

Author's response to reviews

Title: Recognition of delirium in ICU patients A diagnostic study of the NEECHAM confusion scale in ICU patients

Authors:

Henny Immers (Henny.immers@hetnet.nl)

Marieke J Schuurmans (m.j.schuurmans@med.uu.nl)

Jaap J Bijl van der (j.j.vanderbijl@med.uu.nl)

Version: 2 **Date:** 26 August 2005

Author's response to reviews: see over

Dear editor,

Thank you for considering our manuscript for publication in BMC Nursing. We thank the referees for their valuable, thoughtful comments. We acknowledge most of the points raised by them and tried to change the manuscript accordingly. Hereby we will describe a detailed overview of our responses.

We hope you will consider the article in this present form for publication.

Yours sincerely,

Marieke Schuurmans

Responses to reviewer 1

Minor essential revisions

1. The term acute confusional states has been replaced by delirium throughout the manuscript.
2. Additional literature as suggested is added.
3. Manuscript is rewritten to enhance readability, comments made are included.
4. Intubated patients were not excluded, detailed information on this part of the study is added.
5. Cutpoints of the NEECHAM are added.
6. Results on user-friendliness of the scale are rewritten, points raised by the referee are cleared.
7. Literature is added, we tried to strengthen the discussion accordingly.

Responses to reviewer 2

Major compulsory revisions

Background section

- The term acute confusional states has been replaced by delirium throughout the manuscript.
- Manuscript is rewritten to enhance readability, comments made are included.
- Both paragraphs are rewritten as suggested.

Methods section, procedures

- To be able to be interviewed was meant; text is changed accordingly.

Methods section, procedures

- Since each scale consists of several observations, to avoid misunderstanding we decided not to change the term scales by the term observations, as suggested by the referee. The ratings were independent.
- At the end of the study, changed according suggestion.

Methods section about the NEECHAM confusion scale

- Cutpoints of the NEECHAM are added.

Analysis section

- Confusion about Pearson's coefficient is removed by consistent use of term Pearson's inter-item coefficient and Pearson's correlation coefficient.

- Chi-square was used to study the relation between the NEECHAM total score and the DSM-IV diagnosis. In our opinion the NEECHAM scores are ordinal measures, they do not represent equal differences between the numeric values (interval or ratio). Chi-square only provides information on the existence of a statistical relation. The other measures used provide information on the strength and direction of the relation. This information is not strictly necessary to answer the research question, therefore we deleted all and left just the chi-square in the analysis.
- We followed the suggestion of the reviewer with regard to the results of the user-friendliness and present a frequency table.

Results section, reliability

- Suggestions by referee are adopted.

Results section, validity

- Redundant information on the sub scales is deleted as suggested.

Results section, user-friendliness

- The whole section has been rewritten; all suggestions of the referee have been followed.

Discussion section

- The referee is correct with regard to the first paragraph on correlation between physiological functions; sentence has been rewritten.
- Items that could be removed are added.
- More information on intubated patients is given as well as a suggestion for further study.
- Since only 5% of the included patients were intubated, we did not perform subgroup analysis.
- We agree with the referee that further study is needed before the scale can be shortened.

Minor essential revisions

- Incidence rates has been changed.
- We do not agree on the fact that the terms reliability and validity should be to general. These terms are well known and since different aspects of both aspects has been tested we prefer to use them instead of 'testing interrater reliability, internal consistency, concurrent and construct validity.'

Methods section, design and sample

- Redundancies were removed.
- SD was added.

Methods section, procedures

- Full name of DSM-IV is added
- Diagnostic value has been used throughout the manuscript to avoid inconsistency.

Methods section about the NEECHAM confusion scale

- The term behaviour is added.

Results section, reliability

- Table 3 is deleted.

Results section, user-friendliness

- We think the remarks on the outline of the scale are relevant, however, we have changed the formulation based on the remark of the referee.

Discussion section

- Studies are added.
- Redundancy is deleted.

Headings of tables have been rewritten.

Gold standard was added in table 3.

Spelling of names was checked and corrections are made.

Results of the study of Milisen et al, 2005, were added.