PROTOCOL - nutrition survey in Uzbekistan

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Nutrition Research Facility
Knowledge and Research for Nutrition

About the Nutrition Research Facility

The Knowledge and Research for Nutrition project of the European Commission (2020-2026) aims to provide improved knowledge and evidence for policy and programme design, management and monitoring & evaluation in order to reach better nutrition outcomes.

The project is implemented by Agrinatura - the European Alliance on Agricultural Knowledge for Development – which has established a Nutrition Research Facility, pooling expertise from European academia and having the ability to mobilise internationally renowned scientific networks and research organisations from partner countries.

The Nutrition Research Facility provides expert advice to the European Commission and to the European Union (EU) Member States and Partner Countries.

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Disclaimer

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List of Acronyms

Acronym	Description
ASR	Agency for Strategic Reforms
BMI	Body Mass Index
C-FIES	Child-Food Insecurity Experience Scale
CIS	Commonwealth of Independent States
DALY	Disability-Adjusted Life Years
DQQ	Diet Quality Questionnaire
DQQ-IYCF	Diet Quality Questionnaire-Infant and Young Child Feeding
FCQ	Food Choice Questionnaire
FIES	Food Insecurity Experience Scale
FNS	Food and Nutrition Security
IYCF	Infant and Young Child Feeding
MDD	Minimum dietary diversity
MoA	Ministry of Agriculture
MoH	Ministry of Health
NCD	Non-Communicable Disease
NNIS	National Nutrition (and dietary data) Information System
NRF	Nutrition Research Facility
PPS	Proportional-To-Size
PSU	Primary Sampling Unit
UNICEF	United Nation Fund for Children

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Background

Introduction

Dietary patterns are changing globally, moving from scarce, plant-based diets with fresh, unprocessed foods to more affluent diets high in sugar, fat, and animal-source foods, including highly processed products. This "nutrition transition" shifts public health challenges from undernutrition-related infectious diseases and neonatal disorders to chronic diseases related to overconsumption, such as diabetes and cardiovascular diseases. Currently, suboptimal diets are the leading global health risk, resulting in an estimated annual loss of 255 million disability-adjusted life years (DALYs). Globally Uzbekistan has the highest diet-related deaths - 892 per 100,000 people a year[1],primarily by consuming too much salt, too few whole grains and too few fruits and vegetables.

Whilst Uzbekistan has made significant progress in reducing malnutrition in children under five years of age in the past two decades, progress on diet-related non-communicable disease (NCD) targets has been limited, with obesity rates at 21.8% for adult women and 16.1% for adult men, exceeding regional averages. Additionally, diabetes affects an estimated 13.2% of adult women and 12.8% of adult men[2]. These are all set to increase if not addressed. Adopting healthier diets nationally could prevent many premature deaths among adults each year. And for this there is an urgent requirement for good quality and reliable data on diet intakes.

In early 2020, Uzbekistan's Ministry of Health, with the support of the Presidential Administration, initiated efforts to develop regulations aimed at promoting healthier food options for all citizens. By November of the same year, this new strategy was formalised through a presidential resolution, establishing healthier diets as a key component of national policy. However, at the current time essential data to inform decision-making is lacking, particularly on diet quality.

The Nutrition Research Facility[3] (NRF) was originally requested by the EU Delegation in Tashkent, to assess current efforts and interests of key national stakeholders to gather nutrition and dietary data and develop a national nutrition and dietary data information system (NNIS) in Uzbekistan. The wider objective of this NRF assignment is to support evidence-informed decision-making around healthy diets.

Specifically, the NRF is supporting the Ministry of Agriculture (MoA) and Ministry of Health (MoH) in the design, implementation and analysis in the piloting of a household nutrition survey, with particular emphasis on household dietary quality. Diet intakes in terms of quantity have been assessed through other surveys.

Before collecting data from a much larger comprehensive survey that allows a regional analysis, a pilot is advised, especially as the data being collected is new. A pilot, which will be on a national scale, will ultimately provide valuable insights into the effectiveness of the survey questions, the clarity of

[1] GBD 2017 Diet Collaborators. Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet. 2019 May 11;393(10184):1958-1972

[2] https://globalnutritionreport.org/resources/nutrition-profiles/asia/central-asia/uzbekistan/

[3] The Nutrition Research Facility provides expert advice to the European Commission and to the European Union (EU) Member States and Partner Countries. It is developed through the Knowledge and Research for Nutrition project of the European Commission (K&R4Nut), to provide improved knowledge and evidence for policy and programme design, management and monitoring & evaluation to reach better nutrition outcomes. The project is implemented by Agrinatura - the European Alliance on Agricultural Knowledge for Development.

instructions, the time required to complete the survey, and the overall survey design. This data can help identify any potential issues or areas for improvement before conducting a larger survey.

This nationally representative pilot survey will for the first time characterise simultaneously the dietary intake and micronutrient adequacy of infants, adolescents and adults in Uzbekistan.The data generated will serve as a baseline for what is hoped regular nutrition surveys and which is crucial to inform the implementation of the National Food and Nutrition Strategy, to improve the nutrition of Uzbekistan.

Methods – survey design and participants

Survey design

This survey is a nationally representative cross-sectional survey that will characterise adult and infant diet quality, infant and young child feeding practices, including unhealthy practices, experiences of food insecurity, food choices, sociodemographic information and anthropometric status. Ultimately, this survey will provide an estimate of national-level outcomes.

The survey has two components. The first component will assess the diet quality of adults aged 15 years and older using a quantitative questionnaire. The second component will assess the diet quality and feeding practices of infants aged 6-23 months by asking the mothers or primary caregiver using a quantitative questionnaire. Anthropometric assessments will be carried out on both groups: weight and height measures will be taken to assess Body Mass Index (BMI) in adults and wasting and stunting in infants.

