



REVIEW ARTICLE

Dietary transition difficulties in preterm infants: critical literature review[☆]



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KEYWORDS

Development of feeding skills;
Infant feeding;
Feeding problems;
Infants and preterm infants

Abstract

Objective: To analyze the scientific literature on dietary changes in preterm children during the first years of life.

Data source: The PubMed database was used for article selection. The texts were analyzed according to their objectives, research design, and research group characteristics. The following were selected to comprise the criteria: (1) publications in the period from 1996 to 2014; (2) participation of infants and children from birth to 10 years of age; (3) development of oral motor skills necessary for feeding; (4) development of the feeding process; and (5) feeding difficulties during childhood.

Summary of the findings: There were 282 studies identified, of which 17 were used in the review, and five more articles were identified through the reference list of selected articles, totaling 22 references.

Conclusion: Very low birth weight preterm newborns are more likely to have feeding problems in early postnatal stages and during childhood when compared with full-term infants. Monitoring the feeding of these infants after hospital discharge is strictly recommended in an early intervention program aiming at better development of feeding skills.

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PALAVRAS-CHAVE

Desenvolvimento das habilidades alimentares; Alimentação infantil; Problemas de alimentação; Bebês e crianças prematuras

Dificuldades de transição alimentar em crianças prematuras: revisão crítica de literatura**Resumo**

Objetivo: Analisar a literatura científica sobre alterações alimentares em crianças prematuras durante os primeiros anos de vida.

Fonte dos dados: A base de dados do Pubmed foi a perscrutora para a seleção dos artigos. Os textos foram analisados quanto aos seus objetivos; desenhos da pesquisa; características do grupo pesquisa e foram selecionados os seguintes temas para compor os critérios: (1) publicações no período de 1996 a 2014; (2) participação de bebês e crianças, do nascimento até os 10 anos de idade; (3) desenvolvimento das habilidades motoras orais necessárias para a alimentação; (4) desenvolvimento do processo de alimentação e (5) dificuldades alimentares durante a infância.

Síntese dos dados: foram identificados 282 estudos, destes 17 foram utilizados e 5 artigos foram identificados por meio da lista de referência bibliográfica dos artigos selecionados, totalizando 22 referências bibliográficas.

Conclusão: A revisão permitiu concluir que recém-nascidos pré-termo muito baixo peso (RNPTMBP) são mais propensos a apresentarem problemas de alimentação nos estágios iniciais pós-natal e durante a infância quando comparados com crianças a termo. O monitoramento da alimentação após a alta hospitalar é estritamente recomendado em um programa de intervenção precoce com vistas ao melhor desenvolvimento das habilidades alimentares.

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Introduction

Prematurity is considered a risk factor, because the infant's anatomical and physiological immaturity predisposes to a number of adaptation and evolution difficulties in post-natal life.¹ The reduction of neonatal morbidity and mortality and, consequently, the significant increase in survival of very low birth weight (VLBW) preterm newborns, *i.e.*, those with gestational age (GA) <37 weeks and birth weight (BW) <1500 g,²⁻⁵ has led many authors to identify this group of children as prone to develop important dietary-related problems.

The initial difficulties with sucking and swallowing patterns in VLBW preterm newborns during the hospitalization period are described in the literature⁶⁻⁹ as immature oral reflexes, reduced sucking effort, small number of sucks due to pauses, incoordination of sucking, swallowing and breathing, choking, and difficulty accepting full volume by oral route (OR).¹⁰ The morbidities associated with prematurity, such as lower GA at birth, presence of clinical instability of the breathing pattern, prolonged intubation time, and gastrointestinal system immaturity¹¹ make these infants unable to initially receive oral feeding exclusively. Thus, the use of alternative feeding routes, through a nasogastric (NG) or orogastric tube, becomes strictly necessary.^{12,13}

Studies have indicated that feeding problems can persist in these children after hospital discharge, and this can have consequences in the long term.¹²⁻¹⁶ Understanding the development of the feeding process in this population, as well as identifying the factors that may contribute to the onset of eating disorders in childhood are essential to determine, in this group of children, which would be more likely to develop problems, and to identify which

stages of feeding development can be altered.^{17,18} This literature review aimed to assess international and Brazilian articles on feeding development of preterm children and feeding problems during the first years of life.

Methods**Data source**

Articles were selected from the PubMed database using the following descriptors: feeding problems, development of feeding skills, and preterm infants, in the period from 1996 to 2014.

Article selection

The study titles and abstracts were identified by two independent researchers, and disagreements were resolved by consensus-based discussion. All potentially relevant studies and those whose abstracts did not provide sufficient information for inclusion or exclusion were recovered as full articles. After the literature review and selection of articles according to their objectives, an analysis of potentially relevant full texts was carried out based on the pre-established criteria, characterizing it as not single-blinded.

Inclusion criteria for article selection were: (1) publications in the period 1996–2014; (2) participation of infants and children from birth up to 10 years of age; (3) inclusion of necessary oral motor skills (OMS) for feeding; (4) development of the feeding process; and (5) inclusion of feeding difficulties during childhood.

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