

ASSESSMENT OF GENERAL NUTRITION KNOWLEDGE OF GUARDIANS WHEN BRINGING CHILDREN TO GET VACCINATIONS AT THE VACCINATION DEPARTMENT, NATIONAL HOSPITAL FOR TROPICAL DISEASES IN 2023-2024

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ABSTRACT

Objective: To assess the general knowledge of nutrition of guardians when taking their children to get vaccinated at the Vaccination Room, National Hospital For Tropical Diseases in 2023

Method: Cross-sectional study of 99 guardians when taking their children to get vaccinated at the National Hospital For Tropical Diseases in 2023-2024.

Results: Female guardians accounted for 74.7%. The proportion of guardians with children over 24 months old was 33.3%. The proportion of guardians with low knowledge of nutritional group classification (41.4%). 66.7% of guardians knew which substances provide energy, foods belonging to the animal protein group (88.9%). Over 75% of guardians know about the classification of nutrient groups and the foods that provide nutrients for each group, so 99% of guardians are aware of the need to eat enough food from the groups and 96% of guardians understand that nutrition affects children's development. When surveying more deeply the group of guardians of children over 24 months old, 15.2% of guardians have correct knowledge about the oil/fat needs of children 2-5 years old, while the percentage of guardians who answered that they do not know is 75.8%. Regarding the nutritional needs of children 6-8 years old, the percentage of guardians who answered correctly was only 33.3%; the majority answered incorrectly (51.5%). 54.5% of guardians agree that children with diarrhea still need to use oil/fat.

Conclusion: General knowledge of nutrition of guardians when taking children to get vaccinated at the Vaccination Room, National Hospital For Tropical Diseases in 2023 is still low. More guardians need to conduct further research on general practical knowledge of guardians when taking children to get vaccinated to serve as a basis for nutritional counseling, contributing to reducing the rate of malnutrition in children.

Keywords: Guardian nutrition knowledge, Nutrition, Nutrition knowledge.

1. INTRODUCTION

Nutrition in children plays a very important role in physical development, learning and social communication. Providing adequate nutrition has a great significance for the development of children and is a good premise for children to develop optimally in the following stages. In recent years, the rate of malnutrition in children has decreased significantly but is still high. According to statistics from the Institute of Nutrition in 2015, the rate of underweight malnutrition

was 14.1% and stunting was 24.6% [1]. In addition, the rate of overweight and obesity is also increasing and this condition is considered to be related to the lack of knowledge, as well as the mistakes of caregivers when raising children. Malnutrition in children under 2 years old can be life-threatening due to a weakened immune system, from which children are at risk of death from even common diseases such as diarrhea and pneumonia. Many mothers do not dare to feed their children

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with oil/fat (lipid), abstain when their children are sick, the underlying cause is due to the mother's lack of knowledge and limited practice in raising young children [2].

The vaccination room belongs to the hospital's clinic system, annually receiving thousands of guardians for vaccination, examination and nutrition consultation. Among them, some children are found to be malnourished. Currently, there has been no survey at the vaccination room of the National Hospital For Tropical Diseases on the nutritional knowledge of guardians when taking their children for vaccination, so we conducted the topic "Assessing the general knowledge of nutrition of guardians when taking their children for vaccination at the Vaccination Room, National Hospital For Tropical Diseases in 2023-2024" to survey the nutritional knowledge of guardians to have a basis for developing communication materials, providing appropriate nutrition consultation for mothers, in order to further improve the quality of community nutrition.

2. SUBJECTS AND RESEARCH METHODS

2.1. Location: Vaccination Room, National Hospital For Tropical Diseases

2.2. Research Period: From June 2023 to June 2024

2.3. Subjects: Guardians (A person who takes care of and protects the legal rights and interests of minors, people with no civil capacity, people with difficulty in cognition, behavior control - Mr./Mrs./Father/Mother/...) agree to participate in the research guardian.

2.4. Study design: Cross-sectional description with analysis

2.5. Collecting data:

Information collection using interview questionnaires: Data is collected by directly interviewing guardians about general information on socio-demographics, knowledge about nutrition.

