

# Title | DIET QUALITY INDICATORS FOR CHILDREN 6 TO 23 MONTHS: COMPARING TWO ASSESSMENT METHODS IN CAMBODIA

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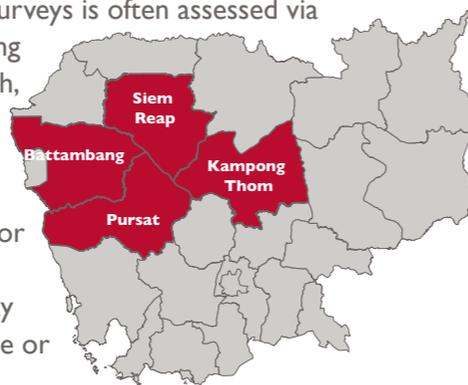


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### INTRODUCTION AND BACKGROUND

Dietary intake in large-scale surveys is often assessed via 24-hour dietary recall following an open or list-based approach, or a hybrid method involving both open and list-based recalls. It is unclear whether key indicators of diet quality for 6-to-23-month-old children calculated from different proxy recall methods are comparable or which is most accurate. We compared diet quality indicator estimations from a list-based and a hybrid recall method against an in-home observation of dietary intake in representative samples of 6-to-23-month-old children (=participants) in select districts in Cambodia.



### RESEARCH METHODS

The study team collected data for each participant from primary caretakers (=respondents) over two consecutive days in June–July 2022. Intake was observed during an in-home visit on day 1. The hybrid and list-based recalls were both administered on

day 2 in random order and by different data collectors. Key diet quality indicators (box 1) for each participant were estimated thrice. We assessed the equivalence of each proxy recall method to the observation using a 10 percent equivalence margin.

### FINDINGS

- The study sample comprised 638 children.
- Both proxy methods were equivalent to the in-home observation for estimating MDD and were able to estimate food group consumption equivalent to the in-home observation for all food groups except breast milk.
- The list-based but not the hybrid recall was able to equivalently predict breast milk consumption at the 10 percent equivalence margin.
- Both methods were highly sensitive and specific when predicting MDD, MMF, MAD, and DDS.
- The hybrid method was more sensitive than the list-based at estimating MDD, but the list-based method was slightly more specific. When estimating MDD, the list-based method agreed with the observation 86 percent of the time and the hybrid agreed 89 percent.
- For food group consumption, both methods were highly sensitive and specific. (See table 1 and figure 1.)

Table 1. Comparison of the Two Proxy Methods to the Observed Intake for Estimating MDD, MMF, MAD, and DDS in Cambodia (N=638)

	MDD	MMF	MAD	DDS <sup>1</sup>
In-home observation (Reference) (%)	29.4	99.4	29.4	3.8 (1.3)
List-based recall (%)	30.8	100.0	30.8	3.8 (1.3)
Equivalence p-value	<0.001	<0.001	<0.001	<0.001
Sensitivity (%)	78.6	100	78.6	--
Specificity (%)	89.1	--	89.1	-- <sup>2</sup>
Hybrid multi-pass recall (%)	36.7	100.0	36.7	4.0 (1.3)
Equivalence p-value	0.04	<0.001	0.04	<0.001
Sensitivity (%)	93.7	100	93.7	--
Specificity (%)	87.1	--	87.1	--

1. Mean (Standard deviation); 2. Dashes indicate that sensitivity or specificity could not be calculated.

### WAY FORWARD

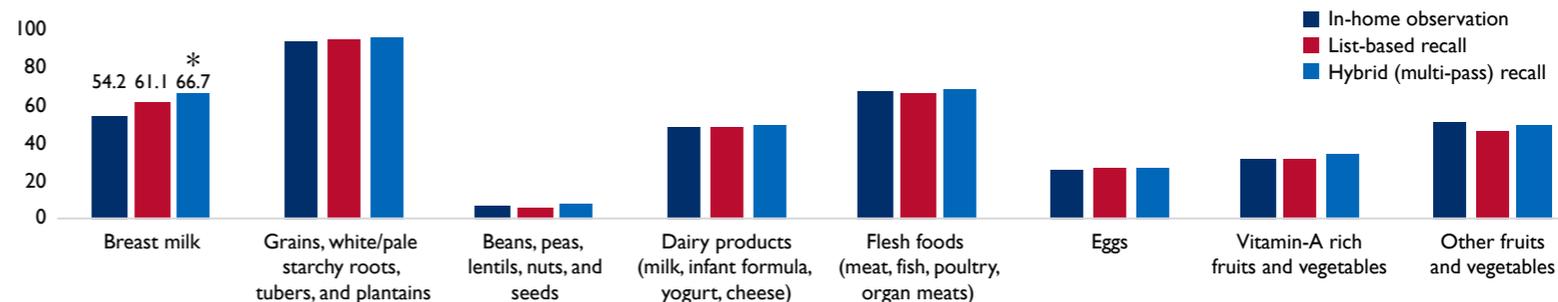
Our preliminary findings suggest that both proxy methods are suitable for determining MDD with high sensitivity and specificity compared to in-home observation. Complementary data collection in select districts in Zambia is currently underway. The results will be further complemented by a costing analysis of each proxy method.

#### Box 1. Diet Quality Indicator Estimations

- Minimum dietary diversity (MDD): achieved when foods and beverages from at least five out of eight defined food groups were reportedly consumed
- Minimum meal frequency (MMF): achieved when solid, semi-solid, or soft foods were consumed at least the minimum number (depending on age and breastfeeding status) of times
- Minimum acceptable diet (MAD): composite indicator that includes MDD and MMF
- Dietary diversity score (DDS): summation of how many of the eight food groups an individual consumed.

Sources: WHO (World Health Organization) and UNICEF (United Nations Children's Fund), 2021. *Indicators for Assessing Infant and Young Child Feeding Practices: Definitions and Measurement Methods*. Geneva: UNICEF and WHO; WHO (World Health Organization), 2010. *Indicators for Assessing Infant and Young Child Feeding Practices: Part 2: Measurement*. Geneva: WHO.

Figure 1. Food Group Consumption Prevalence Estimates in Percent by Assessment Method, Cambodia



\*Not equivalent to reference method at 10 percent equivalence margin



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