

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Self-reported health literacy and medication adherence in older adults: A systematic review
<b>AUTHORS</b>	Schönfeld, Moritz; Pfisterer-Heise, Stefanie; Bergelt, Corinna

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Lee, Hyo Young Dongseo University, Health Administration
<b>REVIEW RETURNED</b>	13-Sep-2021

<b>GENERAL COMMENTS</b>	<p>1. In the conclusion of the introduction, it is presented as follows, but I think you should first describe what kind of heterogeneity there is in the research result. “However, concepts and measures of health literacy and medication adherence applied in the included studies still show a noteworthy amount of heterogeneity.”</p> <p>2. What is “full-text articles, with reasons (n=535)” in Figure 1, please describe in detail in the research method.</p> <p>3. Describe in detail what “records excluded (n=1769)” means in Figure 1 in the research method.</p>
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<b>REVIEWER</b>	Huang, Yen-Ming South Dakota State University
<b>REVIEW RETURNED</b>	15-Sep-2021

<b>GENERAL COMMENTS</b>	<p>Abstract</p> <p>1. Line 22: Please specify the checklist.</p> <p>2. Line 28: It is confusing that you included 9 publications but reported 8 publications here. Please check and revise the information.</p> <p>Strengths and limitations of this study</p> <p>1. Line 41: This systematic review used narrative to describe the findings but did not perform any statistical test. Hence, you did not specifically “examine” existing literature on the association between self-reported health literacy and medication adherence in older adults. Please revise this sentence appropriately.</p> <p>Introduction</p> <p>1. Line 81: Also, reviews commonly included a low proportion of studies measuring HL with self-reports. → What was the mainstream of approaches that the studies measured HL from previous reviews?</p> <p>Methods</p> <p>1. Line 108: Please remove this sentence.</p> <p>2. Line 112: What was the rationale to set a cut-point of 66% to</p>
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	<p>ensure the majority of participants were older adults?</p> <p>3. Line 141: Please specify the name or contents of the checklist.</p> <p>4. Line 227-229: The second and third questions are the same. Please check and revise the questions.</p> <p>Discussion</p> <p>1. Line 304: This study did not examine the associations of HL and MA in older adults as no statistical analysis was performed.</p> <p>References</p> <p>1. Some citation formats are incorrect. Please recheck the accuracy of the citation and revise it accordingly. For example, what is United Nations DoEaSA, Population Division in reference 1? The name of the first author in reference 31 should be Sørensen rather than Sorensen.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Comments to the Author:

1. In the conclusion of the introduction, it is presented as follows, but I think you should first describe what kind of heterogeneity there is in the research result.

“However, concepts and measures of health literacy and medication adherence applied in the included studies still show a noteworthy amount of heterogeneity.”

Our answer: Thank you very much for your comments and for again taking the time to review our manuscript.

We appreciate it very much! We agree that a description of heterogeneity in the studies would improve the conclusion. Unfortunately, as this sentence is part of the abstract, we were not able to describe the heterogeneity in detail here due to limitation of words. However, we added an example of heterogeneity we found in the included studies (line 38). Also, we further describe the heterogeneity in the method section and study limitations. (lines 173-174, 445-447)

2. What is “full-text articles, with reasons (n=535)” in Figure 1, please describe in detail in the research method.

Our answer: Thank you for your comment. We agree that this layout might be a little ambiguous and changed

it accordingly as “full-text articles, with reasons (n=535)” is meant to be a heading for the following reasons of exclusion. Also, we added the information to the research method section. (lines 150-154 and figure 1)

3. Describe in detail what “records excluded (n=1769)” means in Figure 1 in the research method.

Our answer: Indeed, we agree, thank you very much for your comment. We added reasons of exclusion to figure 1 as well as to the method section. (lines 150-154 and figure 1 (notes))

Reviewer: 2

Comments to the Author:

Our answer: Thank you very much for your comments and for again taking the time to review our manuscript.

We appreciate it very much!

