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Original Research Article

Study the malnutrition status of children aged 6-24 months of the Cham ethnic group in Tan Chau town, An Giang province in 2018

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ABSTRACT

Background: In recent years, according to the investigation report of the Institute of Nutrition, the malnutrition rate of children in remote, faraway, and ethnic minority areas is still high compared to children in other regions. Studying the malnutrition status of children aged 6 to 24 months of the Cham ethnic group in Tan Chau town, An Giang province is a practical need to provide some scientific evidence for interventions to reduce the malnutrition rate of children in the locality. This study aims to explore the nutritional status of children aged 6-24 months of the Cham ethnic group in Tan Chau town, An Giang province in 2018.
Methods: Cross-sectional study. Subjects: Cham ethnic children from 6 to 24 months old at the time of the survey and the mothers of the children living in Tan Chau town, An Giang province.
Results: Research shows that the average weight and length increase with age group, and boys have higher corresponding average values than girls. The malnutrition group has the highest malnutrition rate in the age group of 6-12 months at 27.2% and the lowest in the age group of 19-24 months at 2.6%. Undernourished group in the Stunted category has the highest undernourishment rate in the age group of 6-12 months at 44.1% and the lowest in the age group of 19-24 months at 25.7%. Undernourished group in the Wasted category has the highest undernourishment rate in the age group of 13-18 months at 13.9% and the lowest in the age group of 19-24 months at 2.6%.
Conclusions: The malnutrition status of children aged 6-24 months of the Cham ethnic group in Tan Chau town, An Giang province in 2018 is still quite high.

Keywords: Nutritional status, Children 6-24 months old, Cham ethnic group, Tan Chau commune, An Giang province

INTRODUCTION

Every year, millions of children worldwide die from causes related to malnutrition and show signs of physical and mental underdevelopment due to malnutrition since childhood.[1] In Vietnam, according to the announcement of the Nutrition Institute, in 2015 the rate of malnutrition in children under 5 years old nationwide was 14.1% underweight; 24.6% stunted and 6.4% wasted.[2,3] The actual survey has shown that the work of preventing malnutrition is only well implemented in urban areas, while in remote, faraway, and ethnic minority areas, the rate of malnutrition in children is still high, among which children of minority ethnic groups suffer many disadvantages in nutrition care as well as health care and access to health care services.[4] The survey results show that the rate of children suffering from diarrhoea during the annual flood season is relatively high, while the access to healthcare services for families in the poor and near-poor categories is still limited, which somewhat affects the nutritional status of children.[5-7] The period from 6 to 24 months of age is a critical window for children to develop physically and behaviourally. Currently, there has been no scientific study conducted

locally on the nutritional status of children aged 6 to 24 months of the Cham ethnic group.

METHODS

A community-based cross-sectional descriptive study was conducted in 2018 on children of the Cham ethnic group from 6 to 24 months old at the time of the survey and their mothers living in Tan Chau town, An Giang province. Exclusion criteria were children with congenital anomalies: congenital heart defects, cleft lip and palate, cerebral palsy, children with severe illness. Mothers with health issues who cannot respond to interviews (mute, deaf, mentally ill) and mothers who do not agree to participate in the study.

Data collection tools

Use the Nhon Hoa scale with a tray provided by the national malnutrition program with an accuracy of 100 grams. Use a wooden ruler provided by the national malnutrition program with an accuracy of 0.1cm to measure the lying length of children ≤24 months old. Biometric weighing and measuring form for children aged 6-24 months. Mother's interview form: consisting of 4 main parts and 57 questions.

Data analysis

The survey forms were checked for accuracy and the data was cleaned. The children's measurements were processed using WHO Anthro 3.2 software to assess their nutritional status; general information about the children and their mothers; information about family factors, child care counselling, and nutrition practices were entered into Epidata 3.1 software and data was processed using SPSS 23.0 software.

