Reviewer's report

Title: Development and validation of the Accommodation and Enabling Scale for Eating Disorders (AESED) for caregivers in eating disorders

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Reviewer: Paula Kersten

Reviewer's report:

Research question

The study aims to explore the validity and sensitivity of the AESED in two samples of people caring for patients with eating disorders. The literature reviewed was clear and relevant for the purpose of the article and previous work has been acknowledged and described.

Methods

The development of the AESED followed on from previous research conducted by the authors, findings from the literature, a similar questionnaire and review by an expert panel which included carers.

The methods include analyses on two sample of carers. Sample 1 completed the AESED and the authors carried out an exploratory factor analysis, item to total correlations and tested the measure for convergent and discriminant validity. The criteria for retaining factors (eigen values > 1) need justification (why was a Monte Carlo procedure not used). Carers in the first sample consisted of those accessing and those not accessing services which lends strength to the study.

Sample 2 completed the AESED twice, before and after a DVD intervention. These data were used to assess the scale’s sensitivity. From the methods it appears that the authors also intended to carry out a confirmatory factor analysis of the AESED using data from sample 2. However, these data have not been presented in the paper and would make a valuable contribution.

It would be helpful to be clearer in the data analysis section to clarify which samples were used for which analyses as this wasn’t entirely clear till the results section.

Carers’ inclusion criteria are stated in the methods but exclusion criteria are not (e.g. secondary carers were excluded – this should be added to the methods).

The measures included in the study were well described. However, justification should be given for using the total ECI score, rather than exploring individual subscales. In addition, justification for not including the positive subscales should be justified.

It wasn’t entirely clear why the authors carried out correlations between the
AESED subscale scores and the total score. In addition, the scoring of item 28 (a NRS) needs further justification. It is assumed here that the NRS categories can be collapsed in pairs and this has not been formally tested. Considering also the desire to convert this 0-10 scale to a 0-4 scale for analysis purposed it is not clear why an NRS was built into the scale.

Data were analysed with non-parametric correlations, Mann-Whitney-U and Wilcoxin signed Rank tests and this is justified by the authors as the data was not normally distributed. The simple fact that we are dealing here with ordinal data is sufficient justification for the use of non-parametric statistics. The reference to paired t-tests under the section responsiveness in the methods needs to be corrected since Wilcoxin signed Rank tests were used.

Ethics

The authors have not reported ethics permissions. This should be added to the paper.

Data

Data from two studies are presented in this paper:

Development of the AESED and validation:

The section describing sample 1 contains all the relevant descriptive information. However, it would enhance readability if the data could be presented as a table and the text as a brief summary.

The AESED scale was found to have five subscales and table 1 provides the necessary data to confirm the authors' findings. It is not clear on what basis the authors have decided to add all the items into one total score. Since subscales have been identified this suggests a total scale is not unidimensional and that therefore scores should not be added. This needs reconsideration.

The item-total correlations for each of the subscales have been summarised in the text but interpretation of these scores is lacking. For three scales the range of correlations includes low correlations and this need further discussion.

P-values for the correlations between the AESED subscales and other scales are reported and since many of these are significant the authors have concluded good convergent validity. However, some of the correlations with other scales are not that strong and the authors should reconsider the strength of their conclusions based on the correlations.

Discriminant validity is not a term the authors have used but which is in fact assessed in the section entitled ‘The association between AESED and clinical and psychosocial features’. The text describing the correlations here is not that helpful. Indeed the correlations are quite low. Table 3 should suffice for this discussion.

Discussion and conclusions
The discussion and conclusion are in support of the validity of the AESED. Considering some of the questions raised above in the interpretation of the data this should be revisited. The data are encouraging but further work needs to be done to confirm the factor structure and validity of the scale.

Limitations of the work

The limitations of the work have been recognised to some extent. This section could be strengthened by an exploration of the sample (e.g. high proportion of female participants, consequences of not being able to describe non-responders), limitations of factor analyses and other analyses that could be used to explore the scale’s validity.

Title and abstract

The title reports the aim of the study appropriately.

The abstract methods should be clearer about the fact that this paper concerned two samples and insert the correct number of participants.

The abstract should provide the effect size statistics rather than Wilcoxon signed rank test results to report on sensitivity.

The conclusion needs revisiting.

Writing

Since this concerns in essence two studies the readability can be enhanced by clearer subheadings and the addition of a demographics table.

Major Compulsory Revisions:

1. The criteria for retaining factors (eigen values > 1) need justification (why was a Monte Carlo procedure not used).
2. The confirmatory factor analysis of the AESED on sample 2 needs presenting.
3. Clarify in the data analysis section which samples were used for which analyses.
4. Add carers’ exclusion criteria.
5. Justify the use of the total ECI score.
6. Explain why the ECI-positive subscales were not used in the analysis.
7. Explain purpose of the analysis of correlations between the AESED subscale scores and the total score.
8. Justify the scoring of item 28 (a NRS), and why this was an NRS in the first place.
9. Change justification for using non-parametric statistics (i.e. ordinal data as opposed to distribution issue).

10. Remove reference to paired t-tests which weren’t used.

11. Reported ethics permissions

12. Present demographic information in a table

13. Reconsider the justification given to compute a total AESED scale score.

14. Provide interpretation of item-total correlations

15. Reconsider strength of conclusions regarding convergent validity in light of low correlations found for several subscales.

16. Reconsider if the correlations in the section entitled ‘The association between AESED and clinical and psychosocial features’ are needed in addition to Table.

17. Reconsider the conclusions in light of the critique above of the analyses.

18. Further discuss limitations of the work

19. Add to the abstract that two samples were included.

20. Add effect size statistics to the abstract

Minor Essential Revisions

- Abstract: change moderate supported to moderately supported
- At the end of the literature review the authors might wish to say that the paper has four aims, rather than goals.
- On page 4, write OCD in full when used the first time.
- First sentence, page 7: “The items for the Accommodation and Enabling Scale” add “for Eating Disorders”
- Check reference 29, which says submitted, yet has a 2006 date
- Table 1, add to the title that these data refer to sample 1.
- Page 11 states that data on distribution of the subscales will be given; however, these data are only provided for different groups of carers, not all carers combined. This can easily be added to table 2.
- On page 11 the authors say that convergent validity was established by correlating the AESED with the 5 factors scores and HADS-depression and HADS-anxiety, FQ-CC and FQ-EOI and with demographic and clinical variables. They should add also the ECI questionnaire.
- It is suggested that reference to the London and Maudsley Trust is made more anonymous.
- What do the authors mean by ‘PhD research psychologists’ – do they mean
PhD students in psychology?
• On page 7 please write in full what EDU stands for.
• Table 2 would be clearer if data for FQ-CC and FQ-EOI were on the same line.
• The subheadings in the results section need to more clearly reflect the text below them.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests