Food and Agriculture Organization of the United Nations

CAPI-based MDD-W data collection templates from three software solutions

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Output for the project GCP/GLO/1027/GER: Advancing and Expanding the Uptake of Minimum Dietary Diversity for Women Indicator: Capacity Development on collection, interpretation and its use to inform food system transformative policies and programmes.

Food and Agriculture Organization of the United Nations

Rome, 2023

Contents

Background

The purpose of this report is to present the evaluation of various Computer-Assisted Personal Interviewing (CAPI) software solutions that could be applied to collect data for the Minimum Dietary Diversity for Women (MDD-W) indicator. The evaluation aimed to assess the feasibility of existing CAPI tools and explore the latest advancements in the field. As a result of this evaluation, three CAPI-based MDD-W data collection templates were developed.

Software platforms

The evaluation involved three popular CAPI software platforms: Open Data Kit (ODK), Survey Solutions, and Kobo Collect/Toolbox. Each of these platforms offers features and capabilities for data collection.

Open Data Kit

Open Data Kit (ODK) is an open-source CAPI software developed by the University of Washington's Department of Computer Science and Engineering which enables the creation of customized data collection forms for mobile devices. It includes a form builder in several languages, a data collection app, and a server for data management. ODK allows offline data collection, data validation, skip logic, and multimedia support. It is highly customizable and widely used in research and humanitarian projects. ODK is not open access, starting from USD 169/month in June, 2023 (unlimited forms, users, 10 000 monthly submissions, 10GB total storage, one project space, standard support, standard response time) (ODK, 2023).

Survey Solutions

Survey Solutions is a comprehensive platform developed by the World Bank. It allows the collection of data either offline on tablets (CAPI), online using a web interface (CAWI), via phone interviews (CATI), or as part of cost-efficient mixed-mode surveys. It provides a user-friendly interface for designing multilingual surveys, managing data collection, and analyzing collected data. The platform offers skip patterns, data validation rules, and built-in data synchronization. It supports complex questionnaires and can handle large-scale data collection efforts. Collected data can be securely synchronized with the server, where it is stored and managed. The platform provides tools for data quality control, data cleaning, and data export in various formats for further analysis. Moreover, Survey Solutions offers real-time monitoring capabilities, allowing project managers to track the progress of data collection, monitor enumerator performance and identify and address any data collection issues promptly (Survey Solutions, 2023).

Kobo Collect/Toolbox

Kobo Collect/Toolbox is an open-source CAPI tool that offers an intuitive interface for designing data collection forms and conducting surveys. It supports offline data collection, skip patterns, multimedia capture, and data validation. The server component, Kobo Toolbox, facilitates data management and analysis. This tool is widely utilized in field surveys and research projects (Kobo Collect/Toolbox, 2023). It is important to note that the main data collection app for Kobo Toolbox is built using the ODK ecosystem. Kobo Collect, the mobile app, is essentially a replica of the ODK Collect mobile app, albeit a few months behind the original version. Consequently, any form created for ODK should be compatible with Kobo Toolbox and vice versa. Operationally, ODK and Kobo Toolbox function as separate platforms with distinct variations in terms of user support and customization (ODK, 2023).

Evaluation process and developed templates

The evaluation process carried out for this project involved assessing the features, usability, and performance of each software platform in the context of MDD-W data collection. Factors considered included questionnaire design capabilities, offline functionality, data validation options, synchronization methods, support for complex skip patterns and ease of data management.

Based on the evaluation, all three software platforms were deemed suitable for MDD-W data collection. All were considered to provide the necessary features to design and implement CAPI-based MDD-W surveys effectively.

ODK was considered to be highly customizable and adaptable, making it suitable for diverse data collection requirements. Its open-source nature allows for extensive customization and integration with external systems.

Survey Solutions was considered the most able to handle complex questionnaires and large-scale data collection efforts. Advanced features for skip patterns, data validation and data synchronization were also considered an asset.

Kobo Collect/Toolbox showcased an intuitive interface and ease of use, making it accessible to non- technical users. It offered offline data collection capabilities and straightforward data management.

As a result of the evaluation, three templates for CAPI-based MDD-W data collection were developed using ODK (Annex 1), Survey Solutions (Annex 2), and Kobo Collect/Toolbox (Annex 3). These templates serve as ready-to-use forms that can be customized and deployed for data collection purposes. They include the necessary questionnaire structure, skip patterns, data validation rules and other relevant features.

