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## Are popular books on diet and health written based on scientific evidence?: A comparison of references cited in books between the US and Japan

Riho Adachi<sup>1</sup>, Fumi Oono<sup>1</sup>, Akinori Yaegashi<sup>2,3</sup>, Madoka Kishino<sup>4</sup>, Risa Ogata<sup>5</sup>, Mizuki Suga<sup>6</sup>, Ayari Tsumura<sup>7</sup>, Anna Kinugawa<sup>8</sup>, Moe Matsumoto<sup>5</sup>, Satoshi Sasaki<sup>1</sup>

1. The University of Tokyo (Japan), 2. Hokkaido Bunkyo University (Japan), 3. Hokkaido University (Japan), 4. Tokyo University of Agriculture (Japan), 5. Ochanomizu University (Japan), 6. Nakamura Gakuen University (Japan), 7. Tokushima University (Japan), 8. Tohoku University (Japan)

**Background and objectives**: There is a tendency among the general population to obtain information on diet and health from popular books. However, the scientific accuracy of the information presented in them is not necessarily guaranteed, making them often unreliable. References, the sources supporting the presented information, allow for the judgment of information reliability. Although the presence of references does not fully guarantee that the information is trustworthy, it is considered a minimum requirement of reliable information. Therefore, we examined the references in popular books on diet and health sold in the US and Japan.

**Methods:** We selected 100 books in each country based on the ranking order among diet and health categories in online bookstores. We excluded books not related to diet or health as well as books for professionals, textbooks, magazines, and calorie guides. The main themes of books were categorized using the summaries available at the bookstores. We analyzed the entirety of each book for the references to examine where the references were cited (text or figures and tables) and the number of references.

**Results:** The most frequent main themes were general health (US, 31%, Japan, 38%), recipes (US, 44%, Japan, 31%), and weight loss (US, 13%, Japan, 11%). In both countries, 66 books had references. Among these, all books had references on the text (not only on figures and tables) in the US, while this was true for 73% of books in Japan. Furthermore, the books from the US cited many more references than those from Japan. Thirty-seven books cited more than 100 references in the US, but only five books cited more than 100 references in Japan.

**Conclusions:** The proportion of the books with references was similar in the US and Japan, but whether the references were cited in the text and the number of references differed between the two countries. These may reflect the different perceptions of referencing to make presented information trustworthy. The quality of the referencing is under investigation.

**Keyword:** evidence-based nutrition, reference source, reliable information, books, health

**Further Collaborators:** Yuya Kakutani (Osaka Shoin Women's University)

Tomoya Takaoka (Shinshu University Hospital)

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## Availability of healthy and unhealthy foods in modern retail outlets located in selected districts of Greater Accra region, Ghana.

Akosua Pokua Adjei<sup>1</sup>, Gideon Amevinya<sup>1</sup>, Wilhemina Quarpong<sup>1</sup>, Akua Tandoh<sup>1</sup>, Richmond Aryeetey<sup>1</sup>, Michelle Holdsworth<sup>2</sup>, Charles Agyemang<sup>3</sup>, Gershim Asiki<sup>4</sup>, Stefanie Vandevijvere<sup>5</sup>, Amos Laar<sup>1</sup>

1. University of Ghana (Ghana), 2. UMR, MoISA (Montpellier Interdisciplinary centre on Sustainable Agri-food systems), (Univ Montpellier, CIRAD, CIHEAM-IAMM, INRAE, Institut Agro, IRD) (France), 3. University of Amsterdam (Netherlands), 4. African Population and Health Research Center (Kenya), 5. Sciensano (Belgium)

**Background and objective:** Availability of unhealthy (nutritionally poor) foods can influence preference, purchasing and consumption of such foods. This study determined the healthiness of foods sold at modern retail outlets- supermarkets and mini-marts in the Greater Accra Region of Ghana.

**Methods:** All modern retail outlets located in six districts of Greater Accra were eligible. Permanent structured outlets with floor area <200m<sup>2</sup> were categorised as mini-marts; and those  $\geq$ 200m<sup>2</sup> as supermarkets. Shelf length of all available foods were measured. Healthiness of food was determined using two criteria - the NOVA classification and energy density of foods. Thus, ultraprocessed foods or food items with >225kcal/100 g were classified as unhealthy. The ratio of the area occupied by unhealthy to healthy foods was used to determine the healthiness of modern retail outlets.

**Results:** Of 67 retail outlets assessed, 86.6% were minimarts. 85.0% of the total shelf area was occupied by foods categorized as unhealthy. Refined grains/grain products were the most available, occupying 30.0% of the total food shelf space, followed by sugar-sweetened beverages (20.1% of total shelf space). The least available food group–unprocessed staples, and occupied 0.1% of the total food shelf space. About two-thirds of food products available (n =3952) were ultra-processed. Across retail outlets, the ratio of ultra-processed-to-unprocessed foods ranged from 3 to 7 with an average (SD) of 5(2). Thus, for every healthy food, there were five ultra-processed ones in the studied retail outlets.

**Conclusion:** This study reveals widespread availability of ultra-processed foods in modern retail outlets within the selected districts. Towards a healthier food retail environment, public health and food regulators, in partnership with other stakeholders need to institute measures that improve availability of healthy foods within supermarkets and mini-marts.

**Keyword:** Modern retail outlet, Healthy food, Unhealthy food, Ultra-processed food, Ghana

Conflict of Interest Disclosure: No conflict of interest