2.6. Evaluation criteria: Basic nutrition documents, pathological nutrition and recommended nutritional needs for Vietnamese people [3-5]

2.7. Sample size: Use a convenient sample size. All subjects meet the research criteria (from 01/06/2023-31/06/2024)

How to overcome errors

- Before interviewing, clearly present the research purpose to the subjects
- Standardize the investigation method and thoroughly train the investigators
- Mobilize and explain to the subjects to maximize cooperation

- Check the collected data after each day

2.8. Ethics in research

The research was approved by the Scientific Council, National Hospital For Tropical Diseases before implementation

The research subjects were fully explained and agreed to accept before conducting the interview

The research results were used to develop a plan to build a communication program, nutrition documents, ensuring to improve the effectiveness of the clinic

3. RESULTS

Table 1. General characteristics of guardians

General information		Number of Patients (n)	Percentage (%)
Age	< 20	1	1
	20-39	92	92.9
	40-59	4	4
	≥ 60	2	1
Sex	Male	25	25.3
	Female	74	74.7
National	The Kinh	92	92.9
	Other	7	7.1
Education level	Primary	0	0
	Secondary	6	6.1
	High School	62	62.6
	College	8	8.1
	University	23	23.2
Job	Officer	2	2
	Farmer	5	5.1
	Housewife	6	6.1
	Other	86	86.9
Current residence	Countryside	76	76.8
	City/town	23	23.2
Income (million VND/month)	< 10	11	11.1
	10-20	73	73.7
	≥ 20	15	15.2
Age of child for vaccination	Children < 24 months	33	33.3
	Children ≥ 24 months	66	66.6

Comments: 74.7% of guardians are female, most of whom are aged 20-39 (92.9%); are Kinh ethnic group (92.9%) and have mainly high school education (62.6%); followed by university and postgraduate (23.2%); The percentage of guardians

who are civil servants is low (2%) and their current residence is mainly rural (76.8%). The majority of guardians take children under 24 months of age for vaccination (66.6%).

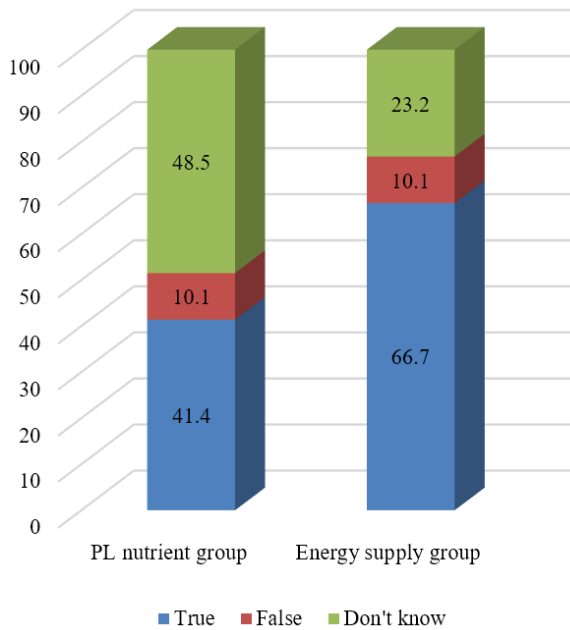


Chart 1. Proportion of guardians with knowledge of nutrient group classification and energy-providing substances

Comment: The rate of guardians of children who understand the classification of nutrients is only 41.4%. There are still 48.5% of guardians who answered that they do not know. This may be specialized knowledge, however, when asked about which substances provide energy, the rate of correct and sufficient answers is only 66.7%. There are still 23.2% of guardians who answered that they do not know.

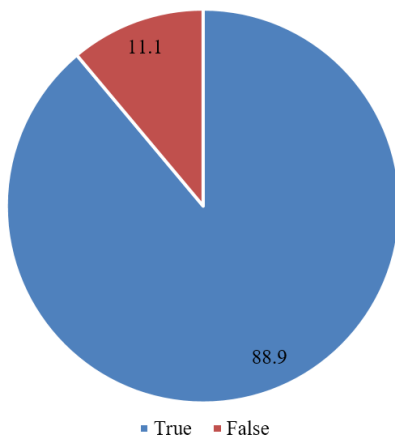


Chart 2. Percentage of guardians with knowledge about animal protein groups

Comment: The survey results on research subjects on which nutrients are classified as providing protein of animal origin showed that up to 88.9% of guardians had correct awareness.