Abstract

1. Line 22: Please specify the checklist.

Our answer: Thank you for this comment. We agree that this information would be important. The checklist was self-developed for the purpose of data extraction. Due to word limitation in the abstract and to reduce confusion, we decided to delete this sentence here and specified the checklist in the method section. (lines 168-172)

2. Line 28: It is confusing that you included 9 publications but reported 8 publications here. Please check and revise the information.

Our answer: Thank you. You are of course correct, and we added information about the measure of MA used in the ninth publication. (line 30)  
Strengths and limitations of this study

1. Line 41: This systematic review used narrative to describe the findings but did not perform any statistical test. Hence, you did not specifically “examine” existing literature on the association between self-reported health literacy and medication adherence in older adults. Please revise this sentence appropriately.

Our answer: Thank you for this important comment. We revised the sentence, now stating that we “give an overview” of existing literature. (line 43)

Introduction

1. Line 81: Also, reviews commonly included a low proportion of studies measuring HL with self-reports.

→ What was the mainstream of approaches that the studies measured HL from previous reviews?

Our answer: Thank you for your comment. Previous reviews have indeed aimed to focus on all existing measures of HL. However, the mainstream of approaches to date are still performance-based measures like REALM and TOFHLA. In previous systematic reviews these performance-based measures are commonly analysed together with self-reports. We have revised the sentence to clarify our argument here. (lines 84-88)

Methods

1. Line 108: Please remove this sentence.

Our answer: Thank you for your comment. We have removed the sentence.

2. Line 112: What was the rationale to set a cut-point of 66% to ensure the majority of participants were older adults?

Our answer: Thank you for your comment. We decided to set the cutoff at this level based on simple majority and not on a mean age since we found many previous reviews that included studies based on a mean age to include studies with undisclosed proportions of younger adults (i.e. no information about age subgroups).

Only two of the included studies in our review contain adults younger than 60 years, both at a rate of under

30%. Accordingly, we only included those studies with younger adults that contained information about age subgroups.

3. Line 141: Please specify the name or contents of the checklist.

Our answer: Thank you for your comment. We added information about the contents of the checklist.  
(lines 145-146)

4. Line 227-229: The second and third questions are the same. Please check and revise the questions.

Our answer: Thank you for your comment. You are correct and we have added the correct third item of the questionnaire. (lines 240-241)

Discussion

1. Line 304: This study did not examine the associations of HL and MA in older adults as no statistical analysis was performed.

Our answer: Thank you. We have revised the sentence accordingly. (lines 317-318)

References

1. Some citation formats are incorrect. Please recheck the accuracy of the citation and revise it accordingly.

For example, what is United Nations DoEaSA, Population Division in reference 1? The name of the first author in

reference 31 should be Sørensen rather than Sorensen.

Our answer: Thank you for your comment. You are of course right, and we doublechecked each reference

again and corrected them where necessary.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Huang, Yen-Ming South Dakota State University
<b>REVIEW RETURNED</b>	06-Oct-2021
<b>GENERAL COMMENTS</b>	Methods Line 117: What was the rationale to set a cut-point of 66% to ensure the majority of participants were older adults?

#### VERSION 2 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 2

Line 117: What was the rationale to set a cut-point of 66% to ensure the majority of participants were older

adults?

Our answer: Thank you again for your comment and your time to read our manuscript.

We set the cutoff at 66% to ensure that the majority of the sample includes older adults and to reduce the potential effect of study participants of younger age. Since sample means are easily impacted by outliers (in our case undisclosed younger participants in the included samples), we aimed at reducing potential bias from those outliers.

We set the cutoff at 66% to have at least a two third majority of older adults while not being too conservative in

our inclusion decisions. We think, a less stringent inclusion rule (e.g. common-sense decision of majority of older

adults in samples) would have involved a greater risk of bias as in our experience there is large variety in age (range

and proportion) in samples, which is often not well described. Further, a more stringent inclusion decision (e.g.

100%) would have led to the exclusion of possibly relevant studies.