that access isn’t a barrier for your team. It might make the methods stronger to leave lines 39-41; page 5 off completely.

4) Figure 1. P 24. The use of a workflow diagram is confusing to me as a visual for the three phases of this project as the diagram with the arrows usually convey a narrowing down of results (such as the case of a PRISMA flow diagram in a systematic review). I’m confused as to the number of 53 PLSs located out of 26 journals (20 of those published PLS) (p. 24 line 16). What does that mean? I suggest perhaps using a different visual tool to demonstrate the timing of each phase as independent of one another.

a. I finally understood the 53 PLSs in the visual graph, but didn’t have this understanding until I got through your explanation in Part 2 on page 10, although your visual is presented much earlier between part 2 and part 3 on page 7.

5) I appreciated the topic as it is an interesting (and important) move towards making scholarship more available to a general audience—especially in the wake of our most recent pandemic of misinformation.

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<b>Reviewer</b>	<b>3</b>
<b>Name</b>	<b>Gaisser, Andrea</b>
<b>Affiliation Service</b>	<b>German Cancer Research Center, Cancer Information</b>
<b>Date</b>	<b>20-Jun-2024</b>
<b>COI</b>	<b>None</b>

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The manuscript is well written and informative, and I fully endorse publication.

Thank you for investigating this topic as it is important in the context of quality health information and patient/consumer participation.

The study is well designed and answers the research questions in a clear and concise manner, the methods being well described. It builds on and considers prior research in this area. Discussion and conclusions clearly describe what is needed as next steps and where further research is needed.

The discussion also touches upon an important topic that needs consideration and further research: Who uses PLSs, and how do they want and need them? How best to avoid oversimplification and misunderstandings, and which reading level is really appropriate?

I do hope that not only more journals will include PLSs but that it can be agreed on a common format for author instructions, developed together with users/consumers, that can be easily followed and, most of all, ensure that PLSs really achieve what they aim at. The article can contribute here. Another important issue that is not discussed is how to best make PLSs accessible and searchable by topic.

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## **VERSION 1 - AUTHOR RESPONSE**

### **Reviewer 1**

Comments to the Author

#### Reviewer Comment 1.1.

Interesting article. The methods seem quite appropriate, however I do recognize that the authors only sampled a limited number of biomedical journals that have long required Lay Summaries (e.g., Epilepsy and Behavior Reports). In any event, these findings do not surprise me. We clearly do not

spend nearly enough time educating trainees to generate PLS.

#### Author response 1.1.

Thank-you for your interest in the article; we agree that the findings speak to a lack of education and training in the development of PLSs.

In regard to sample size, we understand the sample size for this study is small and missed journals that publish plain language summaries (PLSs), as you rightly note. The sample was taken from our previous study in which we searched 534 journals, finding only 27 that published PLSs based on the inclusion criteria for that study. This study is noted in the manuscript as reference 13; Gainey et al, 2023. As you can see from Table 1 in Gainey et al, 2023, we searched 11 journal categories selected from the InCites Journal Citation Reports 2020, using categories based on the top ten non-communicable diseases plus the category of Medicine, general and internal. Due to this search method, journals such as Epilepsy and Behaviour Reports did not appear in our search results.

#### Reviewer Comment 1.2

One topic not addressed by the authors is the possible role of AI platforms in generating PLS.

#### Author response 1.2

This is an important topic of discussion in evidence synthesis; however it was outside the scope of this particular study. In this study, we assessed compliance to author instructions for writing PLSs and did not locate any instructions that mentioned the use of AI tools for generating PLSs. Also, the use of AI tools did not apply to our health literacy assessment.

We plan to address this topic in an upcoming study which will comprise semi-structured interviews with editors of health and medical journals about their perspectives on the development, publication, and dissemination of PLSs, including the role of AI.

#### **Reviewer 2**

Comments to the Author

I'd like to thank the editor for giving me the opportunity to review this manuscript. This three-part systematic environmental scan reviewed 26 health journals for the 1) inclusion frequency of PLSs within these journals; 2) level of compliance (or lack of) PLSs to PLS author instructions; and 3) a

health literacy assessment of the PLSs.