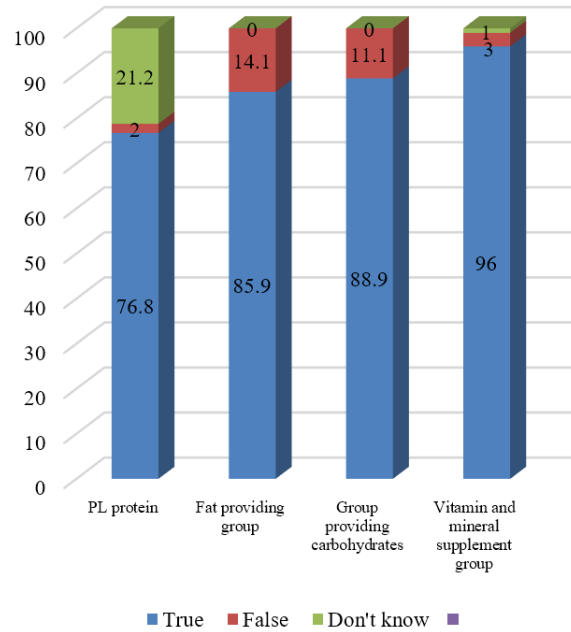


Chart 3. Percentage of guardians with knowledge about protein classification, fat-providing groups, carbohydrates and vitamins-minerals

Comments: The results of the chart above show that over 70% of guardians have basic knowledge about groups of substances that provide energy such as 76.8% of guardians know that protein is divided into 2 groups: animal and plant; 85.9% of guardians know that oil/fat are 2 substances that provide fat (lipid); 88.9% of guardians know which foods belong to the group of carbohydrates (glucid-carbohydrate) and 96% of guardians have correct knowledge about foods that provide vitamins and minerals.

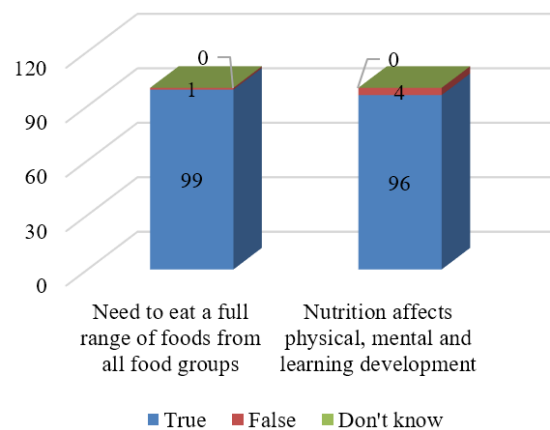


Chart 4. Guardians' knowledge of the role of nutrition and food choices

Comments: The chart results show that over 95% of guardians have correct knowledge about the role of nutrition, 96% of guardians know that nutrition affects children's mental, physical and learning development and that eating enough foods in the nutrient groups is necessary (99%).

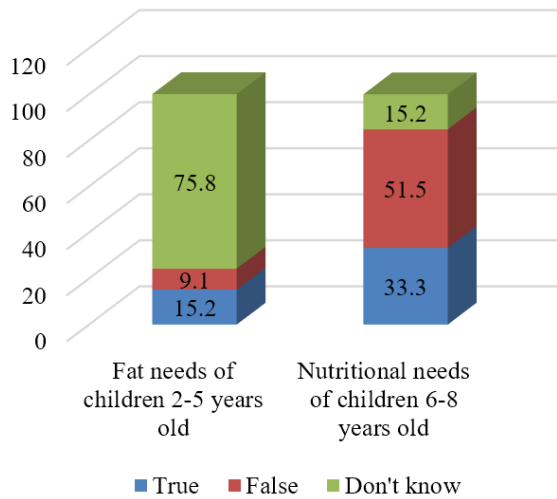


Chart 5. Percentage of guardians with correct knowledge about the fat needs of children aged 2-5 years old as well as the nutritional needs of children aged 6-8 years old

Comment: Only 15.2% of guardians raising children over 2 years old have correct knowledge about the oil/fat needs of children 24-60 months old; 75.8% answered that they do not know. Regarding the nutritional needs of children 6-8 years old, the percentage of guardians with correct knowledge is 33.3%; most guardians have incorrect perceptions about the nutritional needs of children during this period (51.5%).

