A linguistic and cultural study of the Edinburgh Feeding Evaluation in Dementia (EdFED) Scale

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Background
Older people with dementia frequently develop problems around mealtimes and in the later stages of dementia there is an inevitable decline in food intake and an increasing difficulty with self-feeding. As recent reviews have shown, there is little evidence for effective interventions to assist older people with dementia to eat (Watson & Green 2006, Liu et al. 2014). The Edinburgh Feeding Evaluation in Dementia Scale Scale can be used to evaluate these factors. The Edinburgh Feeding Evaluation in Dementia Scale Scale has not been linguistically and culturally validated in Italy; therefore, the linguistic translation and the test of its construct validity in Italian could extend the use of the Edinburgh Feeding Evaluation in Dementia Scale Scale to another language and culture

Aim: To assess the psychometric properties of an Italian version of the Edinburgh Feeding Evaluation in Dementia Scale (EdFED-I)

Materials and methods
Participants (n=211) were chosen from residents with dementia at special care units in licensed long-term care facilities in Italy. The mean age of the participants was 83.3 years (SD 7.46); 90% (n=189) of the participants were female. The study was conducted in February 2013. Observation was performed for 2 days during breakfast and lunch. Meals were presented to residents on a tray, as delivered by the central kitchen. The relative distance between the resident and observer was set at no less than 2 metres to avoid interrupting or intimidating residents. The EdFED Translation was performed independently of professional native English translators. Back-translation of the Italian version of the consensus form, by a professional native English speaker. Comparison between the two versions with amendments to the Italian version of the consent and preparation of the final version.

The structure of the EdFED-I was investigated using Mokken scaling and the validity was studied by correlation using a series of measures related to feeding difficulty and dementia, according to the unmet needs model of Cohen-Mansfield (1999): The Mini-Mental State Examination (MMSE); The Barthel Index; Timing; Body weight; Body mass index (BMI)

Results
Table 1 shows the outcome of the Mokken scaling analysis; all ten items were retained in the scale which has H=0.42 indicating a moderate Mokken scale; 95% CIs for all Hij were acceptable and no items were removed from the scale on the basis of violating monotonicity. Some CIs for HI included the lower bound value of 0.3; there is some evidence that this may be sample size dependent (unpublished data), therefore, these items were not excluded from the present study.

Table 2 shows the intercorrelations of the EdFED-I 10-item scale and the EdFED-I 6-item scale scores with the related measures of cognitive function and nutrition. Both forms of the EdFED-I scale correlate in the expected direction with all these measures, ie negatively with the MMSE, the Barthel index, weight and BMI but positively with time taken to eat. Most of the correlations are statistically significant but, taking a Bonferroni correction into account for multiple measures, the negative correlation between the 10-item EdFED-I score and the BMI was not significant. Also, the negative correlations between the 6-item EdFED-I MMSE and BMI were not significant. The relative distance between the resident and observer was set at no less than 2 metres to avoid interrupting or intimidating residents.

Conclusions and perspectives
Citation validation in this study showed that the EdFED-I behaves as expected in both the 10-item and the 6-item versions; with lower cognitive status the score on the EdFED-I increases; with decreasing ability in activities of daily living the EdFED-I score increases; time taken to feed increases with increasing EdFED-I score; and weight and BMI are inversely related to EdFED-I score. There is evidence here that the EdFED-I may be a useful instrument to measure feeding difficulty in older people with dementia. There is additional evidence that there may be predictive power in the items not related to the behavioural aspects of feeding difficulty and that these may well be included in future Mokken scales. Future work requires a larger sample and a more even spread of feeding difficulty within that sample

References

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