

# A self-reported predefined dietary score for school-aged children grade 5-6 in Bangkok Metropolitan areas and its association with diet-related lifestyle factors

(แบบประเมินคุณภาพการกินอาหารด้วยตัวเองสำหรับเด็กชั้นประถมศึกษาปีที่ 5-6 ในเขตกรุงเทพฯและปริมณฑลและรูปแบบการดำเนินชีวิตที่ส่งผลต่อคุณภาพการกินอาหาร)

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**Introduction** The use of full dietary assessment such as 24-hour recalls are rather burdensome to both participants and researchers, especially in school settings; a substitutable and easy-to-use dietary tool in assessing overall diet quality is preferable. **Objective** To propose a self-reported predefined food frequency-based dietary score: Food-Based Dietary score (FBDS) to simply evaluate dietary intake in school-aged children **Subjects and Methods** Children were recruited from grades 5-6 of primary schools in Bangkok Metropolitan areas. In the first phase, a total of 172 children contributed three non-consecutive 24-hour recalls and completed food-frequency information of ten food groups to test the relative validity by comparing the score with 24-hour recalls as the reference method. In the second phase, 737 children and their caregivers completed a self-administered questionnaire that included the FBDS and lifestyle characteristics. **Results** The FBDS was scored from -20 to 80, with a higher score reflecting a better diet quality. The higher FBDS were significantly associated with calcium, vitamin B1, vitamin B2, the percentage of energy from carbohydrate and protein. A close-to significant association was found between the score and intakes of fiber, iron, and vitamin A. Scoring in the 3rd quartile of the FBDS was found to be related to a low risk of being stunted. Additionally, the higher score was also associated with several healthy lifestyle factors. **Discussion and conclusion** The proposed FBDS showed a good ability to reflect favorable dietary intake. A higher score of FBDS was also linked with several healthy lifestyle factors. Moreover, a lower score on the FBDS is related to under-nutrition rather than over-nutrition. These findings indicate that the higher the FBDS, the better the nutritional status. In conclusion, The FBDS could be helpful for rapidly and easily ranking dietary quality, and is expected to be an effective tool for enhancing nutrition education or self-monitoring for children in Thailand.

**Keywords:** food-based dietary score, school-aged children, predefined dietary index, diet-related lifestyle factors, dietary assessment

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