

The American Journal of CLINICAL NUTRITION

The American Journal of CLINICAL NUTRITION

CLINICAL NUTRITION

STATE OF THE PROPERTY OF THE P

journal homepage: https://ajcn.nutrition.org/

Editorial

Monitoring commercially available complementary foods for the infant and young child in Southeast Asia: accountability and the way forward

Tilakavati Karupaiah 1,2,*

¹ Food Security and Nutrition Impact Lab, Taylor's University, Subang Jaya, Selangor, Malaysia; ² School of BioSciences, Faculty of Health & Medical Sciences, Taylor's University, Petaling Jaya, Selangor, Malaysia

Older infants and young children, defined as 6 to 36 mo of age, undergo intense growth and development. This age group is vulnerable to the double burden of malnutrition, especially in southeast Asia [1,2]. This is a region of diverse economic growth across many low- and middle-income countries (LMICs) but is homogenously facing considerable nutrition transitions [1] with access to commercially produced foods and beverages [3], which are fueling the increase in overweight/obesity.

In this issue of The American Journal of Clinical Nutrition, Pries at al. [4] have highlighted the nutritional quality of commercially produced complementary foods (CPCFs) being marketed to young children in 7 countries (Cambodia, Indonesia, Laos, Malaysia, Philippines, Thailand, and Vietnam), as well as categorized the level of processing of these foods according to the NOVA classification [5]. Their study importantly describes the scenario in Southeast Asian countries regarding the nature of these products with regard to nutrients high in calories, fat, sugar, and sodium content and the degree of processing. Almost half (47.7%) of the CPCFs were categorized as ultra-processed, which not only included additives but across all food categories carried the highest content of total sugar (grams per 100 kcal). This figure is higher than the 29% of ultra-processed CPCFs reported for European countries [6]. In contrast, in 5 West African countries [7], when CPCFs were benchmarked to the WHO-Europe nutrient profile model, nearly half of all products with declared total sugar content warranted a "high sugar" warning, and 84.1% were classified as nutritionally unsuitable, with added sugar and excessive sodium levels being the most common reasons for products failing the nutrient profiling assessment.

Pries et al. [4] also established dry or instant cereal and ready-to-eat purees/meals as the dominant CPCF categories, with each category making up \geq 25% of retail access in these countries. Dry or instant cereals, beverages (>75%), and snacks/finger foods (>50%) also trended toward higher proportions of total sugar and sodium and were

ultra-processed compared to other CPCF categories. This is alarming when considering these complementary foods make up a large proportion of meals consumed by infants and children in this age group [8]. Particularly, total sugar in ultra-processed dry/instant cereals, purees/meals, and snacks/finger foods was greater than in those CPCFs categorized as processed and unprocessed/minimally processed.

A key question is knowing how much "added sugar" is making up this total sugar count, which unfortunately could not be answered in this study. Revisiting the West Africa survey [7], it was noted that 44.1% of dry/instant cereals warranted a "high sugar" warning on their labels due to added sugar. Dry/instant cereals used as complementary feeding contribute the highest percentage of recommended nutrient intake per serving. Recently, a nongovernment organization analyzed the same brand of dry/instant cereal product being manufactured for both LMICs and Europe and reported added sugar content in the product being sold in the LMICs was higher compared with that of the same product available in Europe [9].

There are also 2 concerns arising from the study of Pries et al. [4]. The first is that one-third of CPCFs surveyed for the 7 countries carried additives that were categorized as "not permitted" when benchmarked to the Codex Alimentarius standards [10]. Second, among the 7 countries, Philippines (60.4%) and Vietnam (63.2%) had the highest proportion of ultra-processed CPCFs, and Thailand (18.9%) had the lowest. It is therefore critical in future research to explore the factors determining which concerns may arise from variations in regulatory policies regarding labeling of CPCFs in Southeast Asia.

The dataset used by Pries et al. [4] was derived from a primary study that had some methodological limitations. According to us, the CPCF food labels were sampled for the survey if they were in the English language, which limited CPCF sampling in Vietnam as many product labels were not in English. Such CPCFs are likely produced by small and medium-sized enterprises, which, in Vietnam, are estimated to

DOI of original article: https://doi.org/10.1016/j.ajcnut.2024.04.003.

Abbreviations: CPCF, commercially processed complementary food; LMIC, low- and middle-income country.

^{*} Corresponding author. E-mail address: tilly_karu@yahoo.co.uk (T. Karupaiah).

contribute to 15% of the gross domestic product [11]. It is therefore important to recognize that small- and medium-sized enterprises in Asia are also significant food producers, and the extent of CPCFs produced by them for local consumption, their high in calories, fat, sugar, and sodium content, level of processing, additives use, and adherence to food labeling regulations are all research gaps in Asia to be explored.

