

# Mothers' Knowledge of Good Feeding Practices and Assessment of the Nutritional Status of Their Children Aged 0-59 Months in the Municipality of Golfe 1, Togo

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**Abstract:** Eating practices represent a set of social modes relating to human nutrition, influenced by culture, religion and trends. Knowledge of good dietary practices is needed in order to understand the risk factors associated with poor nutrition, which have an impact on the physical and mental health of young children. Togo is undergoing a dietary transition that is affecting all social strata as a result of urbanisation and globalisation. In Togo, particularly in the Golfe 1 municipality, the implementation of national directives to fight against malnutrition requires a good level of knowledge of appropriate practices on the part of the population. With the aim of implementing good feeding practices, we undertook this study to assess mothers' knowledge of good feeding practices by administering a survey questionnaire and to assess the nutritional status of their children aged 0-59 months in the Bè-Kpota and Adakpamè health centres using anthropometry. This work involved a descriptive cross-sectional study of women with a child aged between 0 and 59 months. The results showed that 38.2% of newborns were put to the breast early; 25% of children aged 0-6 months were exclusively breastfed, while 40.9% received other liquids and 34.1% porridge before the age of six months. Wasting is more prevalent in children aged [12-59] months (12.0%) and [0-12] months (5.0%). In conclusion, this study enabled us to take stock of mother's knowledge of good eating habits, made possible to assess the nutritional status of the children and also to draw up recommendations for the competent authorities in charge of public health and for civil society organisations in the care of malnourished children.

**Keywords:** Feeding Practices, Exclusive Breastfeeding, Child Nutrition, Togo

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## 1. Introduction

Eating practices are all social practices relating to human nutrition, influenced by social factors, culture, religion and dietary trends [1]. At the same time, knowledge of good practices based on scientific standards is necessary for the community and parents, in order to understand the risk factors associated with poor diet. Poor eating habits have repercussions on the physical and mental health of

individuals in general and young children in particular. In addition to nutritional deficiencies, stunting, underweight, wasting and cognitive and behavioural development problems can occur [1].

In low- and middle-income countries, the consumption and preparation of food with unsafe water, poor food storage conditions, low levels of education and inadequate food safety legislation are common [2]. An appropriate and healthy diet is a guarantee of good health, including good physical,

psychomotor and intellectual growth [3]. However, inadequate dietary intake can be responsible for growth disorders, wasting and stunted growth [4]. Africa is home to the largest number of people suffering from food-borne diseases [3]. In Togo, malnutrition is a real public health problem, with chronic and acute malnutrition rates of 28% and 24% respectively [5]. The most vulnerable groups are children (108 out of 1,000 children die before their fifth birthday), pregnant women and nursing mothers [6]. In the Golfe 1 municipality of the Greater Lomé region, the implementation of national directives to combat malnutrition, as well as the national food and nutrition policy to reduce morbidity and mortality due to malnutrition requires the population to have a good level of knowledge of appropriate practices to deal effectively with this major public health issue. However, no research into this scourge has yet been undertaken in this municipality. This justifies the present study, the general aim of which is to study mothers' knowledge of good feeding practices and to assess the nutritional status of their children aged 0-59 months in the Bè-Kpota and Adakpamè health centres in the Golfe 1 municipality.

## 2. Material and Methods

### 2.1. Study Framework

The study took place in the Golfe 1 municipality, one of the seven municipalities of the Golfe district of the Grand Lomé health region in Togo, and more specifically in the Adakpamè and Bè Kpota health centres according to the new 2019 division, from 04<sup>th</sup> December 2020 to 31<sup>st</sup> January 2021. The Grand Lomé region is bordered to the south by the Gulf of Guinea, to the north and east by the maritime region and to the west by the Republic of Ghana.

### 2.2. Study Population

This was a descriptive cross-sectional study. Women with a child aged between 0 and 59 months who met the inclusion criteria were included in the study. Not included in the study were women whose children were in a state of health that did not allow anthropometric measurements to be taken ( $n=14$ ) and women who did not agree to take part in the study ( $n=22$ ) because of waiting times.