References

ODK. 2023. In: ODK Collect data anywhere. [Cited: 14 June 2023]. https://getodk.org/

Survey Solutions. 2023. Ultimate Solution For Quality Survey Data Free CAPI System. In: Survey Solutions Version 23.06. [Cited: 14 June 2023]. https://mysurvey.solutions/en/

Kobo Collect/Toolbox. 2023. In: Powerful and intuitive data collection tools to make an impact. [Cited: 14 June 2023]. https://www.kobotoolbox.org/

Annex 1- ODK (Open Data Kit)

type	name	label::English	hint::English	required	relevant	constraint	constraint_message::English	calculation	repeat_count	appearance	choice_filter	media::image	default
start	start												
end	end												
today	today												
deviceid	deviceid												
username	username												
begin group	meta.data	Meta-data											
geopoint	survey_gps	Please collect the GPS co-ordinates											
note	meta.note	The following questions aim to assess the particpant's study elegibility.										mddw.jpg	
select.one ic	ic	Informed consent signed?		yes									
text	name	Name?		yes									
select_one sex	sex	Sex?		yes									
select_one age	age	Age category?		yes									
date	date.birth	Date of birth?		yes						no-calendar			
calculate	age.calc							round((int((${date} - ${birthdate})div 30.4375 *100 + 0.5)) div 100 div 12 , 2)					
select_one status	status	Physiological status?		yes									
text	idwoman	Woman's ID?	*Record the structure number from the household listing form (e.g., ID 1 is coded as 0001)*	yes		regex(., '^[0-9]{4}$')	Please put in a 4-digit code			numbers			
text	country	Country?	*Record the 5-digit FAO country ID (e.g., Cambodia: 15385, Ethiopia: 15408, Zambia: 15514)* *Codes available at: https://www.fao.org/nocs/en*	yes		regex(., '^[0-9]{5}$')	Please put in a 3-digit code			numbers			
select_one set	set	Setting?		yes									
calculate	idunique							concat(${idwoman},${country})					
end_group													
begin group	lb.req.rec	Required and recommended food groups			${ic}="1" and ${sex}='1' & ${age}='2' and ${status}<='2'								
note	intro.note	Now I'd like to ask you some yes-or-no questions about foods and drinks that you consumed yesterday during the day or night, whether you had it at home or somewhere else. First, I would like you to think about yesterday, from the time you woke up through the night. Think about the first thing you ate or drank after you woke up in the morning ... Think about where you were when you had any food or drink in the middle of the day ... Think about where you were when you had any evening meal ... and any food or drink you may have had in the evening or late-night...and any other snacks or drinks you may have had between meals throughout the day or night.										intro.jpg	
calculate	start.req							if(${name} = '', '', once(now()))					
select.one yes.no.only	fg_a	Yesterday during the day or at night, did you eat or drink: porridge, bread, rice, pasta, noodles, sorghum, millet, corn, couscous, or barley?		yes									

select.one yes.no.only	fg_b	Yesterday during the day or at night, did you eat or drink: white potatoes, white yams, manioc/cassava/yucca, cocoyam, taro roots or tubers, or plantains?		yes	
select.one yes.no.only	fg_c	Yesterday during the day or at night, did you eat or drink: beans, peas, lentils, hummus, tofu, or tempehs?		yes	
select.one yes.no.only	fg_d	Yesterday during the day or at night, did you eat or drink: groundnut/peanut, cashew, walnut, Baobab seeds, chia seeds, or flaxseed?		yes	
select.one yes.no.only	fg_e	Yesterday during the day or at night, did you eat or drink: milk?		yes	
select.one yes.no.only	fg_f	Yesterday during the day or at night, did you eat or drink: cheese or yoghurt?		yes	
select.one yes.no.only	fg_g	Yesterday during the day or at night, did you eat or drink: blood sausage, gizzard, heart, kidney, or liver?		yes	
select.one yes.no.only	fg_h	Yesterday during the day or at night, did you eat or drink: beef, goat, lamb, mutton, pork, rabbit, or yak?		yes	
select.one yes.no.only	fg_i	Yesterday during the day or at night, did you eat or drink: salami, bacon, bologna, or hot dogs?		yes	
select.one yes.no.only	fg_j	Yesterday during the day or at night, did you eat or drink: chicken, duck, goose, or guinea fowl?		yes	
select.one yes.no.only	fg_k	Yesterday during the day or at night, did you eat or drink: fresh, frozen or dried fish, shrimp, or clams?		yes	
select.one yes.no.only	fg_l	Yesterday during the day or at night, did you eat or drink: eggs from poultry or any other bird?		yes	
select.one yes.no.only	fg_m	Yesterday during the day or at night, did you eat or drink: kale, mustard greens, spinach, amaranth greens, chicory, broccoli, or Swiss chard?		yes	
select.one yes.no.only	fg_n	Yesterday during the day or at night, did you eat or drink: pumpkin, carrots, squash, or sweet potatoes?		yes	
select.one yes.no.only	fg_o	Yesterday during the day or at night, did you eat or drink: ripe mango or ripe papaya?		yes	
select.one yes.no.only	fg_p	Yesterday during the day or at night, did you eat or drink: beets, cabbage, cauliflower, celery, cucumbers, eggplant, zucchini, radish, tomato, or mushroom?		yes	
select.one yes.no.only	fg_q	Yesterday during the day or at night, did you eat or drink: apple, avocado, banana, baobab fruit, berries, pineapple, orange, watermelon, guava, coconut flesh, or tangerine?		yes	
select.one yes.no.only	fg_r	Yesterday during the day or at night, did you eat or drink: crisps, chips, puffs?		yes	
select.one yes.no.only	fg_s	Yesterday during the day or at night, did you eat or drink: doughnuts/fried dough/fried bread, or samosas?		yes	