The survey will be first undertaken in Tashkent city before expanding to other regions. Expected to start from mid-October 2024, the data collection will continue up to the first week in December 2024. There will be a short pause during the first few days of data collection to analyse the data being collected to ensure everything is going as planned. Any changes can be incorporated during this period. If it is not possible to carry out the national survey fully in time, then this survey will be done in February/March 2025. Annex 1 details the timeline.

Setting

Uzbekistan has an estimated population size of over 36 million and is the second most populous country of the Commonwealth of Independent States (CIS) countries. Between 2022 and 2028, the number of inhabitants in Uzbekistan is expected to grow.[4] The population is approximately evenly divided between rural and urban areas. Nearly half of the total population is female, but the ratio of females to males changes with age. Specifically, the number of females is higher than males in the population aged 40 and older. In contrast, for those younger than 40, there are more males than females.

Children aged 15 years and younger made up 32% of the Uzbekistan population in 2024. Uzbekistan is administratively divided into 12 regions and 1 capital city administration. As a population-based, cross-sectional survey, the national survey will collect data from all 12 regions and Tashkent City in Uzbekistan. The pilot survey will start in Tashkent city before expanding the data collection to other regions in Uzbekistan.

Figure 1 provides the geographical regions of Uzbekistan.

[4] https://www.statista.com/statistics/1356551/cis-population-by-country/

- Western: Republic of Karakalpakstan and Khorezm region,
- Central: Jizzakh, Syrdarya and Tashkent regions,
- Southern: Kashkadarya and Surkhandary regions,
- Central-Eastern: Bukhara, Samarkand and Navoi regions,
- Eastern: Fergana, Andijan and Namangan regions,
- Tashkent city.

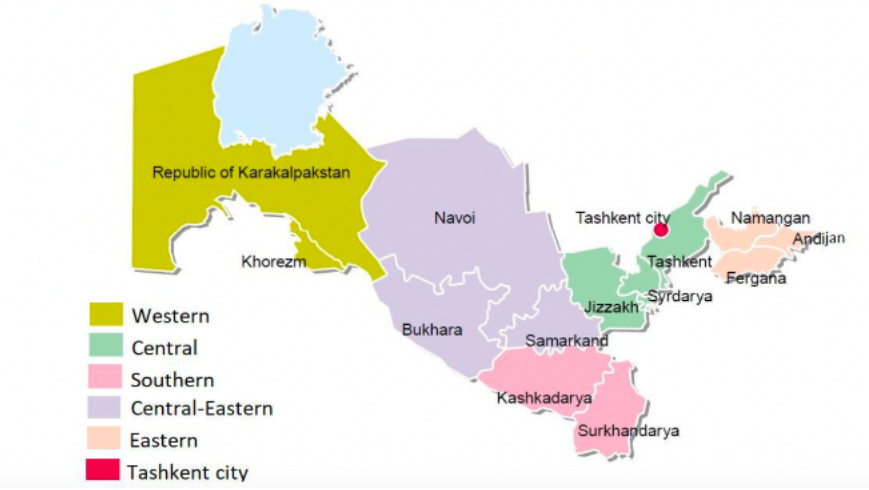

Figure 1 - Geographical regions in Uzbekistan

Participants

The survey population will include two groups: infants aged 6–23 months and adults (15 + years).

Sample size calculations

A separate sample size is required for both groups to be able to capture national estimates for both separately. For the main survey a sample size of **1000** has been set (which is deemed sufficient as long as random sampling is used). This follows the same method as the DQQ survey carried out by the Gallup World Poll in 2022. This will allow analysis by subgroups – sex, urban/rural residence. This will also allow a comparison of dietary intakes over time by subgroups – sex, urban/rural residence. This will also allow a comparison of dietary intakes over time[5].

As some of the households will already have an infant 6-23 months, but others not, then **oversampling** will be done in order to achieve the required number of infants. Infants represent approximately 6% of the total population – which means approximately **1060** households would need to be visited to reach the sample size for infants.

For future surveys this sample size could be carried out in each region to obtain regional representation and also for other age groups. For example, school-aged children 6-9 years and adolescents (10-19 years) separately.

Sampling procedures

A multi-stage ***stratified*** cluster sampling procedure will be used to select households.

The last census undertaken in Uzbekistan was in 1990. However, there are up-to-date estimates available of population size by districts in each region for both urban and rural areas. This is available from the Statistics Agency of the Republic of Uzbekistan (under the President of the country) and will be used as the Primary Sampling Unit (PSU) from which to randomly select Mahallas[6].

[5] For regional estimates then the sample size would need to be larger

[6] Mahallas are the smallest geographical enumeration area in Uzbekistan.

Stratification: in the first stage, 100 districts (PSUs) will be selected using Probability Proportional to Size (PPS) with allocation based on geographic region and urbanicity. Once the number of PSUs to be assigned to each urban-rural strata in each region have been determined, population centres (Mahallas) will be randomly selected. The survey will be conducted face-to-face by sending enumerators to Mahallas. About 11 interviews will be completed in each Mahalla – until the number of children aged 6-23 months is covered.

Household selection: enumerators will travel to an assigned geo-location within the assigned Mahalla and adopt a random route procedure.

Respondent selection: within the household, all adults over 15 years of age have a chance for selection. Selection will be done by random draw. If the selected respondent is unavailable, the enumerator will make at least 2 attempts to contact the selected household member or make arrangements to conduct the interview at a different time. If they cannot interview that respondent, or the respondent refuses then the household is substituted.

