Author's response to reviews

Title: The NEECHAM Confusion scale and the Delirium Observation Screening scale: predictive value and ease of use in clinical practice

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Author's response to reviews: see over
Dear BioMed Central Editorial Team,

Hereby we send you the revised manuscript “The NEECHAM Confusion Scale and the Delirium Observation Screening Scale: Comparison on Predictive Value and Ease of Use in Clinical Practice” for review for publication in BMC Nursing.

We acknowledge the points made by the reviewers and tried to answer them careful. We hope you will consider the article in this present form for publication.

Yours truly,

Marieke Schuurmans and Liesbeth van Gemert

Answers to the points made by the reviewers

Responses to report reviewer C. Niven

1 Clarification of terms used and consistency of terms
Our study was conducted to compare the discriminative ability of two screenings instruments. The discriminative value is determined by the sensitivity and specificity of an instrument. Since both instruments are used as a first screen of the presence of a delirium, and not as a diagnostic tool, we used the term predictive value; predictive for a diagnosis of delirium. Since the term predictive value is found unclear and misleading by the reviewers, we decided to change in the title and throughout the manuscript the term predictive value by discriminative ability.

2 Information about the scales
The information about the scales is condensed to an evaluation of the validity and reliability of both scales. This information is removed from the methods section to the introduction.
The remark with regard to the small sample size is acknowledged in the discussion, conclusion and abstract.

3 Ethics
Information with regard to the ethical approval is added.

4 Unclear procedure
We tried to point out the procedure more clearly. During the five months study period a clinical nurse specialist included on each ward patients on a fixed day, every other week. For example on the general medical ward patients were included on Tuesday in the even weeks. A maximum of 4 patients were included per ward per study day. If there were more eligible patients on a certain day, patients were selected in an alphabetical order. This procedure was chosen to balance workload for the study physician who visited all patients. The study was conducted without additional funding.

5 Time taken to complete the scale
The physical measures are in most cases taken during regular care and not specifically as part of scale’s completion.

6 Robust conclusion with regard to enablement of recognition of delirium
Conclusion is adjusted: it is clear that with these instruments nurses are able to recognize is replace by confirm earlier findings that these instrument enable. To our opinion the sensitivity of both scales allows this conclusion, since hardly any delirious patient is missed by these screening tools.

7 Role of second author in development of DOS
The DOS Scale was developed by Marieke Schuurmans starting in 1996. At that time the NEECHAM was already in practice, however, this instrument was developed to measure acute confusion and was
not linked to the DSM criteria for delirium. The discussion on the difference between acute confusion and delirium was not clear then. In the Netherlands nurse consultants and nurse specialist cooperate closely with physicians who work with DSM diagnoses. Therefore, at that time, the decision was made to develop a new instrument. Since the NEECHAM was later on also linked with the DSM criteria, both instruments serve the same goal. They differ, however, in many aspects.

In order to enhance clinical practice with regard to care for delirious patients, VU Medical Centre decided to implement a screening instrument for nurses. They were confronted with the fact that there were two scales available that met general criteria for successful implementation. In order to guide their choice the study described in the manuscript was conducted. Before the study none of the nurses involved were familiar with any of the scales.

In the practice and research of MS over the last years she has used both scales, depending on patient population (she worked with the NEECHAM in several ICU studies) and on preferences of the nurses with whom she conducts the research. The focus in her research is to enhance recognition of delirium by nurses. She is also involved in studies with the Delirium Rating Scale and with the Confusion Assessment Method.

Responses to reviewer L. Uys

1 Clarification of terms
Response described above.

2 Unclear procedure
Response described above.
Reference to table four added in the methods sections, time to complete the instrument added in table four.

3 Information about false positives and false negatives
Information on false positives and false negatives is replaced from discussion to results section. MMSE is explained.

4 Reference to false positives in discussion
Response described above.

5 Title and abstract accurate and informative
Based on the remarks of C. Niven small changes have been made in title and abstract.

6 Writing is acceptable
The manuscript is screened for poor language, resulting in some changes.