type	name	label		relevant					calculation			media::image
select.one yes.no.only	fg_t	Yesterday during the day or at night, did you eat or drink: instant noodles?		yes								
select.one yes.no.only	fg_u	Yesterday during the day or at night, did you eat or drink: from ... [name local fast food chains]?		yes								
select.one yes.no.only	fg_v	Yesterday during the day or at night, did you eat or drink: chocolates, candies, pastries, cakes, biscuits, cookies, ice cream, or popsicles?		yes								
	fg_x	Yesterday during the day or at night, did you eat or drink: soft drinks, sodas, fruit juices, chocolate drinks, or energy drinks?		yes								
select.one yes.no.only	fg_z	Yesterday during the day or at night, did you eat or drink: sweetened tea, sweetened coffee, or sweetened herbal drinks?		yes								
calculate	end.req								if($\{fg_z\} = '', '', once(now()))			
end_group												
calculate	stime.req								decimal-time($\{start.req\})			
calculate	etime.req								decimal-time($\{end.req\})			
calculate	diff.time.req								$\{etime.req\} - $\{stime.req\}			
calculate	diff.time.req.min								$\{diff.time.req\}*1440			
begin group	lb.opt	Optional food groups		$\{ic\}="1" and $\{sex\}='1' & $\{age\}='2' and $\{status\}<='2'								
calculate	start.req								if($\{name\} = '', '', once(now()))			
select.one yes.no.only	fg_opt_1	Yesterday during the day or at night, did you eat or drink: insects, insect larvae/grubs, insect eggs, or land and sea snails?		yes								
select.one yes.no.only	fg_opt_2	Yesterday during the day or at night, did you eat or drink: [name local wild plants]?		yes								
select.one yes.no.only	fg_opt_3	Yesterday during the day or at night, did you eat or drink: red palm oil?		yes								
select.one yes.no.only	fg_opt_4	Yesterday during the day or at night, did you eat or drink: oil, fats or butter added to food or used for cooking, including extracted oils from nuts, fruits and seeds, and all animal fat?		yes								
select.one yes.no.only	fg_opt_5	Yesterday during the day or at night, did you eat or drink: onion, parsley, garlic, herbs, spices, bouillon cubes, or tomato paste?		yes								
calculate	end.req								if($\{fg_opt_5\} = '', '', once(now()))			
note	end.note	Thank you for your valuable time!										thanks.jpg
end_group												
calculate	stime.opt								decimal-time($\{start.opt\})			
calculate	etime.opt								decimal-time($\{end.opt\})			
calculate	diff.time.opt								$\{etime.opt\} - $\{stime.opt\}			
calculate	diff.time.opt.min								$\{diff.time.opt\}*1440			

Annex 2- MDD-W list-based questionnaire example in Survey Solutions

Generated by Giles, Aug 25, 2022 09:19
Questionnaire created by Giles, Aug 22, 2022 15:30
Last modified by Giles, Aug 24, 2022 11:53

Not shared with anyone

Sections: 3, Sub-sections: 0, Questions: 40.
Questions with enabling conditions: 0
Questions with validation conditions:4
Rosters: 0
Variables: 2

Survey Solutions

MDDW list based questionnaire example_2

SURVEY IDENTIFICATION INFORMATION
QUESTIONNAIRE DESCRIPTION

META-DATA
No sub-sections, No rosters, Questions: 11, Static texts: 1, Variables: 2.