Where an infant 6-23 months is present then they will automatically be selected. If more than one infant is present, then data from all children will be collected (clustering will be taken into consideration in the analysis). In the case of twins then just one will be randomly selected by random draw. If the number of infants aged 6-23 months is not reached, then more households need to be visited to ensure that the required sample size is reached.

All randomly selected household members will be eligible for the individual questions. The household questions may be answered by the person with the most knowledge. The questionnaire (English version) can be found in annex 2. Versions in Uzbek and Russian are also available. A Russian version is needed for mobile data entry as it can only take this form. Enumerators will need to be fluent in both Russian and Uzbek languages. The different tools within the questionnaire have all been validated and as such can provide valid and useful information, set out in the next section.

Outcomes

Diet Quality

The Diet Quality Questionnaire (DQQ) will be used to measure diet quality, including minimum dietary diversity (MDD), dietary diversity scores (DDSs), noncommunicable disease (NCD)-protect and NCD-risk scores, adherence to dietary guidelines (All-5).[7]

IYCF practices

IYCF practices will be assessed using the new WHO and UNICEF recommended 17 indicators to evaluate IYCF practices, (including unhealthy infant feeding).[8]

Food insecurity

The Food Insecurity Experience Scale (FIES) will be used to assess household food security.[9] The FIES consists of eight questions that assess household experience related to adequate food access. Experience questions range from worrying about getting enough food to not eating for a whole day.

[7] https://www.dietquality.org/

[8] WHO, UNICEF . Indicators for assessing infant and young child feeding practices: definitions and measurement methods. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF), 2021. [Google Scholar]

[9] Saint Ville A, Po JYT, Sen A, et al. Food security and the food insecurity experience scale (FIES): ensuring progress by 2030. Food Sec 2019;11:483–91. 10.1007/s12571-019-00936-9 [Google Scholar]

Food choice

The Food Choice Questionnaire (FCQ) has 36 questions about different food qualities that influence people's food choices, focusing on both personal experiences and outside factors.[10]

Anthropometric status

Using standardised procedures, anthropometric measurements, including weight and height/length, will be taken for all survey respondents.[11,12,13] Anthropometric indices (weight-for-height z-scores, length/height-for-age z-scores, weight-for-age z-scores, BMI-for-age z-scores and BMI) will be calculated using the WHO 2006 child growth standards and the WHO 2007 child growth reference data.

- Means and SDs will be calculated for all indices.
- Prevalences will also be calculated: stunting (length/height-for-age z-scores below −2 SD), wasting (weight-for-height z-scores below −2 SD), underweight (weight-for-age z-scores below −2 SD), thinness (BMI-for-age z-scores below −2 SD) and BMI (underweight: < 18.5; overweight: 25 to 29.9; obesity: > 30).

In addition to these outcome indicators, information on the sociodemographic characteristic of households and respondents, including household size, annual average income of the household, physical distance to (un)healthy foods, education status, self-reported health of adults, knowledge of (un)healthy foods, existence of chronic diseases and dietary changes because of these diseases, alcohol and smoking habits will also be collected using the structured questionnaire.

Data quality assurance

A workshop will be held for both supervisors and enumerators (team) on all components of the survey directly before data collection starts. Potential supervisors will receive additional training on teamwork and on monitoring and supervising the data collection process. The enumerators' measurements will be standardised to ensure that the interobserver variability is within tolerable limits and monitored closely by the supervisors.

The training of the team will take approximately 7 days and will include training on methodological procedures, questionnaires and quality assurance. Training on the use of mobile data collection and data generation will be given by the Agency for Strategic Reform (ASR). The survey will be piloted first in Tashkent city and adapted based on the received feedback from the survey team.

The questionnaires have been translated into Uzbek and Russian and back-translated to English to ensure the quality of the translation.

All data collection tools will be created using the Telegram Bot by the ASR. Telegram Bot is an interface of the application. The data collection is developed and modified in Python. Data quality checks will be included during the programming phase to prevent recording errors. These checks will involve limiting response options, using filter choices, implementing skip patterns, and setting default answers. Each day, during data collection and at the end of the day, data can be downloaded and

[10] https://www.ucl.ac.uk/epidemiology-health-care/sites/epidemiology-health-care/files/FCQ_scoring.pdf

[11] World Health Organization & United Nations Children's Fund (UNICEF) . Recommendations for data collection, analysis and reporting on anthropometric indicators in children under 5 years old. 2019. [Google Scholar]

[12] https://www.who.int/tools/growth-reference-data-for-5to19-years

[13] https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/body-mass-index?introPage=intro_3.html

monitored for errors and the current status of the enumerators can be checked for each part of the survey and to avoid any missing data. High-frequency checks will be identified before the surveys begin, to monitor data quality. These checks will cover completeness, tracking the target group, and checking for duplicate identification (IDs). Random visits to the field will also be conducted to assess data quality by the supervisors.

Ethical approval and informed consent

The study protocol along with other documents will be sent to the Ethical Committee of the Ministry of Health. Written informed consent will be obtained from each respondent and participants may withdraw at any time. Confidentiality of all collected data will be given high priority during each stage of data handling. Individual names and personal information of respondents will be kept confidential and data sets will be kept anonymous for analysis.

Data Management

The collected data will be sent to the ASR central server and imported into statistical software as comma-separated values files, after completing each survey sample.

The primary data analysis will focus on computing frequencies and percentages for categorical variables and summary statistics (e.g., means, medians SD, IQR) for summarising continuous variables. Sample weights will be constructed based on the selection probabilities of districts, eligible households and non-response rates. All analyses will also be adjusted for the survey design, e.g., to account for clustering. National estimates will be calculated using weighting procedures if necessary. The NRF will support the MoH/MoA on data analysis if required.