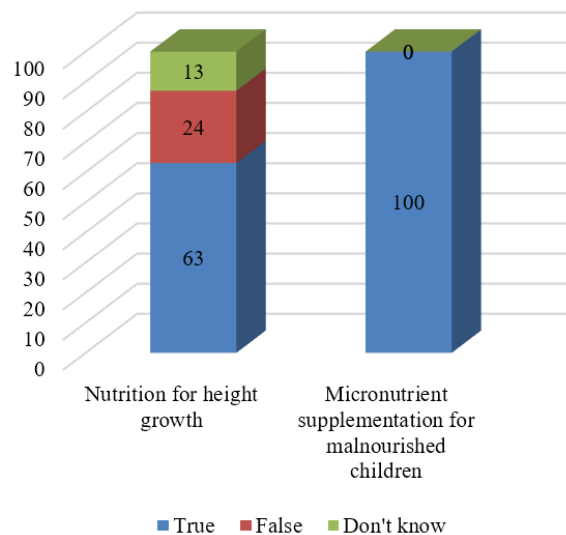


Chart 7. Percentage of guardians with correct knowledge about nutrients needed for height development and micronutrient supplementation when their children are malnourished

Comments: 100% of mothers are aware of the need to supplement micronutrients for their children, especially when they are malnourished; 63% know which nutrients are necessary for their children's height development. The percentage of mothers who answered that they do not know is only 13%.

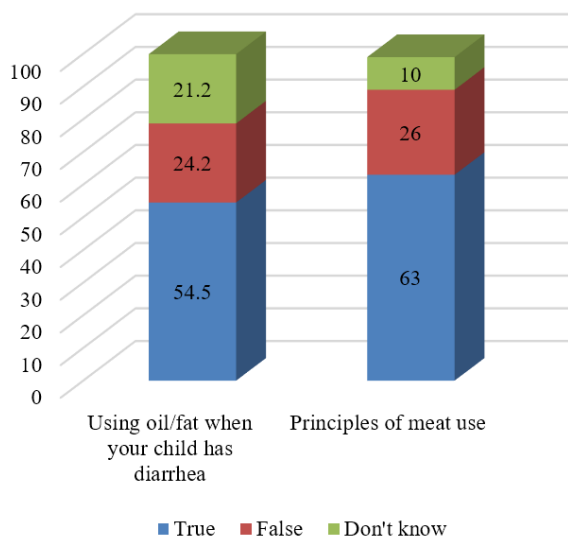


Chart 6. Percentage of guardians with correct knowledge about using oil/fat when their child has diarrhea and principles of using meat

Comment: 54.5% of guardians understood the need to use oil when their child had diarrhea (54.5%), only 21.2% answered that they did not know. Correct knowledge about the principles of using meat in children was also answered correctly by 63% of guardians, only 26% answered incorrectly and 10% answered that they did not know.

4. DISCUSSION

The study recruited a total of 99 guardians. Survey on nutritional knowledge when caring for children under 11 years old. 74.7% of guardians were female, of which the majority were aged 20-39 (92.9%); Kinh ethnic group (92.9%) and their educational level was mainly high school (62.6%); followed by university and postgraduate (23.2%) and no one had primary education or did not attend school; The rate of guardians with guardians as civil servants was very low (2%), a small number were workers, farmers and housewives (5-6%), the majority chose Guardians as other (86.9%). Current residence was mainly rural (76.8%). The majority of guardians take children under 24 months of age for vaccination (66.6%)

In chart 1, the percentage of guardians who understand the classification of nutrients is only 41.4%. There are still 48.5% of guardians who do not know. This may be specialized knowledge that requires training, so this rate is still low. However, when asked about which nutrients provide energy, the correct answer rate is only 66.7%. There are still 23.2% of guardians who do not know. This is only basic nutritional knowledge, which has been taught in the secondary school biology program, while the age of the guardians is mostly under 40 years old, so the lack of basic nutritional knowledge needs to be paid more attention, especially the guardians here are the ones taking care of the children.