RESULTS

The number of children is relatively evenly distributed among the groups; the proportion of boys is higher than girls (57.2%; 42.8%); the majority of children have a birth weight of ≥2500 grams (97.8%); children in the study are mainly firstborn and second-born (36.4%, 50.8%); in the past 2 weeks, the highest proportion of children have respiratory tract infections (10.5%), followed by diarrhea (8.9%), and finally other diseases with the lowest proportion (1.3%) (Table 1).

The majority of mothers in the study are aged 35 and below (84.7%); mothers with primary education level account for the highest proportion (70.6%), followed by lower secondary education at only 18.5%, illiterate and upper secondary education equivalent at the same rate (5.8%, 5.1%); the main occupations of mothers are housewives accounting for 73.2%, farmers accounting for 19.4%, workers accounting for 6.1%, and the remaining are other occupations (1.2%); the number of children in each family is mainly from 1-2 children (37.4%, 49.8%) (Table 2). Average weight and average length increase by age group, and boys have higher corresponding average values than girls (Table 3).

Table 1: General information table of children in the study group.

Characteristics	Groups	N	%
Age group (months)	6-12	77	24.6
	13-18	122	39.0
	19-24	114	36.4
Gender	Male	179	57.2
	Female	134	42.8
Postpartum weight (g)	<2500	7	2.2
	≥2500	306	97.8
Birth order	First child	114	36.4
	Second child	159	50.8
	Third child and above	40	12.8
Diseases in the past 2 weeks	Diarrhea	28	8.9
	Respiratory inflammation	33	10.5
	Other	4	1.3

Table 2: General information on demographic characteristics of mothers.

Characteristics	Groups	N	%
Age (in years)	From 35 years old and below	265	84.7
	Over 35 years old	48	15.3
Educational level	Unlettered	16	5.1
	Elementary school	221	70.6
	Secondary school	58	18.5
	High school	18	5.8
Occupation	Farmer	61	19.4
	Household	229	73.2
	Worker	19	6.1
	Other	4	1.2
Number of children	1 child	117	37.4
	2 children	156	49.8
	From 3 children up	40	12.8

Table 3: Average weight, average height by age group of children.

Characteristics	Average weight (kg)	Average height (cm)
According to age group (months)		
6-12	7.52±0.91	68.75±5.48
13-18	9.00±1.12	76.96±6.03
19-24	10.23±1.29	80.65±6.19
According to youth gender		
Male	9.28±1.57	77.16±7.51
Female	8.83±1.47	75.12±7.38

Underweight group has the highest malnutrition rate in the age group of 6-12 months at 27.2% and the lowest in

the age group of 19-24 months at 2.6%. In the Stunted group, the highest malnutrition rate is in the age group of 6-12 months at 44.1% and the lowest in the age group of 19-24 months at 25.7%. In the Wasted group, the highest malnutrition rate is in the age group of 13-18 months at 13.9% and the lowest in the age group of 19-24 months at 2.6% (Table 4).

Table 4: Nutritional status of children aged 6 to 24 months by age group.

According to age group (months)	Nutritious light body type		Undernourished body type		Nutritious skinny type	
	N	%	N	%	N	%
6-12	21	27.2	34	44.1	6	7.7
13-18	25	20.4	32	26.2	17	13.9
19-24	3	2.6	18	15.7	3	2.6

DISCUSSION

The ratio of nutritious light body type

Undernutrition in the form of being underweight is a common characteristic of malnutrition, but it is not known whether that specific characteristic is a newly occurring type of undernutrition or has been accumulated for a long time.[8] However, monitoring weight is relatively easy in the community, so the prevalence of underweight by age is still used as the general rate of malnutrition.[9] This study's results show that the prevalence of underweight is 15.7%.

In classifying the level of malnutrition in the community, the rate of malnourished children in our study is average. Compared to the nutrition institute's survey data in 2015, the rate of mild malnutrition is slightly higher than the national average (14.1%) and provinces in the Mekong Delta region such as Long An province (8.7%), Tien Giang province (10.7%), Ben Tre province (11.3%), An Giang province (12.8%), Can Tho province (10.7%), and the Mekong Delta region (12.2%).

