International Journal of Contemporary Pediatrics
Tran QH. Int J Contemp Pediatr. 2024 Jun;11(6):717-721
http://www.ijpediatrics.com
pISSN 2349-3283 | eISSN 2349-3291

Original Research Article

DOI: https://dx.doi.org/10.18203/2349-3291.ijcp20241353

Nutritional care practices for children from 6 to 24 months old by Cham ethnic mothers

Quang Hien Tran*

Department of Obstetrics and Gynecology, An Giang Women and Children's Hospital, Long Xuyên, Vietnam

Received: 05 May 2024
Revised: 18 May 2024
Accepted: 20 May 2024

***Correspondence:**
Dr. Quang Hien Tran,
E-mail: tranquanghienag@yahoo.com

ABSTRACT

Background: This study aims to explore the nutritional care practices for children from 6 to 24 months old by Cham ethnic mothers in Tan Chau town, An Giang province in 2018.
Methods: A cross-sectional study was conducted on Cham ethnic children aged from 6 to 24 months and their mothers living in Tan Chau town, An Giang province.
Results: The rate of mothers practicing proper and sufficient prenatal care during pregnancy is 74.4%; the rate of mothers engaging in lighter work than before pregnancy is 64.2%; the rate of mothers eating more than before pregnancy is 72.2%; the rate of mothers taking iron supplements during pregnancy is high at 85%. Practices regarding the timing of weaning children are not good, with 36.8% of mothers weaning children at the wrong time. Practices for feeding children supplementary foods are relatively good: 90.7% of mothers feed their children at the right time, however, the rate of mothers providing children with a complete range of food groups is only 23.0%. Maternal care practices for sick children have many shortcomings, with 81.7% of mothers feeding children incorrectly when they have diarrhea, and only 38.4% of children receiving oral rehydration solution (ORS) when they have diarrhea. Personal hygiene practices of the mother and child care are not good, with 24.3% of mothers not properly performing hand hygiene for themselves and their children.
Conclusions: We need to strengthen propaganda and consulting work for each group of subjects, especially the Cham ethnic people, on nutritional care practices for children from 6-24 months old.

Keywords: Malnutrition, Children aged 6-24 months, Cham ethnic group, Tan Chau commune, An Giang province

INTRODUCTION

Malnutrition in children has been recognized as a major public health problem in the world and in particular in Vietnam. According to The National Institute of Nutrition of Vietnam, in 2015, the country's rates of malnutrition among children under five were 14.1% underweight, 24.6% stunted, and 6.4% wasting.[1,2] Research indicates that attempts to prevent malnutrition have only been successful in urban areas. High rates of child malnutrition persist in remote, distant, and ethnic minority areas; these areas include children from smaller ethnic groups who are disadvantaged in accessing health care and nutritional support. In Tan Chau Town, the Cham ethnic group consists of 2,295 homes with around 21,600 residents, or 12.02% of the total population, clustered around the Hau River.[3] They follow specific rituals and customs, like fasting throughout the month of Ramadan, praying five times a day, and not eating pork. According to surveys, children experience a comparatively high rate of diarrhea during the yearly flood season, and families from low-income and near-poor households have restricted access to medical care, which has an impact on children's nutritional health.[4,5] This study aims to explore the nutritional care practices for children from 6 to 24 months old by Cham ethnic mothers in Tan Chau town, An Giang province in 2018.

METHODS

This was a community-based cross-sectional descriptive study involving mothers and children of the Cham ethnic group residing in Tan Chau town, An Giang province, who were between the ages of 6 and 24 months at the time of the survey, in 2018. This study was approved by the institutional ethics committee.

Inclusion criteria

The Cham ethnic children between the ages of 6 and 24 months at the time of the survey, as well as their mothers who resided in Tan Chau town, An Giang province, were included.

Exclusion criteria

Children with congenital heart defects, cleft palates, cerebral palsy, children who are extremely unwell, moms who refuse to participate in the study, and mothers with health concerns that prevent them from responding to interviews (silent, deaf, mentally ill) were excluded.

