Evidence Analysis Library: Pediatric Nutrition Screening
Validity and Reliability Criteria

What is the validity and reliability of nutrition screening tools for identifying risk of malnutrition related to under- or over-nutrition in the pediatric population?

Table 1. Cut points for interpreting data of pediatric malnutrition screening tools

Criteria for Individual Study Results	Overall Classification for Each Tool
Validity Results	
Se, Sp, PPV, NPV[a]	**Overall Degree of Se, Sp, PPV, NPV**
90 to 100%, *Excellent*	High
80 to 90%, *Good*	Moderate
70 to 80%, *Fair*	Low
60 to 70%, *Insufficient*	Low
50 to 60%, *Poor*	Low
Reliability and Agreement Results	
Kappa Value[b]	**Overall Level of Agreement and Reliability**
Above 0.90, *Almost Perfect*	High
0.80 to 0.90, *Strong*	High
0.60 to 0.79, *Moderate*	Moderate
0.40 to 0.59, *Weak*	Low
0.21 to 0.39, *Minimal*	Low
0 to 0.20, *None*	Low
Cronbach's Alpha Value[c]	**Overall Level of Internal Consistency**
$\alpha \geq 0.9$, *Excellent*	High
$0.9 > \alpha \geq 0.8$, *Good*	High
$0.8 > \alpha \geq 0.7$, *Acceptable*	Moderate
$0.7 > \alpha \geq 0.6$, *Questionable*	Low
$0.6 > \alpha \geq 0.5$, *Poor*	Low
$0.5 > \alpha$, *Unacceptable*	Low
ICC Value[d]	**Overall Level of Test-Retest Reliability**
> 0.90, *Excellent*	High
0.75 to 0.9, *Good*	High
0.5 to 0.75, *Moderate*	Moderate
< 0.5, *Poor*	Low

Abbreviations: Se=sensitivity, Sp=Specificity, PPV=Positive predictive value, NPV=Negative predictive value

[a]Criteria were set based on Neelemaat F, Meijers J, Kruizenga H, van Ballegooijen H, van Bokhorst-de van der Schueren M. Comparison of five malnutrition screening tools in one hospital inpatient sample. *Journal of clinical nursing.* 2011; 20 (15-16): 2,144-2,152. PMID: 21535274.

[b]Criteria were set based on McHugh ML. Interrater reliability: the kappa statistic. *Biochemia medica.* 2012; 22(3): 276-282. PMID: 23092060.

[c]α=alpha. Criteria were set based on Tavakol M, Dennick R. Making sense of Cronbach's alpha. *International journal of medical* 420 *education.* 2011; 2: 53-55.

[d]ICC=intraclass correlation coefficient. Criteria were set based on Koo TK, Li MY. A Guideline of Selecting and Reporting Intraclass Correlation Coefficients for Reliability Research. *Journal of chiropractic medicine.* 2016; 15(2): 155-163.