

Breastfeeding and Complementary Feeding Practices for Children with Cleft Lip and Palate

Práticas de Aleitamento Materno e Alimentação Complementar de Crianças com Fissura Labiopalatina
Prácticas de Lactancia Materna y Alimentación Complementaria para Niños con Labio y Paladar Falso

RESUMO

Objetivo: O estudo teve como objetivo descrever as práticas de aleitamento materno e introdução alimentar, bem como avaliar o estado nutricional de crianças com fissuras labiopalatinas. **Método:** Trata-se de um estudo transversal realizado em um serviço de referência em reabilitação de fissuras labiopalatinas na região do Vale do São Francisco (PE). Aplicados questionários validados sobre condições socioeconômicas, aleitamento materno e introdução alimentar. **Resultados:** Observou-se predominância de crianças do sexo masculino (65,4%) e de fissura labiopalatina combinada (42,3%). Apesar dos indicadores antropométricos adequados, verificou-se baixa qualidade alimentar, vulnerabilidade socioeconômica e reduzida prática de aleitamento materno, com uso frequente de mamadeira. Na alimentação complementar, 66,7% apresentaram boa aceitação dos sólidos e 20% relataram refluxo nasal. **Conclusão:** Os resultados evidenciam a necessidade de estratégias nutricionais específicas e de novas investigações que subsidiem o aprimoramento da atenção nutricional a crianças com fissuras labiopalatinas.

DESCRIPTORES: Fenda labial; Fissura palatina; Avaliação nutricional; Aleitamento materno; Introdução complementar.

ABSTRACT

Objective: The study aimed to describe breastfeeding and complementary feeding practices, as well as to assess the nutritional status of children with cleft lip and palate. **Method:** This cross-sectional study was conducted in a referral service for cleft lip and palate rehabilitation in the São Francisco Valley region (Pernambuco, Brazil). Validated questionnaires on socioeconomic conditions, breastfeeding, and complementary feeding were applied. **Results:** A predominance of male children (65.4%) and combined cleft lip and palate (42.3%) was observed. Despite adequate anthropometric indicators, low dietary quality, socioeconomic vulnerability, and reduced breastfeeding practices—with frequent bottle use—were identified. In complementary feeding, 66.7% showed good acceptance of solid foods, and 20% reported nasal reflux. **Conclusion:** The findings highlight the need for specific nutritional strategies and further research to improve nutritional care for children with cleft lip and palate.

DESCRIPTORS: Cleft lip; Cleft palate; Nutritional assessment; Breastfeeding; Complementary feeding.

RESUMEN

Objetivo: El estudio tuvo como objetivo describir las prácticas de lactancia materna e introducción de alimentos, así como evaluar el estado nutricional de niños con fisuras labiopalatinas. **Método:** Se trata de un estudio transversal realizado en un servicio de referencia para la rehabilitación de fisuras labiopalatinas en la región del Valle del Río São Francisco (Pernambuco, Brasil). Se aplicaron cuestionarios validados sobre condiciones socioeconómicas, lactancia materna e introducción alimentaria. **Resultados:** Se observó predominio de niños del sexo masculino (65,4%) y de fisura labiopalatina combinada (42,3%). A pesar de indicadores antropométricos adecuados, se identificó baja calidad de la dieta, vulnerabilidad socioeconómica y una práctica reducida de lactancia materna, con uso frecuente de biberón. En la alimentación complementaria, el 66,7% presentó buena aceptación de los alimentos sólidos y el 20% refirió reflujo nasal. **Conclusión:** Los resultados evidencian la necesidad de estrategias nutricionales específicas y de nuevas investigaciones que apoyen el perfeccionamiento de la atención nutricional a niños con fisuras labiopalatinas.

DESCRIPTORS: Labio hendido; Fisura palatina; Evaluación nutricional; Lactancia materna; Alimentación complementaria.