Additional subgroup analysis will be computed for variables with adequate sample sizes for each category.

The DQQ Indicator will be used to analyse the diet quality data.[14] The Rasch model will be used to construct the FIES.[15] The FCQ will be analysed using the FCQ scoring key.[16] UNICEF will provide the syntaxes for analysis of the IYCF data. Anthropometric indices will be calculated using the WHO Anthro software for children under 5 years of age and WHO AnthroPlus software for adolescents.[17] BMI for adults will be calculated in Stata.

All analyses will be done using Python, Stata or SPSS.

Timeline

The timeline for the survey runs from the second/third week in October until the first week in December (Annex 1).

Budget

To be added

[14] https://www.dietquality.org/calculator

[15] Saint Ville A, Po JYT, Sen A, et al. Food security and the food insecurity experience scale (FIES): ensuring progress by 2030. Food Sec 2019; 11:483–91. 10.1007/s12571-019-00936-9 [Google Scholar]

[16] https://www.ucl.ac.uk/epidemiology-health-care/sites/epidemiology-health-care/files/FCQ_scoring.pdf

[17] https://www.who.int/tools/child-growth-standards/software

Annex 1 – Proposed survey calendar

Study Title: Uzbekistan nutrition and diet information systems (PHASE III)

	Phases and Activities		Sep-24				Oct-24				Nov-24				Dec-24				Jan-25				Feb-25			
	Week ---->	Who	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	**Discernment, readiness and engagement**																									
1.1	Protocol devlopment (and translation into Uzbek)	JNKE/SNKE																								
1.2	Follow-up signing of the Joint Ministerial Order (signed order)	JNKE																								
1.3	Ethical approval submission	JNKE																								
1.4	Liaise with UNICEF on protocol and their specific activities and funding	JNKE/SNKE																								
1.5	Training materials developed (and translated into Uzbek)	SNKE					D1																			
1.6	Liaise with Agency for Strategic Reforms for mobile data entry (and checking)	JNKE																								
1.7	Review further funding sources (MoA)	JNKE																								
1.8	Engagement of translator for pilot training (*depends on when ethical approval is gained)	SNKE																								
1.9	Checking to make sure everything is	JNKE																								
2	**Construction, implementation and monitoring and adjustment**																									
2.1	Training (*depends on when ethical approval is gained)	JNKE/SNKE																								
2.2	Preliminary field work and feed back	JWG/JNKE/SNKE																								
2.3	Survey (national representative pilot)	JWG/JNKE																								
2.4	Quality checks on data (checking with supervisors and electronic data)	JWG/JNKE/SNKE																								
3	**Reporting**																									
3.1	Analysis	JWG/JNKE/SNKE																								
3.2	Feedback with enumerators	JWG/JNKE/SNKE																								
3.3	Initial interpretation	JWG/JNKE/SNKE																								
3.4	Final analysis	JWG/JNKE/SNKE																								
4	**Reporting**																									
4.1	All final reports and meeting/consultation reports	JNKE/SNKE																						D2		

Annex 2 - Nutrition Survey Questionnaire

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Informed consent and confidentiality of interviews

Adults/adolescents 15+

Good morning/afternoon, Mr/Mrs/Ms _____. We are from [insert the name of your organisation].

You are being invited to participate in a survey that aims to examine the dietary intakes and nutritional status of adults in Uzbekistan. Ultimately we want to understand more about the types of food people are eating in and why people choose to eat the foods that they do.

Your participation is entirely voluntary, and you may choose not to participate or withdraw at any time without any consequences.

If you agree to participate, you will be asked to:

- Provide information about the household you live in, your dietary intake, experience of food insecurity, food choices and health and nutritional status through a questionnaire.
- Allow measurements of your infant's height and weight.

The study will take approximately 30 minutes to complete.

There are minimal risks associated with participating in this study.

Your responses will be kept confidential and will only be used for research purposes. Data will be stored securely and will not be shared with anyone outside of the research team. All identifying information will be removed from the data to protect your privacy.

If you have any questions about this study or your rights as a participant, please contact [insert contact information for the researcher or an ethics board].

By signing below, you indicate that you have read and understood the information provided above, and you agree to participate in this study. You will receive a copy of this consent form for your records.

Do you have any question before we start? (Answer questions).

Participant Name (Print): _____

Participant Signature: _____

Date: _____

Enumerator Signature: _____

For parents/caregivers of infants 6-23 months

Good morning/afternoon, Mr/Mrs _____. We are from [insert the name of your organisation].

You are being invited to participate in a survey that aims to examine the dietary intakes and nutritional status of infants aged 6-23 months. Your participation is entirely voluntary, and you may choose not to participate or withdraw at any time without any consequences.

If you agree to participate, you will be asked to:

- Provide information about your infant's dietary intake, feeding practices and nutritional status through a questionnaire.
- Allow measurements of your infant's height and weight.

The study will take approximately 30 minutes to complete.

There are minimal risks associated with participating in this study.

Your responses will be kept confidential and will only be used for research purposes. Data will be stored securely and will not be shared with anyone outside of the research team. All identifying information will be removed from the data to protect your privacy.

If you have any questions about this study or your rights as a participant, please contact [insert contact information for the researcher or an ethics board].

By signing below, you indicate that you have read and understood the information provided above, and you agree to participate in this study. You will receive a copy of this consent form for your records.

Do you have any question before we start? (Answer questions).