LIST-BASED QUESTIONNAIRE (REQUIRED AND RECOMMENDED FOOD GROUPS)
No sub-sections, No rosters, Questions: 24, Static texts: 1.

LIST-BASED QUESTIONNAIRE (OPTIONAL FOOD GROUPS)
No sub-sections, No rosters, Questions: 5.

LEGEND

Basic information

Title   MDDW list based questionnaire example_2

META-DATA

FAO. 2021. *Minimum dietary diversity for women.*

GPS location	GPS	gps
	N	
	W	
	A	

Date	DATE: CURRENT TIME	date

Informed consent signed?	SINGLE-SELECT	ic
	00 ○ No	
	01 ○ Yes	

Sex?

V1 `ic==1`
M1 Informed consent not provided!

	SINGLE-SELECT	sex
	00 ○ Male	
	01 ○ Female	

Age?

V1 `ic==1`
M1 Informed consent not provided!
V2 `sex==1`
M2 Not female!

	SINGLE-SELECT	age
	01 ○ <15 years	
	02 ○ 15-49 years	
	03 ○ ≥50 years	

Date of birth?	DATE	dob

VARIABLE	LONG	age_calc
`(CenturyMonthCode(date.Value.Month, date.Value.Year) - CenturyMonthCode(dob.Value.Month, dob.Value.Year))/12`		

Physiological status?

SINGLE-SELECT · `status`

- V1 `ic==1`
- M1 Informed consent not provided!
- V2 `sex==1`
- M2 Not female!
- V3 `age==2`
- M3 Not aged 15-49 years!

01 ○ Non-pregnant, non-lactating
02 ○ Non-pregnant, lactating
03 ○ Pregnant, non-lactating
04 ○ Pregnant, lactating

Woman's ID?

TEXT · `idwoman`

- I Women's IDs are 4-digits (e.g., ID 1 is coded as 0001)
- V1 `ic==1`
- M1 Informed consent not provided!
- V2 `sex==1`
- M2 Not female!
- V3 `status != 3`
- M3 Not non-pregnant!
- V4 `status != 4`
- M4 Not non-pregnant!
- V5 `age==2`
- M5 Not aged 15-49 years!

Country (code)?

TEXT · `country`

- I 5-digit FAO country ID (e.g., Cambodia: 15385, Ethiopia: 15408, Zambia: 15514) Codes available at: https://www.fao.org/nocs/en

Country (list)?

SINGLE-SELECT · `country_cat`

01 ○ Cambodia
02 ○ Ethiopia
03 ○ Zambia

Setting?

SINGLE-SELECT · `set`

01 ○ Rural
02 ○ Per-urban
03 ○ Urban

VARIABLE
`idwoman + "-" + country`

STRING · `idunique`

LIST-BASED QUESTIONNAIRE (REQUIRED AND RECOMMENDED FOOD GROUPS)

E ic==1 & sex == 1 & age==2 & status != 3 & status != 4

STATIC TEXT

LIST-BASED LONG INTRODUCTION

Now I'd like to ask you some yes-or-no questions about foods and drinks that you consumed yesterday during the day or night, whether you had it at home or somewhere else.

First, I would like you to think about yesterday, from the time you woke up through the night. Think about the first thing you ate or drank after you woke up in the morning … Think about where you were when you had any food or drink in the middle of the day … Think about where you were when you had any evening meal … and any food or drink you may have had in the evening or late-night… and any other snacks or drinks you may have had between meals throughout the day or night.

I am interested in whether you had the food items I will mention even if they were combined with other foods.

Please listen to the list of foods, and if you ate or drank any one of them, say yes.

Yesterday during the day or at night, did you eat or drink: porridge, bread, rice, pasta, noodles, sorghum, millet, corn, couscous, or barley?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_a
Yesterday during the day or at night, did you eat or drink: white potatoes, white yams, manioc/cassava/yucca, cocoyam, taro roots or tubers, or plantains?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_b
Yesterday during the day or at night, did you eat or drink: beans, peas, lentils, hummus, tofu, or tempehs?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_c
Yesterday during the day or at night, did you eat or drink: groundnut/peanut, cashew, walnut, Baobab seeds, chia seeds, or flaxseed?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_d
Yesterday during the day or at night, did you eat or drink: milk?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_e
Yesterday during the day or at night, did you eat or drink: cheese or yoghurt?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_f
Yesterday during the day or at night, did you eat or drink: blood sausage, gizzard, heart, kidney, or liver?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_g
Yesterday during the day or at night, did you eat or drink: beef, goat, lamb, mutton, pork, rabbit, or yak?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_h