According to the research results of Vu Phuong Ha surveying ethnic minority children in Huong Hoa and Dakrong districts, Quang Tri province in 2010 was 42.1% as well as Nguyen Thi Thanh Thuan surveying Tay ethnic children in Chiem Hoa district, Tuyen Quang province in 2009 was 23.3%, both higher than our results.[10,11] This further demonstrates that the current malnutrition rate in our country varies in different regions and requires special attention to highland areas, ethnic minorities, and remote areas.

The ratio undernourished body type

Malnutrition in children is a measure of chronic malnutrition or prolonged protein deficiency.[12] The main causes are usually low birth weight, premature supplementary feeding, and children suffering from diarrhea.[12-16] The prevalence of stunting malnutrition is increasingly being recognized for its public health significance. Observing the phenomenon of accelerated growth in height in many countries, it is noted that the growth period of children before school age is crucial, even though stunted children may experience catch-up growth later on, in places where the prevalence of malnutrition in children is high, the average height of adults is lower compared to places with lower rates of malnutrition.[17] The research results show that the rate of stunting is 26.8%.

The rate of stunting is higher than in Soc Trang province (25.6%), Can Tho province (21.4%), An Giang province (23.9%), Long An province (19.5%), Tien Giang province (24.4%), Ben Tre province (21.9%), the Mekong Delta region (23.5%), and the whole country (24.6%). In this study, the prevalence of severe malnutrition was much higher than that of mild malnutrition and underweight, indicating the common occurrence of chronic malnutrition in the study area and also consistent with the general trend of the country.[2]

The ratio nutritious skinny type

Malnutrition in the form of wasting reflects recent food shortages, with an acute nature. Research results show that the prevalence of wasting malnutrition is 8.3%, higher than in Soc Trang province (3.9%), Can Tho province (3.2%), An Giang province (6.0%), Long An province (2.8%), Tien Giang province (5.8%), Ben Tre province (5.0%), the Mekong Delta region (5.6%), and the whole country (6.4%). In this study, it was found that there is a difference in the proportion of malnourished individuals compared to other studies, which may be explained by the fact that we conducted the research in an area predominantly inhabited by the Cham ethnic group. Furthermore, our study subjects were all between 6 months and 24 months old.

This is a group at high risk of malnutrition, which can be explained by the significant decrease in some nutrients and vitamins such as iron, vitamin A, after 6 months of breastfeeding. During this period, the child's body grows rapidly in physical, motor, and mental aspects, thus increasing the need for energy and nutrients.

Malnutrition rate by age and gender

The research results show that the highest rate of mild malnutrition is in the age group 6-12 months old with

(27.2%), the highest rate of moderate malnutrition is in the age group 6-12 months old with (44.1%), and the highest rate of severe malnutrition is in the age group 13-18 months old with (13.9%). This can explain why at this age children need energy to grow and enhance motor activities but the supply process is lacking, there may be many reasons leading to this situation, early weaning, improper diet and lack of child care.

The results in chart 3.2 show that boys have the same rates of malnutrition in all three categories (underweight 15.6%, stunted growth 24.5%, severely wasted 8.9%) equivalent to the rates of malnutrition in girls (underweight 15.7%, stunted growth 29.8%, severely wasted 7.7%).

Limitations

One of the limitations of the current study was the small size of the study population. Furthermore, this study was taken only in a province. A national survey is needed to establish the malnutrition prevalence in children.

CONCLUSION

It is necessary to strengthen propaganda and consultation for each target group, especially Cham ethnic people and mothers with low education levels to improve knowledge and practice of child care as well as child care. Nutritional care during pregnancy, improving economic life for poor households contribute to reducing the malnutrition rate of children in the area as well as in the community.

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