Statistical analysis

Data was cleansed and the survey forms were verified for accuracy. In order to determine the children's nutritional status, their measurements were processed using WHO Anthro 3.2 software. Additionally, general data about the children and their mothers, as well as details about family dynamics, child care counselling, and nutrition practices, were entered into Epidata 3.1 software. Finally, statistical package for the social sciences (SPSS) 23.0 software was used to process the data. To find the strength of the correlation, apply univariate logistic regression and calculate the OR and 95% confidence interval. A relationship is considered to exist if the p value is less than 0.05.

RESULTS

The proportion of mothers practicing proper and sufficient prenatal care during pregnancy is relatively high at 74.4%; the rate of mothers engaging in lighter work than before pregnancy is 64.2%; the rate of mothers eating more than before pregnancy is 72.2%; the rate of mothers taking prenatal vitamins during pregnancy is also high at 85% (Table 1).

The rate of exclusive breastfeeding for the first 6 months is quite high at 87.5%. Among these, 68.7% of infants are breastfed within the first hour after birth, and the rate of mothers not discarding colostrum is quite good at 70.3%. However, there are still 29.7% of mothers who discard colostrum before the first feeding. The results regarding the practice of weaning show that the rate of mothers weaning their children at a non-recommended time is 36.8% (Table 2).

Table 1: Information on prenatal care practices by mothers.

Characteristics	Frequency	%
Proper and complete pregnancy check-up		
Yes	233	74.4
No	80	25.6
Eating during pregnancy		
Eat less than before pregnancy	4	1.3
Eat like before pregnancy	83	26.5
Eat more than before pregnancy	226	72.2
Take iron supplements during pregnancy		
Yes	266	85.0
No	47	15.0
Working while pregnant		
Work more gently	201	64.2
Work as usual or harder	112	35.8

Table 2: Information on breastfeeding practices.

Characteristics	Frequency	%
Discard the colostrum		
Yes	93	29.7
No	220	70.3
Time to breastfeed for the first time after birth		
In the first hour	215	68.7
From the 1st hour to 24th hour	64	20.4
24 hours after birth	29	9.3
Do not remember	5	1.6
Exclusive breastfeeding period		
Correct	274	87.5
Not correct	39	12.5
Weaning time		
Correct	173	63.1
Not correct	101	36.8

Table 3: Information on complementary feeding practices for children.

Characteristics	Frequency	%
Time for nutritional supplements		
Correct	284	90.7
Not correct	29	9.3
Number of meals per day for children		
From 3 to 5 meals	223	71.2
Less than 3 meals or more than 5 meals	90	28.8
Food group for children to eat		
Complete all 4 groups	72	23
Not enough	241	77.0
Supplement with vitamin A		
Yes	313	100.0
No	0	0
Regular child weighing		
Yes	306	97.8
No	7	2.2

Only 45% of mothers take their children to healthcare facilities when they are sick, the rest self-medicate by purchasing drugs. When children suffer from diarrhea, only 38.4% of mothers give them oral rehydration salts (ORS), and the percentage of mothers who encourage their children to breastfeed or eat more than usual when they have diarrhea is quite low at only 39.6%. A high number of mothers, 81.7%, practice dietary restrictions for their children during diarrhea, among which 99.1% avoid giving their children foods containing oil and fats, followed by fruits and vegetables at 42.3% (Table 4).

Table 4: Information on the practice of caring for sick children.

Characteristics	Frequency	%
How a mother handles it when her child is sick		
Take the child to the medical facility	141	45.0
Buy medicine and treat yourself	172	55.0
Give children oresol when they have diarrhea (n=159)		
Yes	61	38.4
No	98	61.9
Breastfeed and feed the child when they have diarrhea		
As usual	86	54.1
More than usual	63	39.6
Less than normal	10	6.3
Dietary restrictions for children with diarrhea		
Yes	130	81.7
No	29	18.2
Diet for children with diarrhea (n=130)		
Avoid foods with strong odors (shrimp, crab, fish)	22	16.9
Avoid oil and fat	129	99.1
Avoid eating vegetables and fruits	55	42.3

The practice of handwashing with soap among mothers and children reached a rate of 75.7%, however, there is still 24.3% of mothers who do not practice proper hand hygiene for themselves and their children at necessary times (Table 5).