RECEBIDO EM: 17/05/2025 APROVADO EM: 03/06/2025

How to cite this article: Menezes MCM, Freitas JRAF, Santos N, Sotero AM, Souza TKM, Silva DFDS, Silveira MS, Skrapek MVC. Breastfeeding and Complementary Feeding Practices for Children with Cleft Lip and Palate. *Saúde Coletiva* (Brazilian Edition) [Internet]. 2026 [cited year month day];17(104):18936-18949. Available from: DOI: 10.36489/saudecoletiva.2026v17i104p18936-18949

Marianna Campos Mororó de Menezes
Nutritionist, University of Pernambuco (UPE).
ORCID: <https://orcid.org/0000-0001-8670-8314>

Jorrana Rodrigues Andrade de Freitas
Nutritionist, University of Pernambuco (UPE).
ORCID: <https://orcid.org/0009-0002-3268-5828>

Naili dos Santos
Nutrition Student, University of Pernambuco (UPE).
ORCID: <https://orcid.org/0009-0009-5892-8120>

Andrea Marques Sotero
Professor of Nutrition at the University of Pernambuco (UPE) and PhD in Nutrition and Public Health from the Federal University of Pernambuco (UFPE).
ORCID: <https://orcid.org/0000-0002-8433-0175>

Thays Kallyne Marinho de Souza
Professor of Nutrition at the University of Pernambuco (UPE) and PhD in Nutrition from the Fe-

deral University of Pernambuco (UFPE).
ORCID: <https://orcid.org/0000-0001-6091-382X>

Diego Felipe dos Santos Silva
Professor of Nutrition at the University of Pernambuco (UPE) and PhD in Science Education: Chemistry of Life and Health from the Federal University of Rio Grande do Sul (UFRGS).
ORCID: <https://orcid.org/0000-0003-3105-1428>

Matheus Sobral Silveira
Professor of Nutrition at the University of Pernambuco (UPE) and PhD in Rehabilitation and Functional Performance from the University of Pernambuco (UPE).
ORCID: <https://orcid.org/0000-0003-2005-292>

Michele Vantini Checchio Skrapek
Professor of Nutrition at the University of Pernambuco (UPE) and PhD in Science from the University of São Paulo (USP).
ORCID: <https://orcid.org/0000-0001-5681-5987>

INTRODUCTION

Cleft lip and palate (CLP) are congenital craniofacial malformations caused by failures in embryonic facial fusion, with multifactorial origins. They compromise sucking, swallowing, and breathing, affecting feeding, growth, and child development. In Brazil, there are 5.86 cases per 10,000 live births, revealing their relevance to public health.

Adequate feeding in the first months is vital for neurological, cognitive, and digestive development, in addition to ensuring nutritional and immunological support. Despite the recommendation of exclusive breastfeeding until six months and complementary breastfeeding until two years

or more, children with FLP face difficulties such as impaired sucking, nasal reflux, risk of choking, and difficulties in latching and positioning during breastfeeding^{5,7}. This can compromise weight gain and promote monotonous eating patterns, with the risk of nutritional inadequacies^{8,9}. Given this, multidisciplinary follow-up from the prenatal period is essential to guide feeding management according to the child's anatomy, ensure adequate growth, and strengthen the mother-baby bond¹⁻¹⁴. This study aimed to describe breastfeeding and food introduction practices and assess the nutritional status of these children.

METHOD

This is a cross-sectional study of

26 children aged 0 to 24 months with cleft lip and palate (CLP), followed up at a specialized referral service in Vale do São Francisco, PE, between March and October 2024. The research was approved by the Research Ethics Committee (opinion no. 6,603,464; CAAE No. 70573023.6.0000.5191), in accordance with Resolution No. 466/2012¹⁵, after institutional authorization and signing of the Free and Informed Consent Form (FICF) by the guardians and the Assent Form (AF) when applicable.

The sample was selected for convenience, including mothers or guardians over 18 years of age; children whose guardians did not sign the forms or did not complete the questionnaires were excluded. Validated

instruments were used to investigate socioeconomic aspects², breastfeeding practices³, and food introduction⁴. Anthropometric measurements followed WHO recommendations⁵: weight measured on a digital pediatric scale (up to 11 months) or vertical scale (from 12 months) and length obtained with an infantometer. The weight-for-age (W/A), weight-for-length (W/L), and length-for-age (L/A) indices were analyzed using Anthro® software, according to WHO curves, and classified by SISVAN^{6,7} cut-off points.

