

A Standardized Method for Collecting Valid and Consistent Data for Minimum Dietary Diversity for Women, an Indicator of Micronutrient Adequacy

Anna Herforth, Harvard T.H. Chan School of Public Health, USAID Advancing Nutrition, Boston, MA, USA; **Chris Vogliano**, USAID Advancing Nutrition, Arlington, VA USA; **Kristina Sokourenko**, Cornell University, Ithaca, NY, USA; **Cecilia Gonzalez**, Independent consultant, Baltimore, MD, USA; and **Betül Uyar**, Wageningen University and Research, Wageningen, Netherlands

BACKGROUND

The Minimum Dietary Diversity for Women (MDD-W) is a food group-based indicator of micronutrient adequacy for women aged 15–49 years.¹ Data for MDD-W can be collected for MDD-W using either an open 24-hour recall or a list-based method for reporting foods consumed over the previous day or night. While methods for the open recall are standardized, the list-based method has been implemented in widely varied ways. Multi-topic surveys, including

Demographic and Health Surveys (DHS), the Gallup World Poll, and other national surveys, have several constraints that require a standardized and low-burden methodology, including limited survey time for any given module and enumerators who are not necessarily trained in dietary assessment. Furthermore, a standardized and validated data collection tool for MDD-W will help improve comparability between settings and over time.

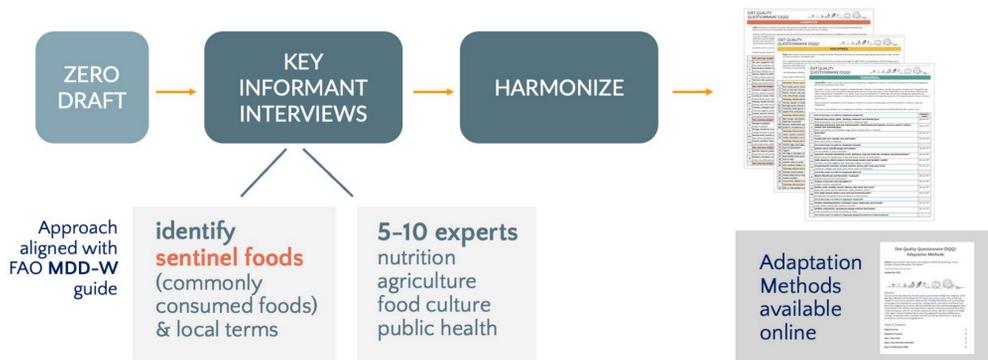
ACTIVITIES

The Global Diet Quality Project developed the Diet Quality Questionnaire (DQQ) as a standardized way to collect data for the MDD-W alongside additional indicators of diet quality. It consists of closed-ended questions, which include only the most frequently consumed food items (sentinel foods) from each food group. We tested the validity of the sentinel food approach through cognitive testing and validation studies. Participatory adaptation was used to identify the sentinel foods appropriate for each of 120

countries. The adaptation relied on interviews with key informants from various regions of each country, to identify commonly consumed foods in each of the 29 food groups of the DQQ, and universally-understood terminology for each food item. Following the completion of the key informant interviews, the adaptation team undertook a harmonization process to identify and re-check any differences between countries within the same region.

Country Adaptation

a standardized & participatory process → Global public good



The Diet Quality Questionnaire is a ready-to-use, country-adapted, five-minute tool for consistent and reliable data collection for MDD-W and other diet quality indicators.

OUTCOMES

Completed adapted DQQs are available for 120 countries. These take five minutes to implement, are ready to use as is, and can be used to gather data for MDD-W and other diet quality indicators. Adaptations have also been completed for a companion questionnaire for infant and young child feeding (IYCF), which can be used to gather data for the World Health Organization and UNICEF IYCF indicators such as MDD for children aged 6–23 months. The tools have also been translated into national languages.

The sentinel food approach is likely to be more consistently understood by respondents than open-ended list-based questions, which resulted in misclassification. Sentinel foods can capture the diets of vast majority of consumers for most food groups;² the most diverse food groups can be handled by more than one question per food group. In a three-country validation study, MDD-W results from the DQQ were almost identical to those from a quantitative 24-hour recall (Uyar et al. 2023).

CONCLUSION

The DHS program and Gallup World Poll are implementing the country-adapted questions produced from this global effort to collect MDD-W data across >90 countries. The availability of standardized, ready-to-use questionnaires facilitates the collection of valid and

comparable MDD-W data. The country-adapted DQQs, and an online calculator to automatically calculate the MDD-W and other diet quality indicators from DQQ data, are freely available as global public goods on dietquality.org.

¹ Martin-Prevel, Y., M. Arimond, P. Allemand, D. Wiesmann, T.J. Ballard, M. Deitchler, M.C. Dop, et al., 2017. "Development of a Dichotomous Indicator for Population-Level Assessment of Dietary Diversity in Women of Reproductive Age." *Current Developments in Nutrition*, 1(12):1012001.
² Ma, S., A.W. Herforth, C. Vogliano, and Z. Zou. 2022. "Most Commonly-Consumed Food Items by Food Group, and by Province, in China: Implications for Diet Quality Monitoring." *Nutrients*, 14(9): 1754. <https://doi.org/10.3390/nu14091754>
³ Uyar, B.T., E.F. Talsma, A.W. Herforth, L.E. Trijsburg, C. Vogliano, G. Pastori, T.H. Bekele, and I.D. Brouwer, 2023. "The DQQ is a Valid Tool to Collect Population Level Food Group Consumption Data: A Study among Women in Ethiopia, Viet Nam, and Solomon Islands." *The Journal of Nutrition*, 153(1): 340–351. <https://doi.org/10.1016/j.tjnut.2022.12.014>

HARMONIZATION

Harmonizing Food Lists

by region & sub-region

Ex. consumption of RED PALM OIL in African countries.

- Ensure consistency & comparability
- Identify discrepancies & reduce redundancy
- Understand regional & sub-regional patterns

