

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

TITLE (PROVISIONAL)	Sex-related differential item functioning of the Jenkins Sleep Scale: a cross-sectional study among 77,967 employees in the Finnish public sector
AUTHORS	Juhola, Juhani; Arokoski, J. P. A.; Ervasti, Jenni; Kivimäki, Mika; Vahtera, Jussi; Myllyntausta, Saana; Saltychev, Mikhail

VERSION 1 – REVIEW

REVIEWER	Sieminski, Mariusz Medical University of Gdansk, Department of Emergency Medicine
REVIEW RETURNED	29-Aug-2023

GENERAL COMMENTS	Dear Authors, You have performed a very interesting study on Jenkins Sleep Scale focusing on its psychometric properties. Although the project is planned and realized in a very sound manner You have collected a population dominated by (1)women and (2) persons in middle and older age . You have performed an elegant analysis on the issue of gender. For full picture of the reliability of JSS in Finnish population I would like to see a similar analysis of difficulty, discrimination and differential item functioning (DIF) in context of age. I would suggest performing analysis for subjects below and above 50 years old. It may be a part of this publication or its continuation. I do not have further comments.
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REVIEWER	Climent-Sanz, Carolina University of Lleida, Nursing and Physiotherapy
REVIEW RETURNED	05-Dec-2023

GENERAL COMMENTS	This manuscript offers new insight into the psychometric properties of the JSS, with a special focus on sex-related DIF. I would recommend accepting this manuscript for publication. However, there is only one recommendation I would make before publishing it: 1. In the methods section, please explain briefly the Finnish Public Sector study. 2. There are a couple of typos: pg 5 line 33 I believe that instead of "Item response a theory" the authors meant "Item response theory". pg 7 line 6 the sentence should have only one full stop before 'The' instead of two.
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VERSION 1 – AUTHOR RESPONSE

Responses to the comments made by the Reviewer 1

Comment 1

For full picture of the reliability of JSS in Finnish population I would like to see a similar analysis of difficulty, discrimination and differential item functioning (DIF) in context of age. I would suggest performing analysis for subjects below and above 50 years old. It may be a part of this publication or its continuation. I do not have further comments.

Response 1

We had considered the similar DIF analysis based on age groups. It is possible that we are going to conduct such an analysis as a separate further study. We have the following text in the “recommendations for further research” section at the end of the discussion:

“Further research may reveal the potential DIF of the JSS among people of different age groups...”

Responses to the comments made by the Reviewer 2

Comment 1

In the methods section, please explain briefly the Finnish Public Sector study.

Response 1

We have now re-written the FPS description. Please, see our response to the Editor’s comment #5.

Comment 2

There are a couple of typos: pg 5 line 33 I believe that instead of "Item response a theory" the authors meant "Item response theory".

pg 7 line 6 the sentence should have only one full stop before 'The' instead of two.

Response 2

We have now corrected these typos.