#### Reviewer Comment 2.1

I noted numerous grammatical, spelling, syntax, and citation errors throughout this manuscript that I tried to ignore at the onset but found it more and more noticeable as I progressed. For example a few in the first few pages:

- a. P.2 line 54-56 syntax errors “...highlights the need for a better ways to support authors adhere to PLS...”
- b. P. 3; line 4 spelling “Artcile Summry”
- c. P. 3; line 29 lack of citation for Malick et al. study

#### Author response 2.1

Thank you for picking up these errors. We appreciate how frustrating it is to read a submitted manuscript with such errors. We have now used the tool Pro Writing Aid to check for spelling and grammatical errors, and ensured all citations were correct.

#### Reviewer Comment 2.2.

Inclusion Criteria and Selection of Health Journals. Inclusion criteria is reported (P.4; line 28-40) but not exclusion specifically, except for Cochrane’s Database of SRs because but for a systematic review, a true set of inclusion/exclusion criteria should be defined at the onset. The authors did include a link to their previously published scoping review which also lists inclusion criteria but only creates a header there for “inclusion criteria” alone. Please make these parts more distinctive in this manuscript.

- Ex. As mentioned earlier on P.3 “strengths and limitations” one of the limitations was that you only included journals published in English—so that was one of your excluding factors which wasn’t mentioned in that specific section.

#### Author response 2.2

This study is an environment scan, a methodological approach for which there is no systematic approach or standardised reporting guidelines in the EQUATOR network. We do not see it as problematic to only include/highlight inclusion criteria for two reasons. First, as you note, we state

that we excluded the Cochrane Database from this study. Second, although we comment on a limitation of the study being that we only reviewed journals that published PLSs in English, we include as our third inclusion criteria that the journals publish PLSs in English. It would be superfluous to then list as an exclusion criteria, journals that published PLSs in language other than English. Although our list of exclusion criteria is short, we have specified these in the manuscript as we acknowledge readers of this paper may expect both inclusion and exclusion criteria.

#### Reviewer Comment 2.3

P. 6; lines 17-21 Who was the third person? If none mentioned then does that mean there were no disagreements or inconsistencies?

#### Author response 2.4

We did have a third person (DM) resolve disagreements between reviewers (KG & JS). We have specified the role of DM in resolving disagreements to the manuscript to clear up any confusion.

#### Reviewer Comment 2.4

P. 6; lines 39-41 “reviewers accessed journal articles through the library subscriptions held by the U of Sydney, Australia” – does this mean that you only included articles that you had a journal subscription to? Could this potentially be a limitation in the overall articles/subscriptions you reviewed? It’s a given that you access the articles you need through the library and whatever the library doesn’t have access to you have them interlibrary loan to make sure that access isn’t a barrier for your team. It might make the methods stronger to leave lines 39-41; page 5 off completely.

#### Author response 2.4

We have added a sentence to the manuscript to clarify that all journals were accessible via these subscriptions.

#### Reviewer Comment 2.5

Figure 1. P 24. The use of a workflow diagram is confusing to me as a visual for the three phases of this project as the diagram with the arrows usually convey a narrowing down of results (such as the case of a PRISMA flow diagram in a systematic review). I’m confused as to the number of 53 PLSs located out of 26 journals (20 of those published PLS) (p. 24 line 16). What does that mean? I suggest perhaps using a different visual tool to demonstrate the timing of each phase as independent of one

