Seasonal variation in nutrition intake among young people in Lao PDR

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【Objective】

This study aimed to investigate seasonal variations in nutrient intake among people aged 6 to 24 years in Lao PDR, considering their Lao PDR .

【 Methods 】

Data were collected from the Lao PDR Food Consumption Survey (2016-2017) during the rainy season and the dry season in three regions, with two provinces per region. Recruitment for the survey took place in each season across these selected areas.
Body mass index (BMI)-for-age percentile was calculated and stratified into tertiles. Welch's t-test was used to analyze seasonal differences (dry and rainy seasons) in macronutrient intake across the three nutritional status groups.

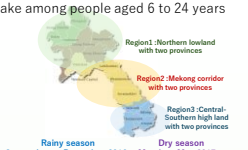

Figure1. Timeline of the data collection

【 Results 】

The study included 412 participants, with 216 from the rainy season and 196 from the dry season. About 70% of participants were between 6 and 14 years old, and about 60% were female (Table1). Approximately 80% of the participants resided in rural areas, with a higher proportion of rural residents observed in the dry season compared to the rainy season. Based on the World Health Organization's (2007) definition, about 80% of participants fell within the normal weight range. The proportion of individuals with underweight (14%) exceeded that of those categorized as overweight or obese (6%).

Overall, the average daily energy intake was 1431 kcal/day (standard deviation: SD 493) during the rainy season and 1365 kcal/day (SD 496) during the dry season (*p-value* 0.176) (Figure2). Daily energy intake from protein was significantly lower during the rainy season (14 %energy, SD 0.4) compared to the dry season (15 %energy, SD 0.4) (*p-value* 0.043). Conversely, energy intake from fat was significantly higher during the rainy season (15 %energy, SD 1.0) compared to the dry season (13 %energy, SD 0.7) (*p-value* 0.037).

Table1. Sociodemographic characteristics of participants by seasons

Characteristics	Total (N=412)	Seasons	
		Rainy (N=216)	Dry (N=196)
Demographic characteristics, n (%)			
Age group			
6-14 years	285 (69.2)	144 (66.7)	141 (71.9)
15-24 years	127 (30.8)	72 (33.3)	55 (28.1)
Gender, Female	250 (60.7)	132 (61.1)	118 (60.2)
Rural area	313 (76.0)	152 (70.4)	161 (82.4)
Nutritional status, n (%) [a]			
Underweight	57 (13.8)	26 (12.0)	31 (15.8)
Normal weight	330 (80.1)	175 (81.0)	155 (79.1)
Overweight or Obese	25 (6.1)	15 (6.0)	10 (5.1)
Tertile of BMI-for-age percentile, n (%)			
First tertile	138 (33.5)	71 (32.9)	67 (34.2)
Second tertile	137 (33.3)	71 (32.9)	66 (33.7)
Third tertile	137 (33.3)	74 (34.2)	63 (32.1)

[a] World Health Organization (2007)

【 Discussion 】

The observed seasonal fluctuations in nutrient consumption indicate possible imbalances in dietary diversity between the two seasons. Future research should investigate which primary food groups contribute to the seasonal differences in protein and fat energy intake.

【 Conclusion 】

These findings could lead to develop nutrition education initiatives aimed at securing consistent nutrient intake across different seasons.

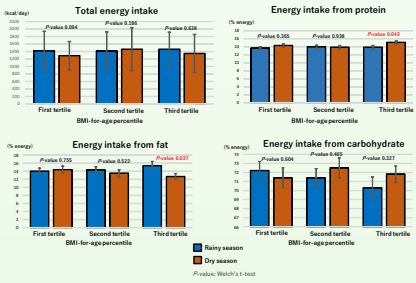

Figure 2. Difference in macronutrients intake between the two seasons among three nutritional status

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本発表に関連して、共同演者含め開示すべき利益相反に該当する項目はありません。