### 2.3. Sampling and Data Collection

#### 2.3.1. Sampling

The size of the study sample was calculated using Daniel Schwartz's formula:

$$N = z^2pq/i^2$$

$N$  = sample size;

$z$  = parameter related to the risk of error ( $z = 1.96$  for a risk of 5%);

$p$  = prevalence of malnutrition in Togo which, according to the Third Demographic and Health Survey (EDST III) (2013-2014), is 16% in the Greater Lomé area;

$$p = n/N$$

$n$  = number of cases and  $N$  = total population of children aged 0-59 months ( $37/1609 = 0.023$ );

$q = 1-p$ ; expected prevalence of malnutrition ( $1-0.023 = 0.977$ );

$i$  = precision ( $i = 0.05$ ).

The minimum sample size was calculated as  $n = (1.96)^2 (0.023) (0.977) / (0.05)^2 = 34.53$ .

The minimum sample size  $n = 34.53 + 4\%$  of the expected number of malnourished children in the Golfe district ( $N = 1609$ ). This gives 64.4 malnourished children.

Thus, the sample size  $n = 34.53 + 64.4$  i.e.  $n = 98.9 \approx 99$  children and 99 mothers.

In total, 110 women were included in this study with their children (110 children).

#### 2.3.2. Data Collection

Data was collected using a questionnaire administered to all women who agreed to answer our questions and who had attended a vaccination session or curative consultation during the survey period. It was combined with anthropometric measurements of the children in the Bé Kpota centre and then afterwards in Adakpamè on each vaccination day.

### 2.4. Data Analysis

The data collected (anthropometric data, mother's health, child growth and development) from a questionnaire (survey form) were analysed using EPI Info 7 software version 7.2.2.16. Tabulation and graphs were produced using Excel 2013. The differences were considered significant in multivariate analysis, at the 5% threshold ( $P < 0.05$ ), in order to show the link between parents' level of education and the nutritional status of their children.

## 3. Results

A total sample of 110 mothers and 110 children aged 0-59 months visited the Bè-Kpota and Atakpamè medical and social centres in Golfe 1, Togo.

### 3.1. Mothers' Socio-Demographic and Occupational Data

The socio-demographic data of the women who took part in this study are shown in Table 1.

Table 1. Socio-demographic distribution of the mothers.

Parameters considered	Headcount (n)	Percentage (%)
Age category [25 – 30]	40	36,4
Mothers' professions Retailers	34	30,9
Matrimonial status Married	101	91,8
Instruction level Secondary school	75	68,2

### 3.2. Distribution of Children by Age and Sex

The distribution by sex and age group (Figure 1) shows that 52.7% of the children were girls. The sex ratio was

therefore 0.89%. The [0-6] months age group accounted for 40.0% of the sample. The sex ratio was 90.

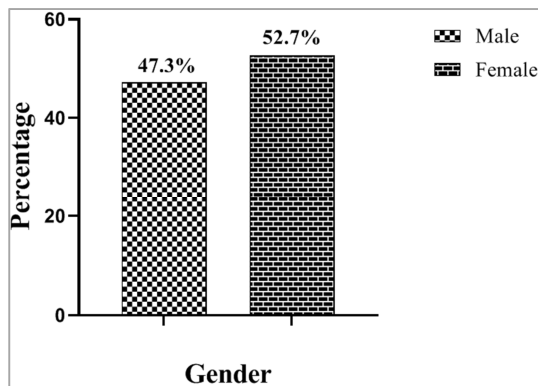


Figure 1. Distribution of children by sex.

### 3.3. Height of Children

The majority of children were between 58 and 63 cm tall, i.e. 12.7% (n = 14) (Figure 2).

