

Percent contribution of small pelagic fish species to recommended nutrient intake (RNI) of under 5 children living along the four coastal regions of Ghana



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Introduction

About 80% of artisanal fish production is consumed daily, with 80% coming from small pelagic fish species (Lazar *et al.*, 2017). Small pelagic fish species (SPS) provide vitamins, minerals, and essential fatty acids, making them crucial for nutrition and food security.

Objectives

This study aimed to determine the dietary intake of small pelagic fish species among children under five years living in the four coastal regions of Ghana

Methods

Design, setting and population:

A cross-sectional study of 960 under 5 children in the four coastal regions (Central, Greater Accra, Volta, Western) of Ghana.

Data collected:

An enumerator-administered 24-hour recall of two non-conservative days (1 weekday and 1 weekend) using dietary aids in the form of household food models was used to record dietary intake. Fish consumption recalls were summarized under mealtime, fish name, and quantity (g).

Data Analysis:

Data was analyzed using Statistical Package for Social Science, version 26 (SPSS). Using the RIING nutrient composition database, Nutrient intakes were also summarized into mean \pm SD. Each specific nutrient was compared to the age-specific dietary reference intakes and multiplied by 100 to obtain the %RNI.

Results

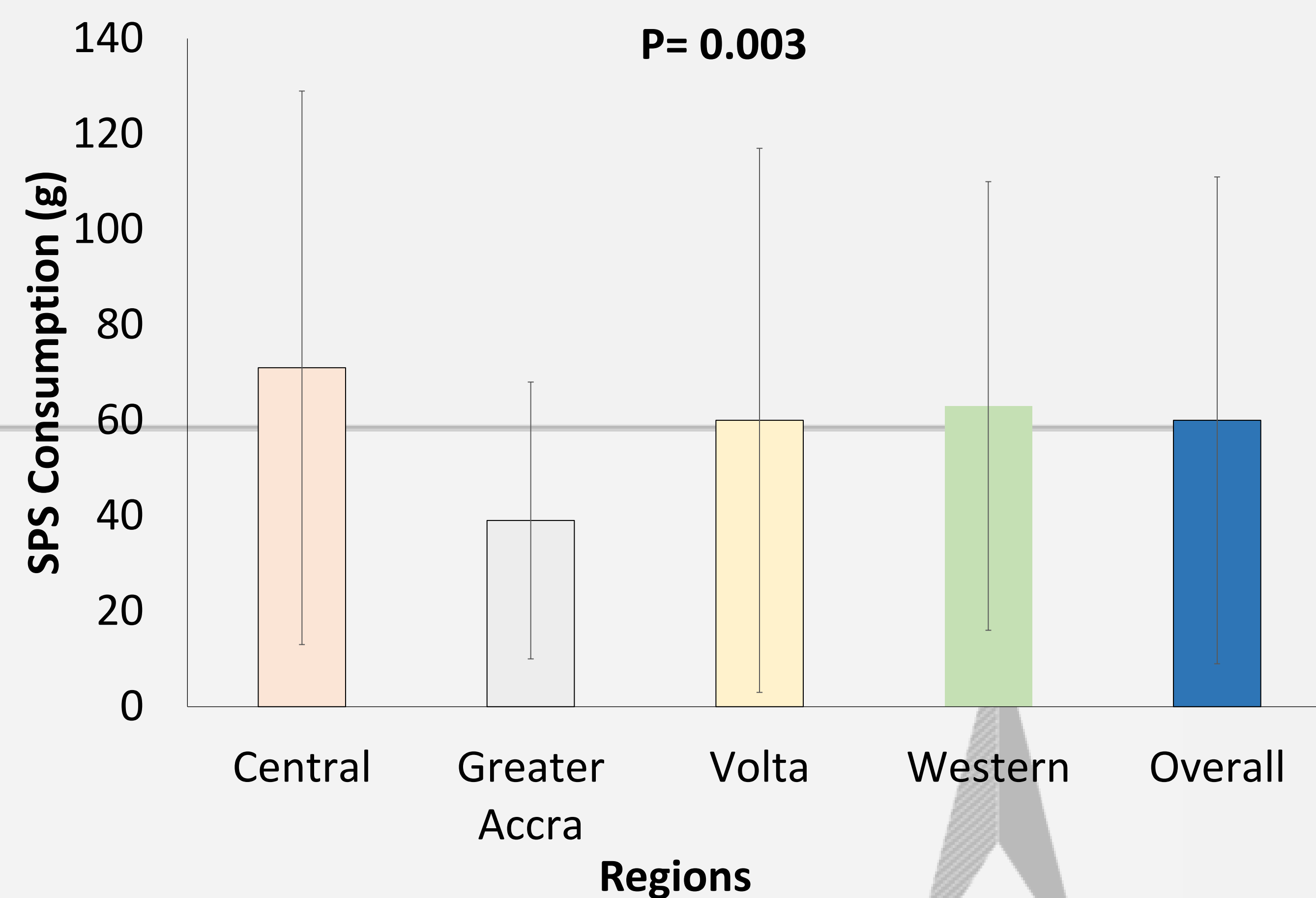


Figure 1: SPS consumption by Region

*Values in Mean \pm SD. Mean comparison with ANOVA. Post-hoc with Tukey

Table 1 : Percent Contribution of SPS to child RNI by region^a

Variable	Central (n= 206)	Greater Accra (n= 168)	Volta (n= 218)	Western (n= 202)	Total (n= 794)
Energy (kcal)	19	9	18	17	16
Protein (g)	181	81	143	190	153
Fat (g)	25	13	33	17	23
Vitamin A (mg)	4	3	4	4	4
Folate (μ g)	2	1	1	1	1
Vitamin B ₁₂ (mg)	235	141	235	223	212
Iron (mg)	45	18	39	46	38
Vitamin D (mg)	12	6	10	11	10
Calcium (mg)	62	21	50	74	53
Zinc (mg)	30	11	25	36	26

^a All values in % The WAFCT, RIING database, GHANAFOOD composition database, FOOD Central, and analyzed anchovies and sardinella samples used to determine nutrient intake

Conclusion and Recommendation

Aside Protein and vitamin B₁₂, all the other nutrients contributed less than 60% to the RNI of the under 5 child. Consuming SPS with other food sources will augment their nutrient intake and improved food and nutrition security. Culturally acceptable nutrition education techniques should be employed.

Acknowledgement

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Reference

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