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additional body composition information, thus opening up many new clinical and research possibilities.

Funding Sources: Funded by a NIH/NIDDK grant.

Current Developments in Nutrition 8 Suppl 2 (2024) 103558

¹ <https://doi.org/10.1016/j.cdnut.2024.103558>

P15-036-24 Accurate Prediction of Anthropometric Body Dimensions by 3D Optical Imaging Versus a High-Resolution 3D Laser Scanner

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Objectives: Increasing interest is focusing on clinically-useful measurements that go beyond body mass index (BMI) in predicting a person's body composition and health risks. One relatively new approach is 3D imaging for digital anthropometry with scanners ranging from large stationary devices to smartphones. High-resolution laser scanners (HRLS) are costly and sometimes require facility renovations. Can equivalent anthropometric data be acquired with a lower-cost, smaller footprint 3D optical (3DO) scanner?

Methods: 102 healthy adult participants ranging in BMI (17–45 kg/m²) completed the protocol including HRLS (Vitus Smart XXL; Human Solutions North America, Cary, NC) and 3DO (SS20; Size Stream, Cary, NC). Acquired digital avatars were analyzed for circumferences (C) and regional and total volumes with corresponding surface areas using the same software. Comparisons of 3DO to HRLS included $X \pm SD$, correlations, root-mean square (RMSE) and mean absolute errors (MAE, $X \pm SE$), and bias analyses.

Results: There was close agreement between all 3DO and HRLS digital anthropometric measurements including, as examples, waist C [92.0 ± 14.6 vs. 90.2 ± 14.6 cm, $p = NS$; R^2 , 0.93; RMSE, 4.1; MAE, 3.0 ± 2.8 cm]; non-significant bias], hip C [104.4 ± 9.0 vs. 104.3 ± 9.1 cm, $p = NS$; R^2 , 0.87; RMSE, 3.3; MAE, 1.7 ± 2.8 cm], and waist C/hip C [0.88 ± 0.08 vs. 0.86 ± 0.08 , $p = NS$; R^2 , 0.77; RMSE, 0.04; MAE, 0.030 ± 0.032 ; non-significant bias].

Conclusions: The evaluated 3DO scanner, capable of rapidly quantifying multiple body surface features, can serve as an alternative to HRLSs as a means of acquiring clinically relevant anthropometric measurements in research and clinical settings.

Funding Sources: Funded by a NIH/NIDDK grant.

Current Developments in Nutrition 8 Suppl 2 (2024) 103559

¹ <https://doi.org/10.1016/j.cdnut.2024.103559>

P15-037-24 Perceptions and Drivers of Healthier Food and Beverage Stocking in Urban and Rural Indonesian Primary School Canteens

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Objectives: Obesity is rising in Indonesia, especially among school-aged children. One-third of children's daily calories come

from school food vendors ('canteens') which favor processed snacks, high-sugar beverages, and lack fruits, vegetables, and proteins. Given the need for healthier options in schools, we sought to formatively (1) assess perceptions (taste, acceptability) and (2) identify food choice drivers of selected items to be stocked and promoted in school canteens.

Methods: Canteen owners ($n=5$) and school staff who play a managerial role ($n=5$) were recruited from urban ($n=3$) and rural ($n=2$) schools located in Magelang, Indonesia. Five food and beverage items, selected for nutritional content and feasibility of procurement, were assessed in researcher-led taste tests. Participants were asked to consider potential acceptability by children and rate the items on a 3-point hedonic scale. In-depth interviews (IDIs) further examining acceptability and food choice were conducted in Bahasa, transcribed, and translated to English. Data were triangulated for key themes.

Results: Perceptions varied based on participants' role. Of the items tested, sate buah (fruit skewers) was the most liked (70% of participants) for its taste and perceived acceptability, followed by IndoMilk (fortified dairy drink) (50%) and sate telur puyuh (quail egg skewers) (40%). No participants reported liking polo pendem (tubers and peanuts) or gethuk (cassava snack) due to both being viewed as unappealing to children and therefore unlikely to sell. IDIs revealed that packaging, marketing, and affordability influence children's food choices, as well as individual taste preferences. Participants underscored the importance of profitability for their canteens.

Conclusions: Indonesian school canteens tend to offer high-calorie, low-nutrient options. Children's preference (taste, appeal) and ability to afford foods are primary considerations for canteen stocking and pricing. This formative study identified several healthier options suitable for consideration. A future planned intervention will leverage these findings to improve school food environments, increase diet quality, and reduce risk for obesity in this setting.

Funding Sources: George G. Graham Professorship Endowment Fund and Alma Ata University.

Current Developments in Nutrition 8 Suppl 2 (2024) 103560

¹ <https://doi.org/10.1016/j.cdnut.2024.103560>

P15-038-24 Sex-Dependent Brain Metabolic Dysregulation in Obesity and Diabetes

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Objectives: Obesity and diabetes predispose individuals to cognitive decline and affect brain metabolism. The *ob/ob* (leptin deficient) and *db/db* (lacking functional leptin receptor) mouse models are widely used in obesity and diabetes research. Both models on the C57Bl/6J background exhibit obesity, hypercholesterolemia, hyperinsulinemia, glucose intolerance, and insulin resistance compared to controls, however the *db/db* model exhibits more severe glucose intolerance and insulin resistance. We aimed to compare the effects of the obese and diabetic phenotypes of these models on the brain metabolome to better understand the relationship between obesity, diabetes, and the brain metabolome. Additionally, we aimed to determine the

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