Nutrition screening in children – the validation of a new tool
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Summary
Objective: To demonstrate the validity of a new nutrition screening tool for use with children

Method: Full ethical approval was obtained from the Salford and Trafford Research Ethics Committee prior to undertaking this study. All children (aged 2–17 years) admitted to the study wards (two medical, two surgical) of a large paediatric centre in Manchester, UK, over a four week period were screened using a newly developed, nurse administered paediatric nutrition screening tool (NST). The NST consisted of three elements – clinical diagnosis, nutritional intake and anthropometric measures. Each element was scored and children with an overall score of 4 or more were considered at nutritional risk. Of those screened, a random sample (n=110) were further assessed for full nutritional status by a registered dietitian. The full nutritional assessment consisted of a face-to-face interview obtaining dietary and social information, anthropometric measurements and retrieval of medical information from case notes. Data were analysed using chi-square tests to compare groups within the sample and kappa statistics to compare agreement between the full nutritional assessment and NST.

Results: The majority of 110* participants were surgical admissions (57%), male (58%) and the mean age was 8.9 years (SD 4.5 years). Nutritional risk was identified in 24.5% of the sample using the NST, and in 27% of the sample by full nutritional assessment. Compared to the latter, the NST demonstrated 70% sensitivity and 92.5% specificity. Kappa was calculated as 0.645 (CI 0.481, 0.809). The incidence of nutritional risk was not significantly different between males and females (by either method), but was statistically higher (by both methods) in medical compared with surgical admission (X²=14.117, p<0.001; X²=12.721, p=0.008 respectively).

Conclusion: The results of this small validation suggest that this new nutrition risk screening tool is valid and reliable for the identification of children requiring further nutritional assessment and appropriate intervention. It demonstrates moderate to substantial agreement with a full nutritional assessment. Further investigation will focus on the malnutrition risk by different clinical conditions and clinical settings.

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Reference
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