The data were double-entered into Epi Info® and analyzed in SPSS®.

Quantitative variables were described by mean and standard deviation; qualitative variables were described by frequencies. Associations between types of FLP and anthropometric indicators were tested using chi-square or Fisher's tests, adopting $p < 0.05$.

RESULTS

The sample consisted of 26 children treated at a specialized cleft lip and palate referral service in the São Francisco Valley region (PE) in 2024. There was a predominance of males (65.4%) and a higher frequency of cleft lip and palate (42.3%). The mean

age was 11.69 months (± 10.27), with a mean weight of 7.67 kg (± 3.55) and a mean length of 68.15 cm (± 13.76).

Regarding anthropometric indicators, most children had adequate nutritional status: 88.5% had adequate weight for their age, 76.9% had adequate length for their age, and 73.1% were classified as eutrophic by weight-for-length index. Despite this predominance, 23.1% were very short for their age, 15.4% were thin, and 11.5% were overweight, indicating some degree of linear growth impairment and the presence of nutritional changes in a smaller proportion (Table 1).

Table 1 - Nutritional status indicators of children with cleft lip and palate treated at the specialized referral service in the São Francisco Valley region (PE), Brazil, 2024.

Variables		n	%
Weight for age	Low weight for age	3	11,5
	Adequate weight for age	23	88,5
Length for age	Very short for age	6	23,1
	Length appropriate for age	20	76,9
Weight for length	Thinness	4	15,4
	Eutrophy	19	73,1
	Overweight	3	11,5

Source: Prepared by the authors, 2024.

The socioeconomic questionnaire² showed that most caregivers were female (92.3%), self-declared brown (69.2%), and married (57.7%). Households were generally medium-sized: 42.3% lived with three people, 30.8% with four, and 26.9% with five. Most used public transportation (73.1%), did not have formal employment (80.8%), and lived on up to one minimum monthly wage (69.2%).

In addition, half of the respondents (50%) reported receiving government benefits.

Table 2 describes breastfeeding practices in children with FLP up to six months of age. Most mothers (72.7%) received guidance at the maternity ward and 90.9% attempted to breastfeed, but only 36.4% reported adequate latching, while 63.6% faced difficulties. Regarding the method of feeding, 54.6% used a bottle and only

18.1% offered milk directly from the breast. Regarding the type of milk offered at home, 36.4% used exclusively breast milk, 36.4% combined breast milk with another type, and 27.2% offered another type of milk. Regarding the position during breastfeeding, 36.4% adopted a sitting position, 18.2% adopted a straddle position, and 45.5% did not have a defined position for breastfeeding.

Tabela 2 - As práticas de aleitamento materno em crianças com FLP até seis meses atendidas no serviço especializado de referência, na região do Vale do São Francisco (PE), Brasil, 2024.

Variables		n	%
Did you receive guidance on breastfeeding at the maternity ward?	Yes	8	72,7
	No	3	27,3
Did you try to breastfeed the child?	Yes	10	90,9
	No	1	9,1

Original Article

Menezes MCM, Freitas JRAF, Santos N, Sotero AM, Souza TKM, Silva DFDS, Silveira MS, Skrapeç MVC
Breastfeeding and Complementary Feeding Practices for Children with Cleft Lip and Palate

Did the child catch it?	Yes	4	36,4
	No	7	63,6
Did the child catch it?	Breast	2	18,1
	Bottle	6	54,6
	Did not respond	3	27,3
What kind of milk did you offer at home?	Only breast milk	4	36,4
	Breast milk and other milk	4	36,4
	Other milk	3	27,3
What is the best position for breastfeeding?	Straddle	2	18,2
	Sitting	4	36,4
	None	5	45,5

Source: Prepared by the authors, 2024.