Participant Name (Print): _____

Participant Signature: _____

Date: _____

Enumerator Signature: _____

Annex 3 - Questionnaire

SECTION 1: Identifying information

1.	Region (OBSERVE)	[REGION]
	01 - Tashkent city 02 - Tashkent region 03 - Andijan region 04 – Fergana region 05 – Namangan region 06 – Syrdarya region 07 – Navoi region 08 – Samarkand region 09 - Bukhara region 10 – Khorezm region 11 – Surkhandarya region 12 – Jizzakh region 13 – Kashkadarya region 14 - Republic of Karakalpakstan	
2.	Mahalla ID (OBSERVE) ☐☐☐☐☐	[PLACEID]
	Mahalla name _____ ___	
3.	Household ID (OBSERVE) ☐☐	[HHID]
4.	Residence (OBSERVE)	[RESIDE]
	01. Urban 02. Rural	
	DATA HANDLERS	
5.	Supervisor code: ☐☐☐	[SUPCODE]
	Supervisor signature:	
6.	Enumerator code: ☐☐☐	[ENUCODE]
	Enumerator signature:	
7.	Date of data entry: D D M M Y Y	[DEDATE]

Important: Does the household have a child/ren aged 6-23 months? If yes, and if agreed, then fill all sections with the mother or primary caregiver.

SECTION 2: Sociodemographic characteristics (Household and Respondent)

A household is defined as a single person or group of people who regularly reside together in the same accommodation and who share the same catering arrangements. The household members defined in this fashion are not necessarily related by blood or by marriage. Thus, resident domestic servants and boarders (i.e. persons paying to share the household accommodation and meals), are included. Any other individual or group of people living in the same dwelling constitute a separate household or households if they have separate catering arrangements.

This section to be filled by head of household (or relevant other)

	Household*				
1	Ages (Permanent residents (current))		Female	Male	Total
	< 6 months		[____]	[____]	[TOTCH]
	6-23 months	If yes fill out for mother/caregiver and all sections	[____]	[____]	
	24 - 59 months		[____]	[____]	
	6-10 years		[____]	[____]	[TOTADOL]
	10-19 years		[____]	[____]	
	20-49 years		[____]	[____]	[TOTADUL]
	50-55 years		[____]	[____]	
	55 – 70 years		[____]	[____]	
	70+ years		[____]	[____]	
1a	Household size		[____] [TOTFHH]	[____] [TOTMHH]	[____] [TOTHH]
2	Average annual household income		Categories here • ≤ 6,000 01 More than 6, 000 ≤ 12,000 02 More than 12,000 ≤ 18,000 03 More than 18,000 ≤ 24,000 04 More than 24,000 99 Do not know	Category of family status 01 Underprivileged 02 Medium level 03 Low to medium 04 Medium to high 05 At a high level	[HHINC] [HHSES]

3	Percentage of income spent on food	01 <10% 02 10-19% 03 20-29% 04 30-39% 05 40-49% 06 50-59% 07 >60%	[HHFOOD]
4	Distance to nearest shop/supermarket/market (by usual mode of transport)	01 < 5 mins 02 5-10 mins 03 10-20 mins 04 20-30 mins 05 >30 mins	[DISTSHOP]
5.	Perceived food availability in the community. Are the following foods or drinks sold in stores you can get to WITHIN 5 MINUTES FROM YOUR HOME, using your usual mode of transportation (e.g. walk, drive, or public transit)?	00 [not available to buy] 01 [available to buy] 99 [don't know]	
Vegetables		[____]	[FOODAVAIL1]
Fruits		[____]	[FOODAVAIL2]
Clean water		[____]	[FOODAVAIL3]
Sweetened beverages		[____]	[FOODAVAIL4]
Fast food from outlet		[____]	[FOODAVAIL5]
Ultra processed foods e.g.,		[____]	[FOODAVAIL6]
Healthy snacks e.g.,		[____]	[FOODAVAIL7]

This section to be filled by randomly selected respondents

Respondent

1	Name and code	What is your name? *Write here for referral purposes only – remind the respondent that this information will not be shared further.*	
2	Sex	01. Female; 02. Male [____]	[RESPSEX]
3	Age	What is your age? (i*n completed years*) [____]	[RESPAGE]
4	Mother tongue	01. Uzbek 02. Russian 03. Karakalpak [____] 04. Tajik	[RESPETH]

		05. Kazakh 06. Other language	
5	Educational level	01. No education 02. Primary [____] 03. Secondary 04. Secondary – specialised vocational 05. Higher * Note: *Education categories refer to the highest level of education attended, whether or not that level was completed.*	[RESPED]
6	On a scale of 1 to 10, with 10 being excellent health, how would you rate your current health	[____]	[RESHEALTH]
7	Do you have any existing medical conditions?	01 Yes; 02 No; 99 Refused [____] If no or 99 skip to question 9	[RESMED]
8	Do you require a special diet because of your medical condition?	01 Yes; 02 No; 99 Refused [____]	[RESPCHRDIET]
9	Do you take dietary supplements?	01 Yes; 02 No [____]	[RESPSUPP]
10	In your opinion, what foods make up a healthy diet? *Please list your top three*	01 Starchy staple foods 01 [ ] 02 [ ] 03 [ ] 02 Pulses nuts or seeds 03 Vegetables 04 Grains 05 Fruits 06 Dairy 07 Eggs 08 Meat or poultry 09 Fish	[RESPHEA1] [RESPHEA2] [RESPHEA3]
11	Weight Kg Record 999 if refused	[____ . ___]	[RESPWT]
12	Height cm Record 999 if refused	[_____ . ___]	[RESPHT]

13	Do you smoke?	01 Yes; 02 No; 99 Refused [____] If no or 99 skip to question 15	[RESPSMO]
14	How many cigarettes do you smoke per day?	Number of cigarettes [_____]	[RESPSMONUM]
15	Do you drink alcohol?	01 Yes; 02 No; 99 Refused [____] If no or 99 skip to next section	[RESPALC]
16	How much alcohol do you drink in a week (on average)?	Number of drinks [_____]	[RESPALCNUM]

SECTION 3: Diet Quality (DQQ)

This section to be filled by all respondents. Those aged between 6 and 10 years can be helped by the mother or primary caregiver.