Yesterday during the day or at night, did you eat or drink: salami, bacon, bologna, or hot dogs?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_i
Yesterday during the day or at night, did you eat or drink: chicken, duck, goose, or guinea fowl?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_j
Yesterday during the day or at night, did you eat or drink: fresh, frozen or dried fish, shrimp, or clams?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_k
Yesterday during the day or at night, did you eat or drink: eggs from poultry or any other bird?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_l
Yesterday during the day or at night, did you eat or drink: kale, mustard greens, spinach, amaranth greens, chicory, broccoli, or Swiss chard?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_m
Yesterday during the day or at night, did you eat or drink: pumpkin, carrots, squash, or sweet potatoes?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_n
Yesterday during the day or at night, did you eat or drink: ripe mango or ripe papaya?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_o
Yesterday during the day or at night, did you eat or drink: beets, cabbage, cauliflower, celery, cucumbers, eggplant, zucchini, radish, tomato, or mushroom?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_p
Yesterday during the day or at night, did you eat or drink: apple, avocado, banana, baobab fruit, berries, pineapple, orange, watermelon, guava, coconut flesh, or tangerine?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_q
Yesterday during the day or at night, did you eat or drink: crisps, chips, puffs?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_r
Yesterday during the day or at night, did you eat or drink: doughnuts/fried dough/fried bread, or samosas?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_s
Yesterday during the day or at night, did you eat or drink: instant noodles?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_t

Yesterday during the day or at night, did you eat or drink: from … [name local fast food chains]?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_u
Yesterday during the day or at night, did you eat or drink: chocolates, candies, pastries, cakes, biscuits, cookies, ice cream, or popsicles?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_v
Yesterday during the day or at night, did you eat or drink: soft drinks, sodas, fruit juices, chocolate drinks, or energy drinks?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_x
Yesterday during the day or at night, did you eat or drink: sweetened tea, sweetened coffee, or sweetened herbal drinks?	SINGLE-SELECT 00 ◯ No 01 ◯ Yes	fg_z

LIST-BASED QUESTIONNAIRE (OPTIONAL FOOD GROUPS)

E `ic==1 & sex == 1 & age==2 & status != 3 & status != 4`

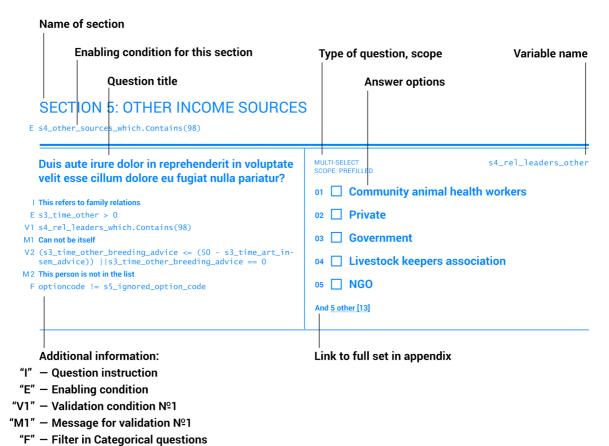|	
Yesterday during the day or at night, did you eat or drink: insects, insect larvae/grubs, insect eggs, or land and sea snails?	SINGLE-SELECT fg_opt_1 00 ◯ No 01 ◯ Yes
Yesterday during the day or at night, did you eat or drink: [name local wild plants]?	SINGLE-SELECT fg_opt_2 00 ◯ No 01 ◯ Yes
Yesterday during the day or at night, did you eat or drink: red palm oil?	SINGLE-SELECT fg_opt_3 00 ◯ No 01 ◯ Yes
Yesterday during the day or at night, did you eat or drink: oil, fats or butter added to food or used for cooking, including extracted oils from nuts, fruits and seeds, and all animal fat?	SINGLE-SELECT fg_opt_4 00 ◯ No 01 ◯ Yes
Yesterday during the day or at night, did you eat or drink: onion, parsley, garlic, herbs, spices, bouillon cubes, or tomato paste?	SINGLE-SELECT fg_opt_5 00 ◯ No 01 ◯ Yes

Legend and structure of information in this file

Name of section

Enabling condition for this section

Type of question, scope

Variable name

Question title

Answer options

SECTION 5: OTHER INCOME SOURCES

E s4_other_sources_which.Contains(98)

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur?