Among children aged six months to two years, 53.3% were exclusively breastfed until six months of age. Regarding food preparation, most mothers (66.7%) offered whole foods,

followed by those who used mashed (20.0%) or blended/strained (13.3%) foods. As for the utensils used during feeding, open cups (40.0%) and spoons (33.3%) were the most commonly used. The majority (60.0%) re-

ported no feeding difficulties; among the complaints observed, the most common were choking (13.3%), difficulty chewing (6.7%), and, especially, nasal reflux (20.0%) (Table 3).

Table 3 - Complementary feeding practices in children with FLP between 6 months and two years of age treated at the specialized referral service in the São Francisco Valley region (PE), Brazil, 2024.

Variável		n	%
Exclusive breastfeeding	Yes	8	53,3
	No	7	46,7
Food preparation	Blended/sifted	2	13,3
	Mash	3	20,0
	Whole	10	66,7
What utensil was used?	Baby bottle	4	26,7
	Open cup	6	40,0
	Spoon	5	33,3
Were there any difficulties during feeding?	No complaint	9	60,0
	Choking	2	13,3
	Difficulty chewing	1	6,7
	Nasal reflux	3	20,0

Source: Prepared by the authors, 2024.

The analysis of anthropometric indicators according to cleft type in children up to six months of age did not reveal statistically significant differences ($p>0.05$). No child with cleft

lip was underweight, very short, or thin, although only 11.1% to 12.5% were classified as adequate for all three indicators. Among those with cleft palate, 50% were underweight and 66.7% were very short, although

62.5% to 75% were within the adequate range for the other indices. In the group with cleft lip and palate, 50% were underweight and 66.7% were thin, with only 22.2% to 25% classified as adequate (Table 4).

Table 4 - Association of anthropometric indicators and cleft type in children up to 6 months of age treated at the specialized referral service in the São Francisco Valley region (PE), Brazil, 2024.

Classification (Weight x Age)			
Type of cleft	Underweight (%)	Adequate weight (%)	p-value
Lip fissure		11,1%	0,436
Cleft Palate	50%	66,7%	
Cleft Lip and Palate	50%	22,2%	

Classification (Length x Age)			
Type of cleft	Very low length for age (%)	Adequate length for age (%)	p-value
Lip cleft	0%	12,5%	0,540
Cleft Palate	66,7%	62,5%	
Cleft Lip and Palate	33%	25%	
Classification (Weight x Length)			
Type of cleft	Thinness (%)	Eutrophy (%)	p-value
Lip fissure	0%	12,5%	0,136
Cleft Palate	33,3%	75%	
Cleft Lip and Palate	66,7%	12,5%	

Source: Prepared by the authors, 2024.

The analysis of anthropometric indicators according to the type of cleft in children aged six months to two years did not reveal statistically signi-

ficant differences ($p > 0.05$). No child with cleft lip was underweight or thin; 42.9% were of adequate weight and 66.7% were overweight. In contrast, all children with cleft palate were un-

derweight and thin. In the group with cleft lip and palate, 57.1% had adequate weight, 63.6% were classified as eutrophic, and 33.3% were overweight (Table 5).

Table 5 - Association of anthropometric indicators and cleft type in children aged 6 months to 2 years treated at the specialized referral service in the São Francisco Valley region (PE), Brazil, 2024.

Classification (Weight x Age)				
Type of cleft	Underweight (%)	Adequate weight (%)		p-value
Lip fissure	0%	42,9%		0,477
Cleft Palate	100%	0%		
Cleft Lip and Palate	0%	57,1%		
Classification (Length x Age)				
Type of cleft	Very low length for age (%)	Adequate length for age (%)		p-value
Lip cleft	33,3%	41,7%		0,452
Cleft Palate	33,3%	0,0%		
Cleft Lip and Palate	33,3%	58,3%		
Classification (Weight x Length)				
Type of cleft	Thinness (%)	Eutrophy (%)	Overweight (%)	p-value
Lip fissure	0%	36,4%	66,7%	0,248
Cleft Palate	100%	0%	0%	
Cleft Lip and Palate	0%	63,6%	33,3%	

Source: Prepared by the authors, 2024.

DISCUSSION

The sample consisted mainly of male children, with a predominance of cleft lip and palate, a pattern similar to that described in national and international epidemiological studies^{3,8}. This predominance may be related to the higher frequency of combined clefts among boys, which poses additional challenges for infant feeding and growth⁸.