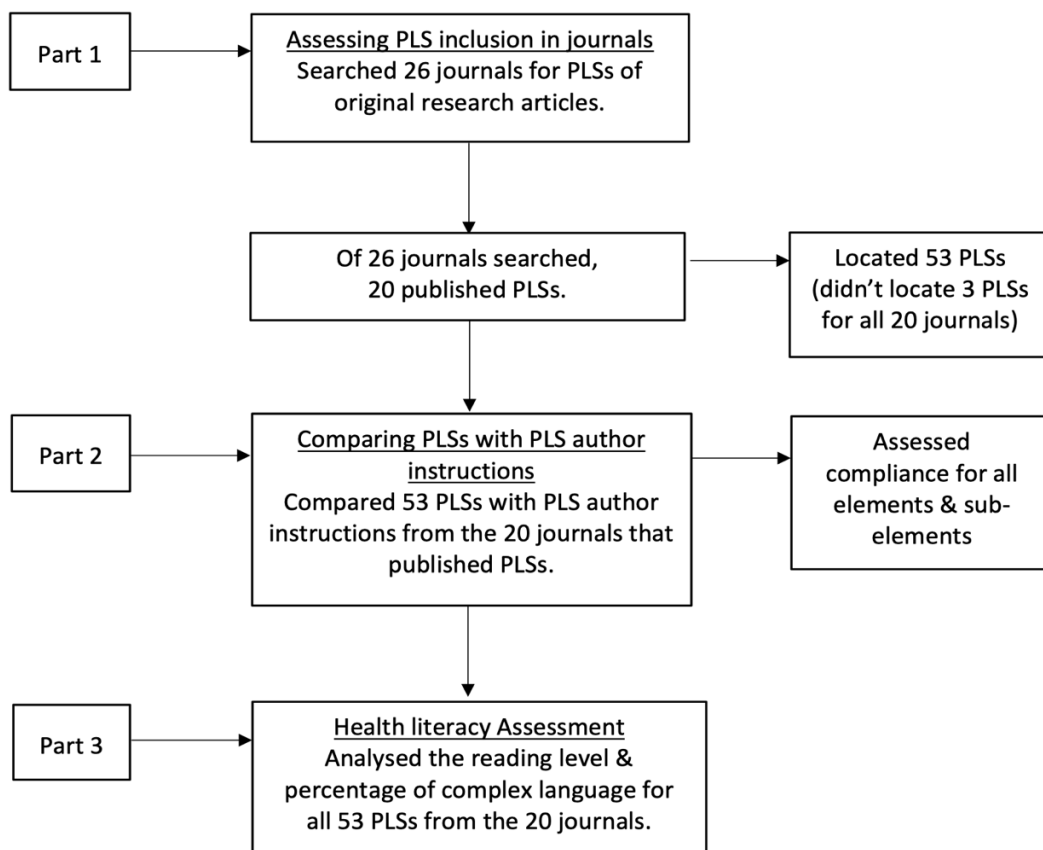
another.

I finally understood the 53 PLSs in the visual graph, but didn't have this understanding until I got through your explanation in Part 2 on page 10, although your visual is presented much earlier between part 2 and part 3 on page 7.

#### Author response 2.5

We acknowledge the confusion nature of Figure 1 and have amended text in the diagram to provide a clearer and more thorough explanation of our process. Also, we have changed the way we label each part, using numerals rather than words to designate each part e.g., Part 1 instead of Part One. We have made this alteration in Figure 1 as well as the main manuscript for consistency.

**Figure 1. Data collection and analysis process**



#### Reviewer Comment 2.6

I appreciated the topic as it is an interesting (and important) move towards making scholarship more available to a general audience—especially in the wake of our most recent pandemic of misinformation.

#### Author response 2.6

Thank you for your enthusiastic and thorough comments. We hope this study will contribute to the development of PLSs as a communication tool and help lead to less misinformation to the public.

#### **Reviewer 3**

Comments to the Author:

#### Reviewer Comment 3.1

The manuscript is well written and informative, and I fully endorse publication.

Thank you for investigating this topic as it is important in the context of quality health information and patient/consumer participation. The study is well designed and answers the research questions in a clear and concise manner, the methods being well described. It builds on and considers prior research in this area. Discussion and conclusions clearly describe what is needed as next steps and where further research is needed. The discussion also touches upon an important topic that needs consideration and further research: Who uses PLSs, and how do they want and need them? How best to avoid oversimplification and misunderstandings, and which reading level is really appropriate? I do hope that not only more journals will include PLSs but that it can be agreed on a common format for author instructions, developed together with users/consumers, that can be easily followed and, most of all, ensure that PLSs really achieve what they aim at. The article can contribute here. Another important issue that is not discussed is how to best make PLSs accessible and searchable by topic.

#### Author response 3.1

Thank you for your thoughtful comments and clear understanding of this topic. The area of accessibility and searchability of PLSs is an important topic to investigate, however it was unfortunately outside the scope of this study. We plan to address it in our next study which will be a qualitative study involving semi-structured interviews of editors of health and medical journals. We will ask them about their perspectives on the development, publication, and dissemination of PLSs.