



## RESEARCH PAPER

## OPEN ACCESS

## Nutritional profile of schoolchildren at EPP Gbèdjougo-a (Torri Bossito)

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### Abstract

The right to basic education is recognized for every child in the world, without discrimination of any kind (Universal Declaration of Human Rights, 1789). Benin follows the same straight line. According to article 13 of Title II of the Beninese constitution of December 11, 1990, "the State provides for the education of young people through public schools. Primary education is compulsory. The State shall progressively ensure free public education." (Constitution of the Republic of Benin, December 11, 1990, p4). Feeding children in schools has a dual purpose. It aims to combat child malnutrition. The aim of our study is to examine the nutritional profile of schoolchildren at EPP Gbèdjougo/A in the commune of Torri Bossito. The equipment used to carry out this study consisted of scales, a metre for measuring anthropometric parameters and a survey form. The method used for this study consisted in sampling, then taking anthropometric values and finally processing the information. The results obtained show that the weight of the majority of children is between [20; 25] and their height is between [110; 120]. There are as many girls as boys in the sample studied, and the majority of children are aged between [5; 10]. Determination of the body mass index shows that most of the pupils are malnourished.

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## Introduction

The right to basic education is recognized for every child in the world, without discrimination of any kind (Universal Declaration of Human Rights, 1789). Benin follows the same straight line. According to article 13 of Title II of the Beninese constitution of December 11, 1990, "the State provides for the education of young people through public schools. Primary education is compulsory. The State shall progressively ensure free public education (Constitution of the Republic of Benin, December 11, 1990, p4). The focus of this article of the Beninese constitution on educational issues is an illustration of the importance and strategic positioning of schooling in the socio-economic development process. With the support of its technical and financial partners, the Beninese government has made major investments in the education sector, particularly in school infrastructure. Since 2006, access to nursery and primary education has been officially free. This measure has gradually been extended to girls in secondary school, a move designed to benefit the vulnerable and reduce disparities in access to education.

Feeding children in schools has a dual purpose. It aims to combat child malnutrition. Food insecurity and malnutrition are not emerging problems. They affect every country in the world, particularly those in sub-Saharan Africa. According to the World Food Programme (WFP), more than 66 million school-age children go to school on an empty stomach, including 23 million in Africa alone (WFP, 2019).

Benin, convinced of the multiple benefits of food security, has introduced social aid for students, school canteens and university works. It is within this framework that the National Integrated School Food Program (PNASI) was initiated for the 2017-2022 period. It seems extremely timely to us, through the present study, to conduct a reflection on the Nutritional Profile of schoolchildren at EPP Gbèdjougo/ A in the commune of Torri Bossito (Torri Bossito).

## Materials and methods

The equipment used to carry out this study consisted of scales, a metre for measuring anthropometric parameters and a survey form. The method used for this study consisted in sampling, then taking anthropometric values and finally processing the information. The sample consisted of 60 students.

Selected teachers from each of the study schools were trained according to WHO standard practices to weigh the children and measure their height. To measure weight, a Seca mechanical scale accurate to 0.01 kg was used, and the children wore their clothes but removed their shoes. For height, a portable stadiometer accurate to 0.001 m was used. Pupils' ages were obtained from their birth certificates and, if these were not available, the date of birth was reported by the parents or pupils themselves. It is therefore possible that the data collected may contain errors, including errors in reading measurements, failure to follow certain rules for taking correct measurements, and in estimating the age of children without a birth certificate.

## Results and discussion

Fig. 1 shows the distribution of pupils by gender. Analysis of this figure shows that 52.54% of pupils are female, while 47.46% are male. This quasi-distribution of pupils is attributable to the strong policy of girls' enrolment pursued by the Beninese government. These results differ from those obtained by Olivier 2013, who had 52% boys and 48% girls in Cotonou schools. He had worked on the nutritional status of primary school children in Cotonou (Benin) and Ouagadougou (Burkina faso). Fig. 2 shows the distribution of students by age. Analysis of this figure revealed that 63.33% of pupils were aged between 10 and 15. Fig. 3 showed the distribution of students according to Body Mass Index (BMI). Analysis of this figure showed that 96.61% of students had a BMI <18 and were therefore underweight, while 5.71% were of normal weight, even though no student showed malnutrition. The distribution of students by weight is shown in Fig. 4. Analysis of this figure shows that the [20, 25] weight range was the most represented

(21.17%), while the [10, 15] weight range was the least represented (5.67%). Table 1 shows the results of the distribution of students according to height. Analysis of this table revealed that 33.89% of students were between [110; 120], while 3.38% were between [140; 150].