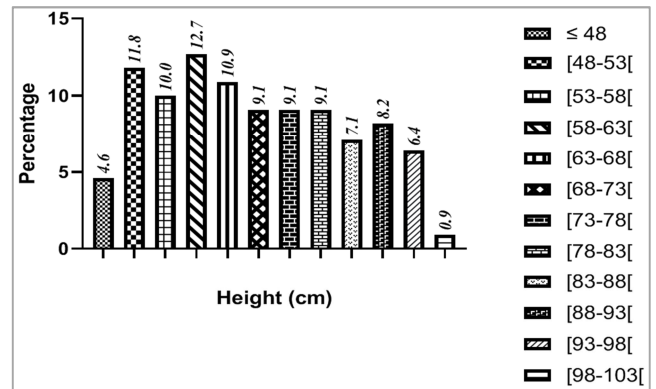


Figure 2. Distribution of children by height.

### 3.4. Mode of Feeding for the [0-6] Months Age Group

The results presented in Table 2 show that 25.0% (n = 11) of children were exclusively breastfed, while 40.9% (n = 18) received other liquids (artificial milk, water) and 34.1% porridge before the age of six months.

Table 2. Distribution of children aged [0-6] months by feeding method.

Parameters considered	Headcount (n)	Percentage (%)
Exclusive breastfeeding	11	25.0
Breastfeeding + artificial milk + water	18	40.9
Breastfeeding + porridge	15	34.1
Total	44	100.0

### 3.5. Growth Status of Children: Weight (kg)/Height (cm) Index

The results of the survey showed that wasting affects more

children in the [12-59] months age group in 12.0% of cases (Table 3). This classification was made using the WHO weight-for-height index table.

Table 3. Distribution of children by age and weight/height index.

Age range in Months	Normal (> - 1 SD)		Malnutrition (> - 3 SD)		Total	
	Headcount (n)	Percentage (%)	Headcount (n)	Percentage (%)	Headcount (n)	Percentage (%)
[0-12]	57	95.0	3	5.0	60	54.5
[12-59]	44	88.0	6	12.0	50	45.5

S D: Standard Deviation

### 3.6. Reasons for Early Weaning Before Six Months for Children Aged [0-59] Months

Of the 110 mothers in the study, 74 gave other foods in addition to breast milk before six months. Various reasons

were given for not practising or continuing exclusive breastfeeding up to six months, the main one being insufficient milk production to cover the child's daily needs (28.2% of cases) (Table 4).

Table 4. Representation of the various reasons for early weaning before six months, according to all mothers.

Parameters considered	Headcount (n)	Percentage (%)
Milk insufficient	31	28.2
Greedy child	25	22.7
Professional cause	9	8.2
Child's refusal to suckle	5	4.5
Maternal will + tradition	3	2.7
Mother's health	1	0.9
Total	74	100.0

### 3.7. Mothers' Breastfeeding Knowledge and Practices

Of the 110 mothers in this study, 66 (60.0%) were aware of the need to breastfeed exclusively up to the age of six months

and did so (Table 5).

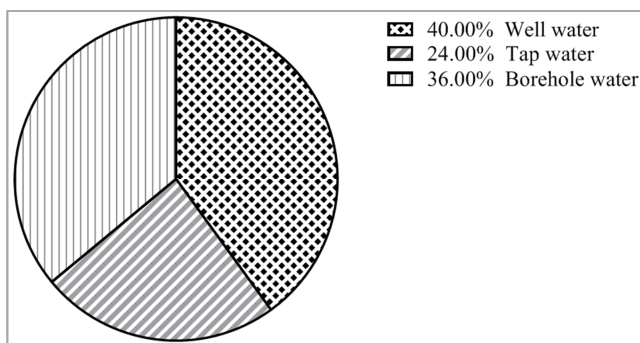
**Table 5.** Breastfeeding knowledge and practices.

Parameters considered	Headcount (n)	Percentage (%)
Exclusive breastfeeding for six months	66	60.0
Early breast-feeding	7	6.4
Breastfeeding at the baby's request	14	12.7
Knowledge of the advantages of breast milk	20	18.2
Knowledge of the advantages of exclusive breastfeeding	3	2.7
Total	110	100.0

### 3.8. Mother's General Knowledge of Hygiene

#### 3.8.1. Sources of Drinking Water

Most households (40%;  $n = 44$ ) used well water for domestic consumption; borehole water accounted for 36% ( $n = 40$ ) and tap water 24% ( $n = 26$ ) (Figure 3).