I **This refers to family relations**
E s3_time_other > 0
V1 s4_rel_leaders_which.Contains(98)
M1 **Can not be itself**
V2 (s3_time_other_breeding_advice <= (50 - s3_time_art_in-sem_advice)) ||s3_time_other_breeding_advice == 0
M2 **This person is not in the list**
F optioncode != s5_ignored_option_code

MULTI-SELECT
SCOPE: PREFILLED

s4_rel_leaders_other

01 ☐ **Community animal health workers**

02 ☐ **Private**

03 ☐ **Government**

04 ☐ **Livestock keepers association**

05 ☐ **NGO**

And 5 other [13]

Additional information:
"I" — Question instruction
"E" — Enabling condition
"V1" — Validation condition №1
"M1" — Message for validation №1
"F" — Filter in Categorical questions

Link to full set in appendix

Breadcrumbs

Type or roster

Roster Title

CHAPTER 3 IDENTIFICATION /
Roster: **LEADER RELATION DETAILS**
generated by fixed list:

01 **Ward Livestock Officer**

02 **Village Livestock Officer**

99 **Other (specify)**

List items

Annex 3- MDD-W list-based questionnaire example in Kobo Collect/Toolbox

MDDW list based questionnaire example_3

META-DATA

Date of the data collection

yyyy-mm-dd

Please insert your GPS location

latitude (x.y °)

longitude (x.y °)

altitude (m)

accuracy (m)

Informed consent signed?

◯ Yes

◯ No

Respondent characteristics

Date of birth?

yyyy-mm-dd

Age of the respondent

◯ <15 years

◯ 15-49 years

◯ ≥50 years

Sex of the respondent

○ Female

○ Male

What is the respondent physiological status?

○ Non-pregnant, non-lactating

○ Non-pregnant, lactating

○ Non-pregnant, lactating

○ Pregnant, lactating

Woman's ID?

_____

Country (code)?

5-digit FAO country ID (e.g., Cambodia: 15385, Ethiopia: 15408, Zambia : 15514) Codes available at: https://www.fao.org/nocs/en

_____

Country (list)?

_____

Setting?

○ Rural

○ Per-urban

○ Urban

LIST-BASED QUESTIONNAIRE (REQUIRED AND RECOMMENDED FOOD GROUPS)

Yesterday during the day or at night, did you eat or drink: porridge, bread, rice, pasta, noodles, sorghum, millet, corn, couscous, or barley?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: white potatoes, white yams, manioc/cassava/yucca, cocoyam, taro roots or tubers, or plantains?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: beans, peas, lentils, hummus, tofu, or tempehs?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: groundnut/peanut, cashew, walnut, Baobab seeds, chia seeds, or flaxseed?

○ Yes

○ No   3/5

Yesterday during the day or at night, did you eat or drink: milk?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: milk?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: blood sausage, gizzard, heart, kidney, or liver?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: beef, goat, lamb, mutton, pork, rabbit, or yak?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: salami, bacon, bologna, or hot dogs?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: chicken, duck, goose, or guinea fowl?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: fresh, frozen or dried fish, shrimp, or clams?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: eggs from poultry or any other bird?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: kale, mustard greens, spinach, amaranth greens, chicory, broccoli, or Swiss chard?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: pumpkin, carrots, squash, or sweet potatoes?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: ripe mango or ripe papaya?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: beets, cabbage, cauliflower, celery, cucumbers, eggplant, zucchini, radish, tomato, or mushroom?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: apple, avocado, banana, baobab fruit, berries, pineapple, orange, watermelon, guava, coconut flesh, or tangerine?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: crisps, chips, puffs?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: doughnuts/fried dough/fried bread, or samosas?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: instant noodles?

○ Yes

○ No

○ Option 3

Yesterday during the day or at night, did you eat or drink: from ... [name local fast food chains]?

○ Yes

○ No

Yesterday during the day or at night, did you eat or drink: chocolates, candies, pastries, cakes, biscuits, cookies, ice cream, or popsicles?

( ) Yes   5/5

( ) No

Yesterday during the day or at night, did you eat or drink: soft drinks, sodas, fruit juices, chocolate drinks, or energy drinks?

( ) Yes

( ) No

Yesterday during the day or at night, did you eat or drink: sweetened tea, sweetened coffee, or sweetened herbal drinks?

( ) Yes

( ) No