Most children had adequate weight and length for their age, in contrast to studies reporting a high prevalence of malnutrition in children with CLP⁹⁻

¹¹. This difference may be attributed to the multidisciplinary and nutritional follow-up provided by the referral service, which favors early monitoring and prevention of weight and height deficits, a finding corroborated by an integrative review that highlights the importance of this approach for better clinical outcomes and quality of life⁷. However, some of the children were very short for their age, indicating impaired linear growth in a subgroup and reinforcing the need for continuous monitoring and individualized nutritional interventions.

The dietary history revealed a predo-

minant consumption of caloric preparations with low nutritional value, such as porridge and porridge rich in starch and sugar, a pattern consistent with the socioeconomic vulnerability of families and described in other studies¹⁰. This dietary pattern can result in micronutrient deficiencies, characterizing "hidden hunger"¹³, reinforcing the need for educational strategies that promote a diversified diet, even in contexts of economic restriction.

The sociodemographic profile shows that care falls mainly on women with low income, no formal employment, and dependence on government bene-

fits, a scenario in line with the national reality, where households headed by mothers without a spouse are five times more common than those headed by fathers¹⁸. This overload, combined with limited resources, can compromise access to adequate guidance and better quality food.

Although most mothers received guidance at the maternity ward and tried to breastfeed, many reported difficulties with latching and sucking, findings consistent with the literature¹⁹⁻²². Anatomical changes in the palate prevent the negative pressure necessary for effective sucking, favoring nasal regurgitation, choking, and reduced intake. Although exclusive breastfeeding until six months and complementary breastfeeding until two years is recommended by the WHO and the Ministry of Health, especially for its nutritional and immunological benefits and positive impact on post-surgical recovery, the frequent use of baby bottles and the low prevalence of exclusive breastfeeding point to a lack of specialized technical support.

The sitting position was the most

commonly adopted, in line with recommendations aimed at minimizing nasal reflux. However, more than 40% of mothers did not have a defined position, which can make breastfeeding even more difficult. In terms of complementary feeding, more than half of the children were exclusively breastfed until six months of age and accepted solid foods well, with the predominant use of open cups and spoons, in accordance with official guidelines³. Nevertheless, reports of choking and nasal reflux indicate persistent motor and anatomical challenges, requiring continuous speech therapy and nutritional monitoring²³.

Although the association between cleft type and anthropometric indicators was not statistically significant, a higher proportion of low weight was observed among children with cleft palate, suggesting a clinical impact of changes in sucking and swallowing^{23,24}. Studies with larger samples and longitudinal designs are needed to clarify this relationship and the effect of rehabilitative interventions.

Limitations include the small sample size and cross-sectional design, which

restrict the generalization of the results. Nevertheless, the findings reinforce the need for integrated nutritional care from an early age, which is essential for adequate growth, prevention of complications, surgical success, and strengthening of public policies aimed at specialized care and professional training in the dietary management of children with cleft lip and palate.

CONCLUSION

The findings show that, even with guidance, mothers faced difficulties in breastfeeding, resorting to bottle feeding and with low adherence to breastfeeding. In complementary feeding, solids were well accepted, but choking and nasal reflux persisted. Socioeconomic vulnerability and poor-quality diets indicate the need for specific nutritional strategies. Despite the scarcity of studies, this research broadens the understanding of the challenges faced by children with FLP and contributes to improving care practices and guiding future investigations.