**Figure 3.** Distribution of household water sources.

#### 3.8.2. Knowledge of Waterborne Diseases

This study revealed that all the mothers were aware of the risks associated with poor food and water hygiene. Of the 110 mothers surveyed, 82.7% ( $n = 91$ ) cited parasites (5.5%,  $n = 6$ ), diarrhoea (2.7%,  $n = 3$ ), dysentery, typhoid fever and cholera as waterborne diseases.

## 4. Discussion

This study, carried out in municipality 1 of the Golfe health district in Togo, specifically in the Bè-Kpota and Adakpamè health centres, involved 110 mothers and 110 children aged 0-59 months.

The study showed that 91.8% of the mothers questioned were married. According to a study carried out in Burkina Faso by Kaboré [7], 69.8% of women were married, and in Cameroon, Gamgne [8] found a rate of 88.7%. Furthermore, a recent study carried out in northern Togo by Abilebou [9] showed that 94.7% of women were married. This marital status represents a considerable advantage in a child's life in terms of emotional and affective well-being, as it ensures the maintenance of children's nutritional status by protecting them against all kinds of diseases. The marital status of the mothers surveyed can be explained by the local significance of marriage in terms of the socio-cultural and religious values of Togolese communities [10].

In this study, the retailer profession was the most

represented, with a rate of 30.9%. This result is similar to that of Abilebou [9] who, in a study in Togo, found a rate of 21.4% for female Retailers. Gamgne [8] in Cameroon found that 55.4% were housewives. On the other hand, our data is higher than that of Savadogo [10], who found a rate of 11.5% for female Retailers in Mali. These differences could be explained by the size of the sample and the context of the study.

Togo is a country where the level of education of the population is still low, particularly women. The level of education of household members is an important factor in improving household living conditions, as it can affect reproductive behaviour, contraceptive use, health behaviour, the level of schooling of children in the household, and hygiene and nutrition habits [11]. The data from this study showed that the majority of the children's mothers had secondary school education (68.2%). This is higher than the level of schooling in urban Togo, which is 62.0%, and even higher than that of girls in Togo (45.0%). It can therefore be said that the level of schooling of mothers, although unsatisfactory, is within the range observed in Togo [11]. Furthermore, the data from this study indicate that over 30% of mothers do not have a sufficient level of education to help improve their child's nutritional status. This situation can be explained by the country's socio-political situation. In fact, the 2010 Education For All (EFA) report from UNESCO's Dakar office ranks Togo 17th out of 28 sub-Saharan African countries, where the quality of and access to education vary widely.

The literacy rate in this study is lower than that reported by Gamgne [8], whose study was carried out at the Bafoussam Provincial Hospital and PMI in Cameroon, with a secondary school enrolment rate of 72.8%. This figure is higher than that of Savadogo [10], who reported a rate of 5% at the Nianankoro Fomba Hospital in Ségou, Mali. Abilebou [9], in northern Togo, reported a secondary school enrolment rate of 1.8%, with 86.6% not attending school. This difference can be explained by the fact that our study was carried out in an urban environment, but also by the many measures taken by the government to encourage girls to go to school.

The 0-6 month age group was the most represented, with 40% of cases, and a predominance of girls (52.7%) compared with boys (47.2%), with a sex ratio of 0.89. Similar studies carried out in Mali, in the circle of Bourem [13], in the health districts of Bamako [14] and Sélingué [15] also reported sex ratios of less than 1. In Togo, studies at national level [16] reported that the number of women was higher than that of

men, with 50.7% of women compared with 49.3% of men. This situation explains the sex ratio in the present study. Djadou et al. [17], in an article from Togo, found an average age of children of  $8.14 \pm 1.02$  months. The predominance of females is therefore in line with the trend in Togo according to the 2010 General Population and Housing Census (RGHP). Contrary to this observation, Tangara in Mali [18] reported a proportion of 53.2% for boys compared with 46.8% for girls, and in the same way, Ousseni in Niger [19] reported 56% boys and 44% girls. Over and above the data from the RGHP in Togo, it can therefore be said that the situation observed in this study could also be explained by the predominance of female children brought for consultation during the present study.