Table 5: Information on hygiene care practices.

Handwashing practice for mothers and children	Frequency	%
Achieved	237	75.7
Not achieved	76	24.3

DISCUSSION

Practicing nutritional care during pregnancy

The research results show that the rate of mothers receiving proper and sufficient prenatal care is only 74.4% during pregnancy. This result is lower than the study by Nguyet et al (85.8%).[6] Iron is an essential mineral for blood formation and performs many other important functions in the body.[7] Pregnant women who are anemic are at risk of miscarriage, preterm birth, delivering small and weak infants, and the child is prone to anemia.[8] The mother is at risk of postpartum hemorrhage and other complications during childbirth, which can affect the child's nutritional status. Our study found that 85.0% of mothers took iron supplements daily during pregnancy.[8] This rate is higher compared to the study by Ha in the ethnic minority areas of Huong Hoa and Dakrong districts in Quang Tri province (35.9%).[9] This may be due to the well-implemented maternal health management in the area. The study results show that 72.2% of mothers ate more than before pregnancy. According to the guidelines of the Ministry of Health, during pregnancy, mothers need to pay attention to their health and should only do light work, avoiding heavy tasks that could affect the fetus and increase the risk of miscarriage. The results indicate that among the mothers participating in the study, 64.2% were able to work more gently than before pregnancy. Thus, it can be seen that the practice of nutritional care during pregnancy by mothers in the study area is quite good.

Breastfeeding practice

According to WHO recommendations, UNICEF states that infants should be breastfed within the first hour after birth, as the first drops of colostrum are rich in nutrients and antibodies, which are very beneficial for the child.[10,11] The majority of children in the study were breastfed. This indicates that breast milk remains the primary nutritional food source for newborns and is a top priority for mothers when breastfeeding.[12] The rate of children being fed colostrum (70.3%) and breastfed within the first hour after birth (68.7%) is lower compared to the study by Ha conducted in the ethnic minority areas of Huong Hoa and Dakrong districts in Quang Tri province (78.6%; 80.4%).[9] This lower rate is due to mothers thinking that breast milk is not good, the milk is raw and cold, or relatives advise discarding it.

The National Institute of Nutrition recommends that children should be breastfed for at least 18 months, as early weaning can also affect the child's development later on.[13] In this study, there were 274 children who were weaned, of which 63.1% were weaned at the appropriate time.

Practicing supplementary feeding for children

The period from the start of complementary feeding to weaning is the most threatening time for the nutritional status of children.[14] Introducing complementary foods early is not beneficial for the child's health because before the age of 6 months, children do not need food other than breast milk; feeding them can lead to less breastfeeding, reduced milk production, and the loss of valuable nutrients from breast milk.[15-19] According to WHO recommendations, from the sixth month onwards, in

addition to breast milk, children need to be supplemented with other types of food.[20] Research shows that only 90.7% of mothers introduce complementary feeding at the right time, which is a higher result compared to the studies by Ha conducted in the ethnic minority areas of Quang Tri province (11.9%).[9] The high rate of proper complementary feeding is due to the fact that the mothers in the study, although they are of the Cham ethnic group, live in a Vietnamese community in the plains and urban areas, thus having better access to information and propaganda about child-rearing guidelines than mothers living in highland or remote areas.