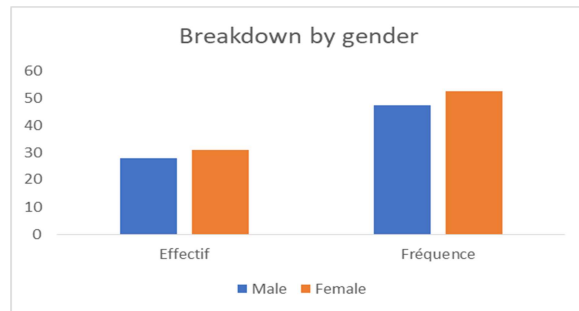


Fig. 1. Distribution of students by gender

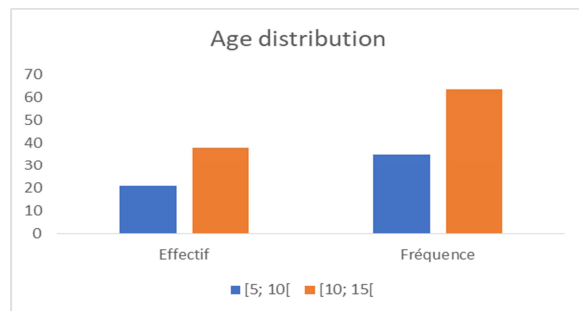


Fig. 2. Distribution of students by age

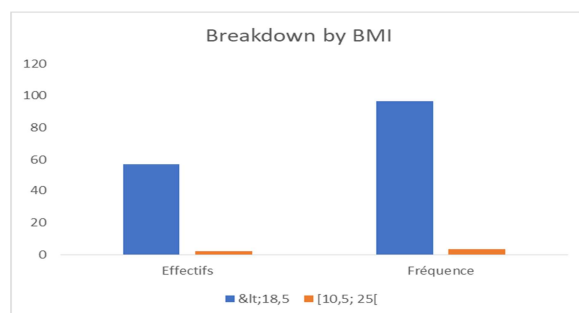


Fig. 3. Distribution of students by BMI

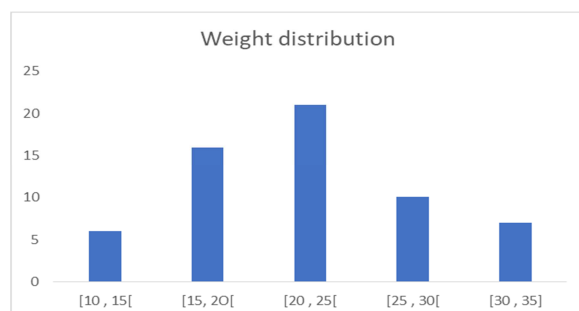


Fig. 4. Distribution of schoolchildren by weight

Table 1. Distribution of students by size

Size in cm	Workforce	Frequency
[90; 100]	6	10,16
[100; 110]	11	18,64
[110; 120]	20	33,89
[120; 130]	13	22,03
[130; 140]	7	11,86
[140; 150]	2	3,38

The results of these studies show that the nutritional status of the children surveyed is unsatisfactory. This may be due to the fact that schoolchildren are still growing, and during the time they spend there, the food they are served at home fails to meet their nutritional needs. The nutritional state of the pupils could also be attributable to the financial power of their parents. Indeed, the current global economic gloom is having a huge impact on parents' incomes and purchasing power, leaving them with no choice but to reduce their children's financial share. What pupils eat at home also has a major influence on their nutritional status.

Indeed, the home is the first place where young children find the food they need for normal growth and development. Several studies in West Africa seem to show that older children are more affected by undernutrition. In Ouagadougou, children aged 10 to 12 were found to be significantly more affected by stunted growth than those aged 7 to 9. However, children aged 5 to 9 suffered more from thinness than their elders, in contrast to the present work. In Nigeria, three studies support our findings. In the first, we found that the more frequent grade 3 leanness identified by BMI, the older the child. On the other hand, more moderate grade 1 leanness was more frequent in 9-10 year-olds than in 11-12 year-olds. For the second, a greater proportion of children aged 11-16 were affected by stunting than those aged 6-10, and for the third, a greater proportion of children aged 10-14 were affected by stunting than those aged 5-9. This situation could be explained by the fact that children who suffer from stunting or undernutrition at a young age, and whose nutritional status does not improve as they get older, continue to fall behind as they get older, taking them further and further away from a normal nutritional status.

In South Africa, however, a study does not corroborate these results, as boys are more malnourished at 5-6 and 10-12 years of age, while girls become more malnourished with age, but the difference is not significant. Stunting, on the other hand, is more indicative of chronic malnutrition, since height takes longer to recover than weight. Stunted children are therefore usually those who have been malnourished for a long time, or who suffered more in the early years of their lives.

In Nigeria, the figure is 12% for children aged 5-9 and 20% for those aged 10-14, which is much higher than our values. The authors explain the high prevalence of stunting by reduced nutritional intake, low socio-economic status and cultural habits. The BMIs obtained in this study clearly highlight the problem of double nutritional burden. This is worrying because many children continue to suffer from undernutrition, which can handicap their development and education, but more and more children are also overweight, a problem that could overburden the healthcare system and overshadow the problems of undernutrition, which will continue to be present. What's more, it's well known that excess weight can also have consequences for health, such as the development of cardiovascular disease, bringing new problems to these regions as they begin to westernize.

As the prevalence of malnutrition among schoolchildren is of paramount importance, the present study of schoolchildren at EPP Gbèdjougo/ A (Torri Bossito) has highlighted their nutritional status. The results show that the majority of children weigh between [20; 25] and their height is between [110; 120]. There were as many girls as boys in the sample studied, and the majority of children were aged between [5; 10]. Determination of the body mass index shows that most of the pupils are malnourished.

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