

## Dietary Diversity and Nutritional Status of Adolescents Attending Public Secondary Schools in Oyo State Nigeria

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**Abstract :** Poor nutritional status during adolescence is a reflection of inadequate intake of nutrients. This can also be associated with a lack of consumption of diverse food. This study assessed the nutritional status and dietary diversity score (DDS) of in-school adolescents in Ibadan North, North East, and Ibadan South West Local Government Areas (LGA) of Oyo State, Nigeria. A cross-sectional study involving 3,510 in-school adolescents from the three LGA was conducted. Nutrient intake was measured using a validated 24-hour dietary recall, and the anthropometric measurement was also taken. Dietary diversity score (DDS) was assessed using the Individual Dietary Diversity Score (WDDS) of nine food groups. Participants were between 10-19 years, and the mean age was  $14.76 \pm 1.68$ ,  $15.32 \pm 1.77$ , and  $15.45 \pm 1.62$  in Ibadan North, Ibadan North East, and Ibadan South West, respectively. About 48% of the participants were male (47.9%), while 52.1% were female. BMI-for-age showed that 92.1%, 5.4%, 2.1%, and 0.4% of the participants were normal, underweight, overweight, and obese, respectively. The mean energy intake ( $143.193 \pm 695.98$ ) of the female respondents was more than that of the male respondents ( $1406.86 \pm 767.41$ ). The macronutrients intake (protein, carbohydrates, fiber, and fats) of the female participants was also found to be more than that of the male participants, with a non-significant difference of 0.336, 0.530, 0.234, and 0.069 (at  $p < 0.05$ ). Out of all the vitamin intake, only vitamin C was found to be statistically different ( $p = 0.038$ ) at  $p < 0.05$  between the male and female respondents. Of all the mineral intake, only phosphorus showed a higher intake ( $575.20 \pm 362.12$ ) among female respondents than the male respondents. The mean DDS of all participants was  $4.59 \pm 0.939$ . The majority of the participants, 1183 (80.9%), were within the medium DDS category, 9.9% were low, while 1.5% were in the high category: of which males were 474 (71.5%) and females were 709 (88.6%). Participants from Ibadan North were 941 (88.5%), and those from South West were 242 (60.5%). A non-significant difference in the mean score of participants from the two locations ( $p = 0.467$ ) was also found. A negative correlation exists between DDS and BMI-for age (-0.11), DDS, and energy intake (-0.46) in Ibadan North and South West LGA. The nutritional status of in-school adolescents was normal, and DDS was within the medium category. Nutrition intervention regarding the consumption of diverse food is necessary among adolescents.

**Keywords :** nutritional status, dietary diversity, adolescents, nutrient intake

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