



ORIGINAL ARTICLE

Validation of a subjective global assessment questionnaire^{☆,☆☆}



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KEYWORDS

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Abstract

Objective: To validate the Subjective Global Nutritional Assessment (SGNA) questionnaire for Brazilian children and adolescents.

Methods: A cross-sectional study with 242 patients, aged 30 days to 13 years, treated in pediatric units of a tertiary hospital with acute illness and minimum hospitalization of 24 h. After permission from the authors of the original study, the following criteria were observed to obtain the validation of SGNA instruments: translation and backtranslation, concurrent validity, predictive validity, and inter-observer reliability. The variables studied were age, sex, weight and length at birth, prematurity, and anthropometry (weight, height, body mass index, upper arm circumference, triceps skinfold, and subscapular skinfold). The primary outcome was considered as the need for admission/readmission within 30 days after hospital discharge. Statistical tests used included ANOVA, Kruskal–Wallis, Mann–Whitney, chi-square, and Kappa coefficient. **Results:** According to SGNA score, 80% of patients were considered as well nourished, 14.5% moderately malnourished, and 5.4% severely malnourished. Concurrent validity showed a weak correlation between the SGNA and anthropometric measurements ($p < 0.001$). Regarding predictive power, the main outcome associated with SGNA was length of admission/readmission.

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^{☆☆} The study was conducted at Postgraduate Program in Child and Adolescent Health, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil.

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PALAVRAS-CHAVE

Avaliação nutricional;
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Secondary outcomes associated included the following: length of stay at the unit after SGNA, weight and length at birth, and prematurity ($p < 0.05$). The interobserver reliability showed good agreement among examiners (Kappa = 0.74).

Conclusion: This study validated the SGNA in this group of hospitalized pediatric patients, ensuring its use in the clinical setting and for research purposes in the Brazilian population.

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Validação de um questionário de avaliação nutricional subjetiva global**Resumo**

Objetivo: Validar o questionário de Avaliação Nutricional Subjetiva Global (ANSG) para a população de crianças e adolescentes brasileiros.

Métodos: Estudo transversal, realizado com 242 pacientes, de 30 dias a 13 anos, atendidos em unidades pediátricas de um hospital terciário, com doenças agudas e tempo de permanência mínima de 24 horas hospitalizados. Após autorização dos autores do estudo original foram realizadas as seguintes etapas para obtenção da validação dos instrumentos de ANSG: tradução (backtranslation), validade de critério concorrente e preditiva e confiabilidade interobservador. As variáveis em estudo foram: idade, sexo, peso e comprimento ao nascer, prematuridade e antropometria (peso, estatura, índice de massa corporal, circunferência braquial, dobra cutânea tricipital e dobra cutânea subescapular). O desfecho principal considerado foi necessidade de internação/reinternação até 30 dias após a alta hospitalar. Os testes estatísticos utilizados foram: ANOVA, Kruskal–Wallis, Mann–Whitney, Qui-quadrado e coeficiente Kappa.

Resultados: De acordo com a classificação do ANSG 80% dos pacientes foram classificados como bem nutridos, 14.5% moderadamente desnutridos e 5.4% gravemente desnutridos. A validade concorrente mostrou fraca a regular correlação do ANSG com as medidas antropométricas utilizadas ($p < 0.001$). Quanto ao poder preditivo, desfecho principal associado ao ANSG foi tempo de internação/reinternação. Os desfechos secundários associados foram: tempo de permanência na unidade após ANSG, peso e comprimento ao nascer e prematuridade ($p < 0.05$). A confiabilidade interobservador mostrou boa concordância entre os avaliadores (Kappa = 0.74).

Conclusão: Este estudo validou o método de ANSG nessa amostra de pacientes pediátricos hospitalizados, possibilitando seu uso para fins de aplicação clínica e de pesquisa na população brasileira.

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Introduction

In recent decades, there has been a significant reduction in the prevalence of worldwide malnutrition in children.¹ Nevertheless, death rates due to severe malnutrition in children undergoing hospital treatment remain high.^{2–4} Several studies have reported a prevalence of malnutrition related to an underlying disease of 6–51% in hospitalized children.^{5–7}

However, the lack of consensus regarding the definition, heterogeneous nutritional screening methods, and the fact that nutrition is not prioritized as part of patient care are some of the factors responsible for the under-recognition of malnutrition prevalence and its impact on clinical results. Recently, a new definition of hospital malnutrition in children has been used. This definition incorporates the concepts of chronicity, etiology and pathogenesis of malnutrition, its association with inflammation, and its impact on body functional alterations.⁸

Thus, it is crucial to know and monitor the nutritional status of hospitalized children, to better understand factors contributing to the occurrence of complications, increased

length of hospital stay, and consequent increase in health system costs.^{5,9–11}

Subjective nutritional assessment is an evaluation method based on clinical judgment and has been widely used to assess the nutritional status of adults for clinical research purposes,⁷ considered a predictor of morbidity and mortality.¹² It differs from other nutritional assessment methods by encompassing not only body composition alterations but also patient functional impairment,¹³ assessing the possible presence of nutritional risks, based on clinical history and physical examination. It is a simple, fast, inexpensive, and non-invasive method that can be performed at the bedside.¹²

The questionnaire adapted by Secker and Jeejeebhoy⁷ for the pediatric population has been termed the Subjective Global Nutritional Assessment (SGNA), and evaluates the following parameters: the child's current height and weight history, parental height, food consumption, frequency and duration of gastrointestinal symptoms, and current functional capacity and recent alterations. It also associates nutrition with physical examination.

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