Assessment of the Nutritional and Health Status of Basic School Children In Khartoum State

A Thesis Submitted to Sudan University of Science and Technology in Fulfillment for the Requirements of the Degree of PhD (In Community Nutrition)

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DEDICATION

To the soul of my father.

To my mother, brothers and sisters.

To my small family (husband and daughters)

To my friends.

I owe this success.

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ABSTRACT

The main objective of the study is to provide information on the nutritional status (N.S) [weight, height, skin fold thickness triceps (SKFT), body mass index (BMI) and food intake] and 15-to 15-yaers-old basic School Children in Khartoum State, Sudan, and to compare it with standards of the WHO-NCHS references. The determinant and their nutritional status including: socioeconomic, physical activities and heath status, in addition to some demographic factors. A total of 725 children were examined.
The results showed that the nutritional status of rural School Children is significantly different (P≤0.05) of underweight (<-ISD W/A), stunting (<-ISD H/A) and thickness (SKFTC<5th percentile) from that of urban School Children. The prevalence of obesity (BMI>85th percentile) among boys was higher in private schools than in governmental schools (50% for private schools and 6.5% for governmental schools), whereas, among girls there was no significant difference (P≤0.05) 16.7% for private schools and 6.5% for governmental schools. In general, the nutritional status of school girls was better than that of School boys. The prevalence of underweight and stunting between both sexes were more obvious in Khartoum North, Omdurman and Khartoum respectively, only significant differences (P≤0.05) were observed between School boys. The study demonstrates that the median weight and heights at age 5-to 10-years of both sexes of School Children were equal to or greater than the WHO-NCHS references, but they were far below the WHO-NCHS references at age 11-to 15 years of both sexes.

The study revealed that the most important determinants of the children nutritional status were the children parents’ education, father profession, income, living condition, family size and physical activities. The distribution of the diseases specially respiratory infections and malaria were presents in significantly higher percentage in rural School Children (63% and 36.1%, respectively) compared to urban (29.7% and 18.2%, respectively) and private (25% and 10.3%, respectively) schools children.

Skipping of breakfast meal was common among rural School Children (18.5%) than urban (16.5%) and private (5.2%). The higher percentages of School Children who take three meals daily were present at private (82.3%) compared to urban (78.5%) and rural (74.1%) schools children. The study also showed that there was significant difference
(P≤0.05) between governmental and private School Children in dietary intake of all of food groups (carbohydrates, legumes, vegetables, milk and milk products and eggs, fruits and fruit juices and beverages), meanwhile only significant differences (P≤0.05) between urban and rural School Children in dietary intake of carbohydrates and legumes were observed.
التوالي)، ولقد ظهر جلياً من هذه الدراسة أن عادة عدم تناول وجبة الإفطار ظهرت بنسبة عالية بين طلاب الريف (15.8%)، الخضر (16.5%)، وطلاب المدارس الخاصة (5.2%); كما بينت الدراسة أن هناك اختلافًا معيّناً (P≤0.05) في تناول المجموعات الغذائية (اللحوم، الكربوهيدرات، الفواكه، العصائر والمشروبات)، والخضروات، الألبان ومنتجاتها، البيض، الفواكه، العصائر، والمشروبات) بين طلاب المدارس الخاصة والحكومية، بينما الاختلاف القياسي بين طلاب مدارس الريف والحضر في تناول الكربوهيدرات والبقوليات فقط.