Nutritionists have advised mothers to divide their children's meals into several times throughout the day to help them absorb nutrients more effectively, rather than just feeding them twice a day as was the old habit. Research shows that 71.2% of children are fed by their mothers 3-5 times a day. This result is relatively lower compared to Soc Trang province (82.2%).[21] Feeding children all four food groups will ensure they receive the necessary nutrients for development, avoiding the risk of malnutrition later on as this is the best stage for children's growth, yet only 23% of children are fed all four food groups by their mothers, which include rice, flour, meat, fish, eggs, fats, and fruits and vegetables. This figure is higher than the one from Ha's study conducted in the ethnic minority areas of Huong Hoa and Dakrong districts in Quang Tri province (14%) but much lower than Soc Trang province (69.9%).[9,21] There are 100% of children taking vitamin A, a result that is higher than Soc Trang province (89.3%). This may be due to the well-managed supplementation of vitamin A in the community. The rate of children being weighed regularly is 97.8%, which is significantly higher than the study by Ha (89.7%).[9]

Thus, the results indicate that the practice of feeding children by mothers in the local area is relatively good, with most mothers feeding their children at the right times and in the right number of meals. However, regarding the food groups for children, the practice is not yet optimal as the majority of mothers do not provide a complete diet of all four food groups.

Practicing care when a child is sick

When children are ill, only 45% of mothers take them to healthcare facilities. The use of Oresol for children with diarrhea (38.4%) is also lower than the findings of and Bui Tran Minh Nguyet (59.6%).[6] These results indicate that local healthcare services have not received adequate attention from the community, highlighting the need to improve public awareness campaigns to encourage mothers to take their children to health stations and hospitals when they are sick and to avoid self-medicating their children.

Breastfeeding children or having them drink more water than usual helps to promptly replenish the fluids lost during diarrhea, as well as providing the necessary nutrients for their development. Research results show that only 39.6% of children were breastfed or fed more when they had diarrhea, a figure that is lower than the study by Ha (53%).[9]

The restricted foods include pungent substances (shrimp, crab, fish) (16.9%), fatty foods (99.1%), fruits and vegetables (42.3%), mainly because most mothers are afraid that eating these will cause more diarrhea, or because grandparents and relatives advise to avoid them. Thus, the practice of caring for sick children by mothers in the local area is still not good in terms of taking children to healthcare facilities when they are sick, encouraging children to breastfeed or eat more when they are ill is still low, and the practice of dietary restrictions when children are sick remains high.

Practice personal hygiene

The period from 6 to 24 months is when children learn to eat from external food sources. During this time, they are highly susceptible to bacterial infections such as diarrhea, ear infections, and respiratory tract infections, coupled with a decrease in immune resistance due to the "immunity gap," which makes them less capable of fighting off infectious diseases, increasing the risk of malnutrition. Therefore, it is very important for mothers to practice hand hygiene before preparing milk, processing food, or feeding their children, and also to wash their children's hands. Research results show that the practice of maternal and child hygiene care is satisfactory (75.8%) and unsatisfactory (24.3%). This indicates that more than a quarter of mothers still do not pay attention to the practice of washing hands for themselves and their children.

Limitations

There are several limitations in this study. The limited size of the study population was one of the study's shortcomings. Additionally, this study was conducted solely in a province. To determine the frequency of childhood malnutrition and the practices of their mothers, a nationwide survey is required.

CONCLUSION

The study need to strengthen propaganda and consulting work for each group of subjects, especially the Cham ethnic people, on nutritional care practices for children from 6-24 months old.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Mondon C, Tan PY, Chan CL, Tran TN, Gong YY. Prevalence, determinants, intervention strategies and