REFERENCES

1. Salari N, Darvishi N, Heydari M, Bokaei S, Darvishi F, Mohammadi M. Prevalência global de fenda palatina, fenda labial e fenda palatina e labial: uma revisão sistemática abrangente e meta-análise. *Revista de Estomatologia, Cirurgia Oral e Maxilofacial*. 2022 abr; vol. 123:110-20.
2. Dantas CA, de Medeiros Albuquerque SV, Cavalcanti RAS. Associação entre estado nutricional e perfil socioeconômico em crianças de Recife, Pernambuco. *Rev Saúde-UNG-Ser*. 2020;14(1-2):8-15.
3. Amorim SMR, et al. A prática do aleitamento materno em crianças com fissuras labiopalatinas. *Rev Eletr Acervo Saúde*. 2019;11(5):e296.
4. Campillay PL, Delgado SE, Brescovici SM. Avaliação da alimentação em crianças com fissura de lábio e/ou palato atendidas em um hospital de Porto Alegre. *Rev CEFAC*. 2010;12(2):257-66.
5. BRASIL. Ministério da Saúde. Guia alimentar para crianças brasileiras menores de 2 anos. Brasília: Ministério da Saúde; 2021.
6. World Health Organization. WHO Anthro software, version 3.2.2. Geneva: WHO; 2007.
7. Brasil. Ministério da Saúde. Sistema de

Vigilância Alimentar e Nutricional (SISVAN): Orientações técnicas de coleta e análise de dados antropométricos. Brasília: Ministério da Saúde; 2011.

8. Matos FGOA, et al. Perfil epidemiológico das fissuras labiopalatais de crianças atendidas em um centro de referência paranaense. *Rev Enferm UFSM*. 2020;10:e28.

9. Escher PJ, et al. Malnutrition as a risk factor in cleft lip and palate surgery. *Laryngoscope*. 2021;131(6):E2060–5.

10. Tungotyo M, et al. The prevalence and factors associated with malnutrition among infants with cleft palate and/or lip at a hospital in Uganda. *BMC Pediatr*. 2017;17:1–7.

11. Miranda GS, et al. Weight, length, and body mass index growth of children under 2 years of age with cleft lip and palate. *Cleft Palate Craniofac J*. 2016;53(3):264–71.

12. Schönardie MS, et al. Relação entre o desenvolvimento infantil e as fissuras labiopalatinas. *Distúrb Comun*. 2021;33(1):40–8.

13. World Health Organization. Essential Nutrition Actions: Improving maternal, newborn, infant and young child health and nutrition. Geneva: WHO; 2013.

14. Castro BS, Moreira MCN. (Re)conhecendo suas casas: narrativas sobre a desospitalização de crianças com doenças de longa duração. *Physis Rev Saúde Coletiva*. 2019;28:e280403.

15. Brasil. Conselho Nacional de Saúde. Resolução nº 466, de 12 de dezembro de 2012. Brasília: Ministério da Saúde; 2013.

16. Santos DTP, et al. Assistência multiprofissional ao recém-nascido com fissu-

ra lábio palatina. *Rev Eletr Acervo Saúde*. 2024;24(11):e17496.

17. IBGE. Panorama do Censo 2022 [Internet]. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística; 2022 [citado 2024 nov 19]. Disponível em: <https://censo2022.ibge.gov.br/panorama/>

18. D'Agostini JC, et al. Nível de conhecimento das mães em relação ao aleitamento materno de crianças com fissuras labiopalatinas. *Braz J Implantol Health Sci*. 2023;5(5):3366–78.

19. Boyce JO, et al. ABM Clinical Protocol #17: Guidelines for breastfeeding infants with cleft lip, cleft palate, or cleft lip and palate—revised 2019. *Breastfeed Med*. 2019;14(7):437–44.

20. Ueki S, et al. Bottle-feeding techniques for children with cleft lip and palate experiencing feeding difficulties. *Int J Nurs Sci*. 2023;10(1):82–8.

21. Wijekoon P, et al. Awareness on feeding, growth and development among mothers of infants with cleft lip and/or palate. *Heliyon*. 2019;5:e02900.

22. Hoffmann L, et al. Feeding difficulties and swallowing disorders in infants with cleft lip and palate. *J Pediatr Nurs*. 2022;63:e96–102.

23. Vitorino AM, et al. Aleitamento materno entre crianças com fissura labiopalatal: uma revisão integrativa. *Saúde Colet (Barueri)*. 2022;12(79):11099–11114.

24. De Moraes Souza LC, et al. Fissuras labiopalatinas: do diagnóstico ao tratamento. *Res Soc Dev*. 2022;11(17):e24911173906