Regarding knowledge of food groups, the rate of guardians with correct knowledge has been improved (chart 3), over 70% of guardians have basic knowledge of groups of substances that provide energy such as 76.8% of guardians know that protein is divided into 2 groups of animals and plants; 85.9% of guardians know that oil/fat are 2 substances that provide fat; 88.9% of guardians know which foods belong to the carbohydrate group and 96% of guardians have correct knowledge about foods that provide vitamins and minerals. Even when dividing the protein group into 2 groups of plants and animals, the percentage of guardians with correct knowledge is also high at 88.9%. No one answered that they do not know (chart 2).

Correct knowledge about the principles of meat use in children is only 63%, 26% answered incorrectly and 10% answered that they do not know (chart 6). Most guardians, especially mothers, often think that the more their children eat, the better, especially meat, this is a good food for children, helping them develop physically and mentally. Parents are often proud that their children can eat a whole plate of meat, a chicken thigh or many shrimps. However, from a nutritional perspective, consuming a lot of meat is the root cause of many current diseases such as gout, metabolic disorders, colon cancer [6],[5]. It is necessary to re-equip knowledge to help guardians have the correct knowledge about the needs of meat, fish in particular or the protein group in general. Only 15.2% of guardians answered correctly about the knowledge about the needs of oil/fat for children aged 24-60 months, most guardians answered that they did not know (75.8%) (chart 5), this result is even lower than the result in the guardian study by Le Viet Anh at 29% [7]. Regarding the nutritional needs of children aged 6-8 years, the percentage of guardians with correct knowledge is 33.3%; Most guardians have incorrect knowledge about children's nutritional needs during this period (51.5%). This is an issue that needs to be changed to improve nutritional knowledge for guardians who are taking care of children, in order to reduce the risk of malnutrition, towards achieving the national nutrition goal of reducing the rate of malnutrition in children through improving knowledge.

When it comes to nutritional knowledge when children are sick, the rate of guardians who answer correctly is still low, with guardians who are taking care of children over 24 months old having correct knowledge of using oil and fat when their children have diarrhea reaching only 54.5%; 21.2% answered that they do not know. Many Guardians have also pointed out that the rate of malnutrition increases when mothers misunderstand the level of feeding their children when they have diarrhea. According to Nguyen Viet Son's research, the rate of malnutrition is 61.7% [8].

Height is often an issue that many parents are concerned about when it comes to nutrition. The rate of guardians with correct knowledge about the need to supple-

ment nutrition and exercise in children to contribute to increasing their height has reached 63% (chart 7), only 13% of guardians answered that they did not know. And 100% of guardians are aware of the need to supplement micronutrients for their children, especially when they are malnourished.

5. CONCLUSION

- 74.7% of guardians are female, most of whom are aged 20-39 (92.9%); are Kinh ethnic group (92.9%) and the education level is mainly high school (62.6%)

- 66.78% of guardians know the groups of nutrients that provide energy

- Over 70% of guardians know the foods in each group such as starch (glucid), fat (lipid), animal protein (animal protein)

- Only 15.2% of guardians have correct knowledge about the oil/fat (lipid) needs of children 2-5 years old and 33.3% of guardians know the nutritional needs of children 6-8 years old

- 54.5% of guardians understand that children with diarrhea still need to use oil/fat in their diet and 63% of guardians understand that using a lot of meat is not good for children children

- 96% of guardians are aware that nutrition plays an important role in the physical and mental development of children and 100% of guardians understand the need for micronutrient supplementation, especially for malnourished children

- It is necessary to strengthen communication on basic nutritional knowledge for guardians at the vaccination room of the National Hospital For Tropical Diseases, contributing to reducing child malnutrition. Develop appropriate communication materials for mothers raising children over 2 years old

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