Proceedings of the Nutrition Society (2010), **69 (OCE2)**, E217 doi:10.1017/S0029665109994137

Malnutrition Matters, Joint BAPEN and Nutrition Society Meeting, 13–14 October 2009, Cardiff

Comparison of the paediatric Yorkhill malnutrition score (PYMS) with other paediatric screening/assessment methods

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All inpatients should be screened for malnutrition[(1)] but validated paediatric tools for use by nursing staff are scarce. The Paediatric Yorkhill Malnutrition score (PYMS) was developed based on ESPEN guidelines[(2)]. Its development, performance[(3)], criterion validity, inter-rater reliability[(4)] and impact on clinical practice[(5)] have been assessed. This study compared the PYMS with other similar paediatric tools.

Two research dietitians screened malnutrition using the PYMS, the Screening Tool for the Assessment of Malnutrition in Paediatrics (STAMP)[(6)] and the paediatric Subjective Global Nutritional Assessment (SGNA)[(7)] in inpatients (1–16 years) from a tertiary paediatric ($n = 225$) and district general hospital ($n = 22$).

Two hundred and forty seven children consented to the study. The prevalence of malnutrition varied between the different tools. Compared to PYMS, STAMP identified more patients as being at risk, while SGNA identified fewer (Table 1).

Table 1

	PYMS (%)	STAMP (%)	SGNA (%)
High risk	21	28.7	1.6
Medium risk	22.3	39.7	16.6

Eighty percent (198/247) of the patients were classified at the same risk of malnutrition between STAMP and PYMS and 81% (199/247) between SGNA and PYMS (Table 2). The agreement between STAMP and PYMS was moderate ($\kappa = 0.47$ 95% CI [0.34–0.61]) and between SGNA and PYMS slight ($\kappa = 0.12$ 95% CI [–0.11–0.34]). PYMS identified all the children who screened at risk by SGNA but only 52% of those screened at risk by STAMP (Table 2). Likewise 20% and 9% of the patients screened at low risk using SGNA and STAMP were classified at risk by PYMS (Table 2).

Table 2

		STAMP		SGNA	
		No risk*	Risk	No risk	Risk
PYMS	No risk*	161 (91%)	34 (48%)	195 (80%)	0 (0%)
	Risk	15 (9%)	37 (52%)	48 (20%)	4 (100%)

*Low and medium risk combined.

STAMP identified a greater percentage of inpatients as being at medium or high risk, while PYMS identified a more manageable proportion. PYMS agreed poorly with SGNA which identifies malnourished rather than patients at risk of developing malnutrition. Comparison against dietetic assessment is needed to explore which screening tool has better diagnostic validity.

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