UZBEKISTAN

Read: 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 to yourself 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 drinks, and if you ate or drank ANY ONE OF THEM, say yes.

	Yesterday, did you eat any of the following foods:	(circle answer)
1	Non, patir, rice , macaroni, noodles, wheat porridge, or any porridge with rice?	YES or NO
2	Black bread, maize, buckwheat, pearl barley, or oatmeal?	YES or NO
3	Potato or turni p?	YES or NO
4	Peas, beans, m ung beans, chickpeas or lentils?	YES or NO
	Yesterday, did you eat any of the following vegetables:	
5	Carrots, pump in or red Bulgarian pepper?	YES or NO
6.1	Spinach, arugula, jusay, tok bagri, or green samsa?	YES or NO
7.1	Tomatoes, cuc umber, cabbage, green Bulgarian pepper, or eggplant?	YES or NO
7.2	Zucchini, beet, mushrooms, radish, cauliflower, or lettuce?	YES or NO
	Yesterday, did you eat any of the following fruits:	
8	Apricots, dried apricots, or persimmon?	YES or NO
9	Orange or mandarins?	YES or NO
10.1	Apple, pear, quince, banana, watermelon, melon, peaches or plums?	YES or NO
10.2	Pomegranate, grapes, figs, cherries, mulberries, or other berries?	YES or NO
	Yesterday, did you eat any of the following sweets:	
11	Cakes, cookies wafers, pastries, sweet rolls, chak chak, or priyaniki?	YES or NO
12	Candy, marmelade candy, chocolates, caramels, ice cream, or halva?	YES or NO
	Yesterday, did you eat any of the following foods of animal origin:	
13	Eggs?	YES or NO
14	Tvorog or chee se?	YES or NO
15	Yogurt, suzma, qatiq, Kefir, ayran, or ryazhenka?	YES or NO
16	Cold cuts, sasiski, tushonka, or sardelki?	YES or NO
17	Beef or lamb?	YES or NO
18	Horse, rabbit o r pork?	YES or NO
19	Chicken or tur ey?	YES or NO
20	Fish, salted fish, smoked fish, canned fish or crabsticks?	YES or NO
	Yesterday, did you eat any of the following other foods:	
21	Sunflower or p umpkin seeds, peanuts, walnuts, almonds or pistachios?	YES or NO
22	Chips such as L ays, Cheers, or Kirieshki?	YES or NO
23	Instant noodle s such as Rolton or Doshirak?	YES or NO
24	French fries, fr ed piroshki, gumma, chebureki, boortsogi, belyashi, or fried chicken wings?	YES or NO
	Yesterday, did you have any of the following beverages:	
25	Milk or powde ed milk?	YES or NO

26	Tea with sugar or navat, coffee with sugar or navat, or cocoa?	YES or NO
27	Fruit juice, frui t drinks, kampot, mors, or iced tea such as Ays Tea or Lipton?	YES or NO
28	Sweet carbona ted drinks such as Coca-Cola, Fanta, or Sprite, lemonade, or energy drinks?	YES or NO
	Yesterday, did you get food from any place like...	
29	KFC or places t hat serve burgers, doner kebab or lavash?	YES or NO

Adapted by the Global Diet Quality Project, www.dietquality.org. 2021.
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INSTRUCTIONS:

1) Read the DQQ exactly as written. Do not include additional dialogue or probing questions. Do not add or remove food items. It is important for the integrity of the questionnaire and comparability of results to not modify the DQQ. Further instructions on how to use the DQQ can be found at our website, www.dietquality.org

2) If you desire to collect information on additional food items, or to add supplementary questions, these additional questions can be placed at the end of the questionnaire.

3) The Global Diet Quality Project has undertaken a systematic process to identify food items for each food group. If you would like to suggest changes to the DQQ, please contact the team using the "Contact Us" button on our website.

1a. How often in the past week have you eaten fast food (e.g., Smash burger, KFC) prepared outside the house?	0 [none]; 1 [once or twice]; 2 [three or four times]; 3 [>5 times]
1b. How often in the past month have you eaten fast food (e.g., Smash burger, KFC) prepared outside the house?	0 [not]; 1 [rarely]; 2 [occasionally]; 3 [often]
2. What is the main method you use to prepare food?	1 [Fried]; 2 [boiled]; 3 [baked]; 4 [steamed]; 5 [fermented/pickled]; 6 [raw]

SECTION 4: Food insecurity experience scale

Adults 20+

	Standard label	Question wording
1	WORRIED	During the last 12 MONTHS, was there a time when You were worried you would not have enough food to eat because of a lack of money or other resources?
2	HEALTHY	Still thinking about the last 12 MONTHS, was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources?
3	FEWFOODS	Was there a time when you ate only a few kinds of foods because of a lack of money or other resources?
4	SKIPPED	Was there a time when you had to skip a meal because there was not enough money or other resources to get food?
5	ATELESS	Still thinking about the last 12 MONTHS, was there a time when you ate less than you thought you should because of a lack of money or other resources?
6	RANOUT	Was there a time when your household ran out of food because of a lack of money or other resources?
7	HUNGRY	Was there a time when you were hungry but did not eat because there was not enough money or other resources for food?
8	WHOLEDAY	During the last 12 MONTHS, was there a time when you went without eating for a whole day because of a lack of money or other resources?

