



ORIGINAL ARTICLE

Evaluation of quality of life in schoolchildren with a history of early severe malnutrition[☆]



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KEYWORDS

Child nutrition disorders;
Child development disorders;
Quality of life

Abstract

Introduction: Severe malnutrition in young children may lead to long-term complications, in particular learning and psychosocial disorders linked to health related quality of life (HRQOL). The aim of this study was to evaluate HRQOL in children with a history of severe malnutrition before 2 years of life, expecting to find lower scores in these patients.

Materials and methods: A comparative study was performed on schoolchildren between 5 and 12 years with a history of early severe malnutrition, excluding those with chronic diseases. The Controls were healthy siblings of patients. The sample size was estimated as 26 subjects per group (Total = 52). Sociodemographic variables were recorded and the HRQOL was assessed with PedsQL4.0. Chi square and Student *t* test were applied. Significance level: $P < .05$.

Results: A total of 25 patients and 28 controls were studied. The HRQOL scores obtained from PedsQL for children with history of malnutrition, compared with their healthy siblings, were: Total: 80.82 ± 1.94 vs 89.18 ± 1.84 ($P < .0001$), physical health/dimension: 87.75 ± 3.37 vs 94.75 ± 1.87 ($P < .0001$), psychosocial health: 77.77 ± 2.90 vs 86.57 ± 1.42 ($P < .0001$), emotional dimension: 67.80 ± 4.40 vs 78.75 ± 2.96 ($P < .0001$), social dimension: 88.80 ± 3.05 vs 95.71 ± 1.52 ($P < .0001$), and school dimension: 74.58 ± 3.80 vs 85.00 ± 3.51 ($P < .0001$).

Conclusions: Patients with a history of early severe malnutrition, showed significantly lower HRQOL scores compared with controls.

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PALABRAS CLAVE

Trastornos de la nutrición del niño;
Discapacidades del desarrollo;
Calidad de vida

Evaluación de la calidad de vida en escolares con antecedentes de desnutrición temprana severa**Resumen**

Introducción: La desnutrición severa en niños pequeños produce secuelas a largo plazo, especialmente trastornos del aprendizaje y de adaptación psicosocial. Dichos aspectos están vinculados con la calidad de vida relacionada a la salud (CVRS). La calidad de vida en niños desnutridos no ha sido suficientemente estudiada. El objetivo fue evaluar CVRS en escolares con antecedentes de desnutrición severa antes de los 2 años de vida, estimando encontrar puntuaciones más bajas en estos pacientes.

Material y método: En un estudio comparativo se incluyeron escolares de 5 a 12 años con antecedentes de desnutrición severa y se excluyeron aquellos con enfermedades crónicas. Los controles fueron los hermanos sanos de los pacientes. Muestreo por conveniencia; tamaño muestral estimado en 26 sujetos por grupo (52 en total). Se midieron CVRS con formulario PedsQL4.0 y variables sociodemográficas. Las diferencias se analizaron con la prueba de la Chi cuadrado y el test de la «t» de Student. El nivel de significación fue: $p < 0,05$.

Resultados: Se estudiaron 25 pacientes y 28 controles. Las puntuaciones de CVRS obtenidas por los niños con antecedentes de desnutrición, en comparación con sus hermanos sanos, fueron: total $80,82 \pm 1,94$ vs $89,18 \pm 1,84$ ($p = < 0,0001$), salud/dimensión física: $87,75 \pm 3,37$ vs $94,75 \pm 1,87$ ($p = < 0,0001$), salud psicosocial: $77,77 \pm 2,90$ vs $86,57 \pm 1,42$ ($p = < 0,0001$), dimensión emocional: $67,80 \pm 4,40$ vs $78,75 \pm 2,96$ ($p = < 0,0001$), dimensión social: $88,80 \pm 3,05$ vs $95,71 \pm 1,52$ ($p = < 0,0001$), dimensión escolar: $74,58 \pm 3,80$ vs $85,00 \pm 3,51$ ($p = < 0,0001$).

Conclusiones: Los pacientes con antecedentes de desnutrición severa temprana presentaron puntuaciones significativamente menores de CVRS comparados con los controles.

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Introduction

The risk of mortality in severe malnutrition is 5%,¹ and it is estimated that over one third of deaths in children younger than 5 years can be attributed to malnutrition.² Cognitive development and learning may be affected beyond the period of acute complications. Severe malnutrition before age 3 years (a critical period in brain development) may have sequelae such as delays in cognitive development and school failure.¹⁻⁴ Nutrients modify brain plasticity and function, and nutritional deficiencies produce changes in signalling cascades that delay myelination and result in a reduced number of neurons, altering neural structure and function.^{5,6}

Other factors such as poverty, infection, hospitalisation, and parental level of education may have a negative influence on cognitive development and academic performance.^{7,8} Early alterations in the mother-infant interaction may cause or exacerbate deficiencies related to malnutrition.¹ These sequence of alterations in severe malnutrition has consequences on the development, learning, and interpersonal relationships of over half of the surviving children.¹⁻⁸ The reduced ability of the individual to interact with the environment and with other individuals may limit his or her potential to have a healthy, happy, and productive life.^{9,10}

Our working hypothesis was that schoolchildren with a history of early malnutrition have biological, psychological, and psychosocial sequelae, and since quality of life is intimately related to these developments, the evaluation of the different dimensions measured by the health-related quality

of life scale (HRQoL) would yield significantly lower values in this group of patients.

It is now recognised that individuals with the same objective health status can report very different subjective quality of life due to differences in resiliency and adjustment skills.^{10,11} The HRQoL assesses the impact of health in other dimensions of human experience, such as personal achievement, satisfaction, wellbeing, happiness, and self-esteem.^{11,12}

Until recent years, organisation of care was based on mortality rates, population diseases, and the cost-benefit of preventing or curing the latter.¹⁰⁻¹³ The World Health Organization (WHO) has acknowledged the critical link between physical and psychosocial health. In recent decades, the assessment of HRQoL has started to consider the individual from an integral perspective, measuring the impact of disease from the perspective of the patient or his or her family.^{13,14}

For the above reasons, the aim of this study was to assess the impact on HRQoL in its physical, emotional, social, and school dimensions from the perspective of the parents of children with a history of early severe malnutrition, measured using the Spanish version of the Pediatric Quality of Life Inventory, Version 4.0 Generic Core Scale^{15,16} (PedsQL) validated for Argentina.

Patients and methods

We designed a comparative study of a population of children of both sexes aged 5 to 12 years that included 29 patients

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