current gaps in addressing childhood malnutrition in Vietnam: a systematic review. BMC Public Health. 2024;24(1):960.
2. Yang B, Huang X, Liu Q, Tang S, Story M, Chen Y, et al. Child Nutrition Trends Over the Past Two Decades and Challenges for Achieving Nutrition SDGs and National Targets in China. Int J Environ Res Public Health. 2020;17(4).
3. Huong PT, Lam NT, Thu NN, Quyen TC, Lien DT, Anh NQ, et al. Prevalence of malnutrition in patients admitted to a major urban tertiary care hospital in Hanoi, Vietnam. Asia Pac J Clin Nutr. 2014;23(3):437-44.
4. Birhan TA, Bitew BD, Dagne H, Amare DE, Azanaw J, Genet M, et al. Prevalence of diarrheal disease and associated factors among under-five children in flood-prone settlements of Northwest Ethiopia: A cross-sectional community-based study. Front Pediatr. 2023;11:1056129.
5. Regassa W, Lemma S. Assessment of Diarrheal Disease Prevalence and Associated Risk Factors in Children of 6-59 Months Old at Adama District Rural Kebeles, Eastern Ethiopia, January/2015. Ethiop J Health Sci. 2016;26(6):581-8.
6. Nguyet BTM. Knowledge, practice of child care by mothers and nutritional status of children under 5 years old in Lac Son district, Hoa Binh province in 2012, Medical Doctoral Thesis, Hanoi Medical University. 2012.
7. Abbaspour N, Hurrell R, Kelishadi R. Review on iron and its importance for human health. J Res Med Sci. 2014;19(2):164-74.
8. Kumari S, Garg N, Kumar A, Guru PKI, Ansari S, Anwar S, et al. Maternal and severe anaemia in delivering women is associated with risk of preterm and low birth weight: A cross sectional study from Jharkhand, India. One Health. 2019;8:100098.
9. Ha VP. Nutrition status and some related factors of children under 2 years old in ethnic minority areas of Huong Hoa and Dakrong districts, Quang Tri province in 2010. Master's thesis in Preventive Medicine, Ha Noi Medical University. 2010.
10. Hossain S, Mihrshahi S. Exclusive Breastfeeding and Childhood Morbidity: A Narrative Review. Int J Environ Res Public Health. 2022;19(22).
11. Nigatu D, Azage M, Motbainor A. Effect of exclusive breastfeeding cessation time on childhood morbidity and adverse nutritional outcomes in Ethiopia: Analysis of the demographic and health surveys. PLoS One. 2019;14(10):e0223379.
12. Ford EL, Underwood MA, German JB. Helping Mom Help Baby: Nutrition-Based Support for the Mother-Infant Dyad During Lactation. Front Nutr. 2020;7:54.
13. Agarwal RK. Importance of optimal infant and young child feeding (IYCF) in achieving millennium development goals. Indian Pediatr. 2008;45(9):719-21.
14. Lawan UM, Amole GT, Jahum MG, Sani A. Age-appropriate feeding practices and nutritional status of infants attending child welfare clinic at a Teaching Hospital in Nigeria. J Family Community Med. 2014;21(1):6-12.
15. Brito A, Olivares M, Pizarro T, Rodriguez L, Hertrampf E. Chilean complementary feeding program reduces anemia and improves iron status in children aged 11 to 18 months. Food Nutr Bull. 2013;34(4):378-85.
16. Kalhoff H, Kersting M. Breastfeeding or formula feeding and iron status in the second 6 months of life: A critical role for complementary feeding. J Pediatr. 2017;187:333.
17. Miniello VL, Verga MC, Miniello A, Di Mauro C, Diaferio L, Francavilla R. Complementary Feeding and Iron Status: "The Unbearable Lightness of Being" Infants. Nutrients. 2021;13(12).
18. Krebs NF, Sherlock LG, Westcott J, Culbertson D, Hambidge KM, Feazel LM, et al. Effects of different complementary feeding regimens on iron status and enteric microbiota in breastfed infants. J Pediatr. 2013;163(2):416-23.
19. Nagpal J, Sachdev HP, Singh T, Mallika V. A randomized placebo-controlled trial of iron supplementation in breastfed young infants initiated on complementary feeding: effect on haematological status. J Health Popul Nutr. 2004;22(2):203-11.
20. Abeshu MA, Lelisa A, Geleta B. Complementary Feeding: Review of Recommendations, Feeding Practices, and Adequacy of Homemade Complementary Food Preparations in Developing Countries - Lessons from Ethiopia. Front Nutr. 2016;3:41.
21. Vu NA, Huong LT, Hoa PTT, Huyen DTT. Knowledge and Practice of Childcare and Nutrition of Mothers and Nutritional Status of Children from 12-24 Months Old in Tien Lu District in 2011. Med Res J. 2013;82(2):148-54.

Cite this article as: Tran QH. Nutritional care practices for children from 6 to 24 months old by Cham ethnic mothers. Int J Contemp Pediatr 2024;11:717-21.