SECTION 5: Food choices

	It is important to me that the food I eat on a typical day:	1 [Not important at all]	2 [A little important]	3 [Moderately important]	4 [Very important]	Code
1	…is easy to prepare					C
2	…contains no additives					N
3	…is low in calories					W
4	…tastes good					S
5	…contains natural ingredients					N
6	…is not expensive					P
7	…is low in fat					W
8	…is familiar to me					F
9	…is high in fibre and roughage					H
10	…is nutritious					H
11	…is easily available in shops and supermarkets					C
12	…is good value for money					P
13	…cheers me up					M
14	…smells nice					S
15	…can be cooked very simply					C
16	…helps me cope with stress					M
17	…helps me control my weight					W
18	…has a pleasant texture					S
19	…is packaged in an environmentally friendly way					E
20	…comes from countries I approve of politically					E
21	…is like the food I ate when I was a child					F
22	…contains lots of vitamins and minerals					H
23	…contains no artificial ingredients					N
24	…keeps me awake and alert					M
25	…looks nice					S

Mood = item mean M
Convenience = item mean C
Sensory Appeal = item mean S
Natural Content = item mean N
Price = item mean P
Weight Control = item mean W
Familiarity = item mean F
Ethical Concern = item mean E

SECTION 6: For children aged 6-23 months

Select all children aged between 6-23 months within the same household

	Infant/young children 6-23 months		
1	Child 1 name Child 2 name	What is your child's name? _____ What is your child's name? _____	
2	Child 1 sex Child 2 sex	Is (the name of the child) 1. Female; 2. Male Is (the name of the child) 1. Female; 2. Male	[CHSEX1] [CHSEX2]
3	Child1 age	When is your child's birthday? Does he/she have a health/vaccination card with the birth date recorded? If yes, record the date of birth as documented in the card	_ _ _ _/ _ _/ _ _ year month day
4		How old was (name of the child) at his/her last birthday? Record age in completed years and/or months	[CHAGEYR1] [CHAGEMO1]
5	Child2 age	When is your child's birthday? Does he/she have a health/vaccination card with the birth date recorded? If yes, record the date of birth as documented in the card	_ _ _ _/ _ _/ _ _ year month day
6		How old was (name of the child) at his/her last birthday? Record age in completed years and/or months	[CHAGEYR2] [CHAGEMO2]
7	Weight Kg Record 999 if refused	Child 1 [____ . ___] Child 2 [____ . ___]	[CHWT1] [CHWT2]
8	Height cm Record 999 if refused	Child 1 [_____ . ___] Child 2 [_____ . ___]	[CHHT1] [CHHT2]

Fill out the following for EACH eligible child separately (see to end)

IYCF: INITIAL BREASTFEEDING		MN
MN1. Check CM17: Was there a live birth in the last 2 years? Copy name of last birth listed in the birth history (CM18) to here and use where indicated: Name_____	YES, CM17=1 ..... 1 NO, CM17=0 OR BLANK 2	2ðEnd
MN36. Was (name) ever breastfed?	YES ..... 1 NO 2	2ðEnd
MN37. How long after birth was (name) first put to the breast? If less than 1 hour, record '00' hours. If less than 24 hours, record hours. Otherwise, record days.	IMMEDIATELY ..... 000 HOURS ..... 1 __ __ DAYS ..... 2 __ __ DK / DON'T REMEMBER 998	
MN38. In the first two days after delivery, was (name) given anything at all other than breast milk to eat or drink, such as water, infant formula, or insert common drinks and foods, including ritual feeds that may be given to newborn infants?	YES, SOMETHING OTHER THAN BREAST MILK ..... 1 NO, ONLY BREAST MILK 2	

IYCF: BREASTFEEDING AND DIETARY INTAKE		BD
BD1. Check UB2: Child's age?	AGE 0 OR 1.....1 AGE 2, 3, OR 4.....2	 2ðEnd
BD2. Has (name) ever been breastfed?	YES.....1 NO .....2 DK 8	 2ðBD4 8ðBD4
BD3. Yesterday, during the day or at night, was (name) breastfed?	YES.....1 NO .....2 DK 8	
BD4. Yesterday, during the day or at night, did (name) drink anything from a bottle with a nipple?	YES.....1 NO .....2 DK 8	
BD5. Yesterday, during the day or at night, did (name) drink Oral Rehydration Salt solution (ORS)?	YES.....1 NO .....2 DK 8	
BD6. Yesterday, during the day or at night, did (name) drink or eat vitamin or mineral supplements or any medicines?	YES.....1 NO .....2 DK 8	