Age, weight, height and circumference of various parts of the body are the essential measurements for children. The weight/height index reflects the relationship between the individual's body mass and height. It reflects the child's current nutritional situation (at the time of the survey). Wasting affects 12.0% of children aged [12-59] months. This result is similar to that reported by Djadou et al. [17] in Togo, which was 12.5%. This proportion is lower than that of Nakanabo [20] who found 19.6% for the same age group in Burkina Faso. This predominance of malnutrition in children aged between 12 and 59 months could be explained by the fact that at 6 months, children begin to consume complementary foods. If this complementary food is inadequate to the child's nutritional needs and/or lacks hygiene, the child will be highly susceptible to malnutrition [21].

Feeding practices are the determining factors in children's nutritional status. Among these practices, breastfeeding is particularly important. Because of its special properties, breast milk transmits the mother's antibodies and the nutrients required for growth to infants. Consequently, the type and duration of breastfeeding are important for children's nutritional status from the outset [22].

The results of this study showed that only 38.2% benefited from early breastfeeding. According to the study by Abou [23] in Senegal, very few infants, around 2%, were put to the breast early in the first hour after birth. The majority of newborns (94%) had started breastfeeding within the first 24 hours and 76.5% had received holy water or sugar water before the first feed.

Optimal breastfeeding practice consists of feeding the baby exclusively at the breast (breast milk, excluding any other food or liquid) for the first six months, followed by complementary feeding (solid or semi-solid foods containing vitamins, minerals and trace elements, proteins, fatty acids and amino acids) from the age of 6 months [24]. The child should then continue to be breastfed until the age of two, in addition to his or her complementary food [24].

Analysis of the results showed that very few children are exclusively breastfed. In fact, only 25% of children aged 0-6 months were exclusively breastfed, while 40.9% received other liquids (artificial milk + water) and 34.1% porridge before the age of six months. For Abou [23] in Senegal, the

rate of exclusive breastfeeding up to 6 months was 44.4%. This practice in the study area is not in line with the recommendations for guaranteeing the nutritional status of young children. Problems can arise when foods are introduced early, because the infant's digestive and renal systems are not mature enough to assimilate complementary foods properly. The early introduction of porridge into the child's diet at a time when his physiology does not allow him to take full advantage of it leads to an interaction between these foods and breast milk [21]. The introduction of semi-solid foods (porridge and juice) from the sixth month and solid foods (family dishes and special dishes) between the child's tenth and twelfth months is recommended. In fact, from the 6th month onwards, breast milk is no longer sufficient to ensure the infant's optimal growth [25].

The main source of household water supply is a well in 40% of cases. Similarly, 82.7% of mothers cited parasites as a disease caused by poor water hygiene. This situation calls for an information and awareness campaign to reduce the health risks associated with hygiene and sanitation in the living environment and the quality of drinking water.

## 5. Conclusion

Breastfeeding and feeding practices are determining factors in the nutritional status of children within populations. Although breastfeeding is predominant, the prevalence of breastfeeding remains low, with a very short average duration. Children's diets are varied, but the average dietary intake of energy and macronutrients does not always comply with WHO recommendations, depending on the age of the child. We also note that mothers' knowledge of early breastfeeding, the age of ablactation, and the causes and consequences of malnutrition is still inadequate. However, mothers' knowledge of the ideal duration of exclusive breastfeeding, even if not sufficiently practised, is sufficient.

Priority should also be given to prevention methods that will provide a long-term solution to the problem of malnutrition. The best prevention can only be achieved as part of a multi-disciplinary programme that focuses on all aspects of development, including sociological, agricultural, health and educational aspects. It is therefore necessary for the authorities, aided by civil society organizations, to raise awareness among mothers in the interest of the nutritional status of young children.

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