The Dortmund Nutritional and Anthropometric Longitudinally Designed Study prospectively associated a higher percent of CPCF consumption with added sugar content in infancy to higher added sugar intake in later childhood [12]. Taking this as a warning, it is important to strongly advocate for healthier reformulation of dry/instant cereals, a major complementary food for infants and young children, by targeting reduced total sugar content and encouraging minimal processing. Although ultra-processed CPCFs were highly available (47.7%), a smaller but significant proportion (27.7%) being sold were unprocessed/minimally processed, with dry/instant cereals making up 34.9% compared with 57.2% being ultra-processed. Fardet et al. [13] called for "relocating food production, processing, and consumption toward minimal processing to preserve food matrices," which they consider is aligned with regional food production specificities to address food and nutrition security needs. It is also urgent for mandatory policy action in Southeast Asian and other countries to adopt comprehensive front-of-pack warning labels as led by the Chile model in the Americas [14] and particularly applied to CPCFs. This action should be perceived as protecting the rights of the child for access to healthy food.

Author contributions

The sole author was responsible for all aspects of this manuscript.

Conflict of interest

The author reports no conflicts of interest.

Funding

The author reported no funding received for this study.

References

 B.M. Popkin, C. Corvalan, L.M. Grummer-Strawn, Dynamics of the double burden of malnutrition and the changing nutrition reality, Lancet 395 (10217) (2020) 65–74, https://doi.org/10.1016/S0140-6736(19)32497-3.

- [2] UNICEF, Children in South East Asia face a 'double burden' of obesity and undernutrition, 2016. Available from: https://www.unicef.org/png/pressreleases/children-south-east-asia-face-double-burden-obesity-andundernutrition-new-report.
- [3] P. Baker, S. Friel, Food systems transformations, ultra-processed food markets and the nutrition transition in Asia, Global Health 12 (1) (2016) 80, https:// doi.org/10.1186/s12992-016-0223-3.
- [4] A. Pries, E. Bassetti, J. Badham, P. Baker, J. Blankenship, et al., Ultra-processing and presence of additives in commercially produced complementary foods in seven Southeast Asian countries: a cross-sectional study, Am. J. Clin. Nutr. (2024), https://doi.org/10.1016/j.ajcnut.2024.04.003.
- [5] C.A. Monteiro, G. Cannon, R.B. Levy, J.C. Moubarac, M.L. Louzada, F. Rauber, et al., Ultra-processed foods: what they are and how to identify them, Public Health Nutr 22 (5) (2019) 936–941, https://doi.org/10.1017/ \$1368980018003762
- [6] E. Grammatikaki, J. Wollgast, S. Caldeira, High levels of nutrients of concern in baby foods available in Europe that contain sugar-contributing ingredients or are ultra-processed, Nutrients 13 (9) (2021) 3105, https://doi.org/10.3390/ nu13093105.
- [7] A. Khosravi, E. Bassetti, K. Yuen-Esco, N.Y. Sy, R. Kane, L. Sweet, et al., Nutrient profiles of commercially produced complementary foods available in Burkina Faso, Cameroon, Ghana, Nigeria and Senegal, Nutrients 15 (10) (2023) 2279, https://doi.org/10.3390/nu15102279.
- [8] T.A. Nicklas, C.E. O'Neil, V.L. Fulgoni 3rd, Nutrient intake, introduction of baby cereals and other complementary foods in the diets of infants and toddlers from birth to 23 months of age, AIMS Public Health 7 (1) (2020) 123–147, https://doi.org/10.3934/publichealth.2020012.
- [9] L. Gaberell, M. Abebe, P. Rundall, How Nestlé gets children hooked on sugar in lower-income countries [Internet], Public Eye (April 2024). Available from, https://stories.publiceve.ch/nestle-babies.
- [10] Internet General Standard for Food Additives Codex Stan 192-1995, Codex Alimentarius International Food Standards, Internet, Food and Agriculture Organization (FAO) and World Health Organization (WHO), 2021. Available from: http://www.fao.org/gsfaonline/docs/CXS 192e.pdf.
- [11] N.D. Chuc, N.T.K. Thai, The participation of Vietnamese SMEs in regional economic integration: survey results of three manufacturing industries, J. Southeast Asian Econ. 34 (1) (2017) 118–147, https://doi.org/10.1355/ae34-1e
- [12] K. Foterek, A.E. Buyken, K. Bolzenius, A. Hilbig, U. Nöthlings, U. Alexy, Commercial complementary food consumption is prospectively associated with added sugar intake in childhood, Br. J. Nutr. 115 (11) (2016) 2067–2074, https://doi.org/10.1017/ S0007114516001367.
- [13] A. Fardet, S. Gold, A. Delgado, N. Kopsahelis, V. Kachrimanidou, L. Kaur, et al., How can food processing achieve food and nutrition security? Sustain. Develop. (2024) 1–14, https://doi.org/10.1002/sd.2899.
- [14] E. Crosbie, F.S. Gomes, J. Olvera, S. Rincón-Gallardo Patiño, S. Hoeper, A. Carriedo, A policy study on front-of-pack nutrition labeling in the Americas: emerging developments and outcomes, Lancet Reg, Health Am 18 (2022) 100400, https://doi.org/10.1016/j.lana.2022.100400.