

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

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| TITLE (PROVISIONAL) | Assessing Differential Item Functioning for the Social Appearance Anxiety Scale: A Scleroderma Patient-centered Intervention Network (SPIN) Cohort Study |
| AUTHORS | Sommer, Sophia; Harel, Daphna; Kwakkenbos, Linda; Carrier, Marie-Eve; Gholizadeh, Shadi; Gottesman, Karen; Leite, Catarina; Malcarne, Vanessa; Thombs, Brett |

VERSION 1 - REVIEW

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| REVIEWER | Flora Balieva 1. Stavanger University Hospital, Department of Dermatology, Stavanger, Norway 2. University of Stavanger, Faculty of Health Sciences, Stavanger, Norway. |
| REVIEW RETURNED | 04-Jul-2020 |

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| GENERAL COMMENTS | <p>This is a well-written paper with a sound methodology and covers an area of importance. The authors have recruited an impressive amount of participants, achieving robust results.</p> <p>I have some comments:</p> <p>1. Strengths and limitations are not thoroughly discussed, they should appear at the end of the discussion. One of the exclusion criteria was not having access to the internet or being able to respond to questionnaires via the internet. This should be mentioned as a potential cause for bias. Is, for instance, the mean age represented realistically if perhaps the oldest patients could not participate? What about the most seriously affected patients? (maybe those who can not use their fingers/hands) and may not have participated. This is an international study. In different countries, there may be differences in patient care availability, e.g. assistance for participation in an internet study vs no such assistance, etc. Would you consider elaborating on these issues?</p> <p>2. The results in Table 1 are given almost fully in the text. Repetition of the table content in text form does not seem necessary. Perhaps only mention that differences were not significant/were significant. Or perhaps just include significant/non-significance in an extra column of the table with no need to repeat all in text form.</p> <p>Very minor: I noticed that 'GPCM' is abbreviated in the abstract but not</p> |
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| | <p>explained. Please check for any other abbreviations not given in full before they appear.</p> <p>The authors have mentioned funding, trial registration, etc, but I did not find a supplementary report (STROBE).</p> |
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1

Reviewer Name: Flora Balieva

Institution and Country: 1. Stavanger University Hospital, Department of Dermatology, Stavanger, Norway; 2. University of Stavanger, Faculty of Health Sciences, Stavanger, Norway.

This is a well-written paper with a sound methodology and covers an area of importance. The authors have recruited an impressive amount of participants, achieving robust results.

Thank you for your comments on our paper. We believe our manuscript is now much improved.

Strengths and limitations are not thoroughly discussed, they should appear at the end of the discussion.

We now include the following text:

This study has several limitations. First, DIF was only investigated in the population of adults with scleroderma and results may not generalize to the general population. Second, in order to complete study questionnaires, patients were required to have access to the internet, which may bias the sample. Specifically, those with most severe disease may not be able to type due to the inability to use their fingers or hands. As well, it is possible that the oldest patients would be unable to participate. However, although the SPIN Cohort constitutes a convenience sample of SSc patients receiving treatment at a SPIN recruiting center, and patients at these centers may differ from those in other settings, a comparison between SPIN Cohort participants and the European Scleroderma Trials and Research (EUSTAR) and Canadian Scleroderma Research Group (CSRG) cohorts showed broad comparability. This increases confidence that insights gained from the SPIN Cohort should be generalizable.

One of the exclusion criteria was not having access to the internet or being able to respond to questionnaires via the internet. This should be mentioned as a potential cause for bias. Is, for instance, the mean age represented realistically if perhaps the oldest patients could not participate? What about the most seriously affected patients? (maybe those who cannot use their fingers/hands) and may not have participated. This is an international study. In different countries, there may be differences in patient care availability, e.g. assistance for participation in an internet study vs no such assistance, etc. Would you consider elaborating on these issues?

The SPIN Cohort constitutes a convenience sample of SSc patients receiving treatment at a SPIN recruiting center, and patients at these centers may differ from those in other settings. Additionally, SSc patients in the SPIN Cohort complete questionnaires online, which may further limit the generalizability of findings. A comparison between SPIN Cohort participants and the European Scleroderma Trials and Research (EUSTAR) and Canadian Scleroderma Research Group (CSRG) cohorts (which do not require internet access), however, showed that the SPIN Cohort is broadly comparable with these cohorts, increasing confidence that insights gained from the SPIN Cohort should be generalizable.

We now discuss this in the manuscript and provide a citation for the study that compares our cohort to the CSRG and EUSTAR cohorts.

2. The results in Table 1 are given almost fully in the text. Repetition of the table content in text form does not seem necessary. Perhaps only mention that differences were not significant/were significant. Or perhaps just include significant/non-significance in an extra column of the table with no need to repeat all in text form.

We have adjusted the manuscript as to avoid repetition.

Very minor:

I noticed that 'GPCM' is abbreviated in the abstract but not explained. Please check for any other abbreviations not given in full before they appear.

Thank you. We have fixed this issue.

The authors have mentioned funding, trial registration, etc, but I did not find a supplementary report (STROBE).

We have now included STROBE documentation as supplementary material.

VERSION 2 – REVIEW

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| REVIEWER | Flora 1. Stavanger University Hospital, Department of Dermatology, Stavanger, Norway 2. University of Stavanger, Faculty of Health Sciences, Stavanger, Norway. |
| REVIEW RETURNED | 16-Jul-2020 |

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| GENERAL COMMENTS | Tditor's comments and my comments are adequately addressed. A very minor suggestion: Table 1 is informative and there is now no repetition, but would you consider mentioning either in the text, or as a separate column in the table if there were significant differences or not significant differences on the different variables between the 2 groups? The numbers seem quite alike, and it seems there were not significant differences (which is a strength), but is not actually mentioned.he e |
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