BD7. Now I would like to ask you about all other liquids that (name) may have had yesterday during the day or at night. Please tell me about all drinks, whether (name) had them at home, or somewhere else. Yesterday, during the day or at night, did (name) drink (name of item):		YES	NO	DK
[A] Plain water?	PLAIN WATER	1	2	8
[B] Infant formula, such as insert local names of common brands?	INFANT FORMULA	1	2Ø BD7[C]	8Ø BD7[C]
[B1] How many times did (name) drink formula? If 7 or more times, record '7'.	NUMBER OF TIMES DRANK FORMULA .....__ DK 8			
[C] Milk from animals, such as fresh, tinned, or powdered milk?	MILK	1	2Ø BD7[D]	8Ø BD7[D]
[C1] How many times did (name) drink milk? If 7 or more times, record '7'.	NUMBER OF TIMES DRANK MILK.....__ DK 8			
[C2] (Was the milk/Were any of the milk drinks) a sweet or flavoured type of milk?	SWEET MILK	1	2	8
[D] Yogurt drinks such as insert local names of common types of yogurt drinks?	YOGURT DRINKS	1	2Ø BD7[E]	8Ø BD7[E]
[D1] How many times did (name) drink yogurt drinks? If 7 or more times, record '7'.	NUMBER OF TIMES DRANK YOGURT .....__ DK 8			
[D2] (Was the yogurt drink/Were any of the yogurt drinks) a sweet or flavoured type of yogurt drink?	SWEET YOGURT DRINKS	1	2	8
[E] Chocolate-flavoured drinks including those made from syrups or powders?	CHOCOLATE DRINKS	1	2	8
[F] Fruit juice or fruit-flavoured drinks including those made from syrups or powders?	FRUIT JUICE, JUICE DRINKS	1	2	8
[G] Sodas, malt drinks, sports drinks, or energy drinks?	SODA, MALT, SPORTS, ENERGY DRINKS	1	2	8
[H] Tea, coffee, or herbal drinks?	TEA, COFFEE, HERBAL DRINKS	1	2Ø BD7[I]	8Ø BD7[I]
[H1] (Was the drink/Were any of these drinks) sweetened?	SWEET TEA, COFFEE, HERBAL DRINKS	1	2	8
[I] Clear broth or clear soup?	CLEAR BROTH	1	2	8

[X] Any other liquids?	OTHER LIQUIDS	1	2Ø BD8	8Ø BD8	
[X1] Record all other liquids mentioned. Recode if possible.	(Specify) _____				
[X2] (Was the drink/Were any of these drinks) sweetened?	SWEET OTHER LIQUIDS	1	2	8	

BD8. Now I would like to ask you about everything that (name) ate yesterday during the day or at night.
I am interested in all foods (name) ate whether at home or somewhere else.
Think about when (name) woke up yesterday. Did (he/she) eat anything at that time?
If 'Yes', ask: Please tell me everything (name) ate at that time. Probe: Anything else?
Record answers using the food groups below.
What did (name) do after that? Did (he/she) eat anything at that time?
Repeat and record with these questions, until reaching when the child woke up this morning.
For any mixed dish, including those commercially packaged, probe: What were the main ingredients in (mixed dish)? Record main ingredients in appropriate food groups.

For each food group not mentioned after completing the above ask: Just to make sure, did (name) eat (food group items) yesterday during the day or at night?		YES	NO	DK
[A] Yogurt, other than yogurt drinks? Note that liquid/drinking yogurt should be captured in BD7[D].	YOGURT	1	2Ø BD8[B]	8Ø BD8[B]
[A1] How many times did (name) eat yogurt? If 7 or more times, record '7'.	NUMBER OF TIMES ATE YOGURT .....__ DK 8			
[B] Porridge, bread, rice, noodles, pasta, or insert other commonly consumed grains and foods made from grains?	FOODS MADE FROM GRAINS	1	2	8
[C] Pumpkin, carrots, sweet red peppers, squash, or sweet potatoes that are yellow or orange inside?	PUMPKIN, CARROTS, SQUASH, ETC.	1	2	8
[D] Plantains, white potatoes, white yams, manioc, cassava, or insert other commonly consumed starchy tubers or starchy tuberous roots that are white or pale inside?	FOODS MADE FROM ROOTS	1	2	8
[E] Dark green, leafy vegetables, such as insert commonly consumed vitamin A-rich dark green leafy vegetables?	DARK GREEN, LEAFY VEGETABLES	1	2	8
[F] Any other vegetables, such as insert commonly consumed vegetables?	OTHER VEGETABLES	1	2	8
[G] Ripe mangoes, ripe papayas, or insert commonly consumed vitamin A-rich fruits?	RIPE MANGO, RIPE PAPAYA	1	2	8
[H] Any other fruits such as insert commonly consumed fruits?	OTHER FRUITS	1	2	8
[I] Liver, kidney, heart, or insert other commonly consumed organ meats?	ORGAN MEATS	1	2	8

[J] Sausages, hot dogs, ham, bacon, salami, canned meat, or insert other commonly consumed processed meats?	PROCESSED MEATS	1	2	8	
[K] Any other meat, such as beef, pork, lamb, goat, chicken, duck, or insert other commonly consumed meat?	OTHER MEATS	1	2	8	
[L] Eggs?	EGGS	1	2	8	
[M] Fresh fish, dried fish, or shellfish?	FRESH OR DRIED FISH	1	2	8	
[N] Beans, peas, lentils, nuts, seeds, or insert commonly consumed foods made from these?	FOODS MADE FROM BEANS, PEAS, NUTS, ETC.	1	2	8	
[O] Hard or soft cheese such as insert commonly consumed types of cheese?	CHEESE	1	2	8	
[P] Sweet foods such as chocolates, candies, pastries, cakes, biscuits, or frozen treats like ice cream and popsicles, or insert other commonly consumed sentinel sweet foods?	SWEET FOODS	1	2	8	
[Q] Chips, crisps, puffs, French fries, fried dough, instant noodles, or insert other commonly consumed sentinel fried and salty foods?	SALTY FOODS	1	2	8	
[X] Other solid, semi-solid, or soft food?	OTHER SOLID, SEMI-SOLID, OR SOFT FOOD	1	2Ø BD9	8Ø BD9	
[X1] Record all other foods mentioned. Recode if possible.	(specify)_____				
BD9. Yesterday during the day or at night, how many times did (name) eat any solid, semi-solid, or soft foods? If BD8[A] is 'Yes', ensure that the response here includes the number of times recorded for yogurt in BD8[A1]. If 7 or more times, record '7'.	NUMBER OF TIMES..... __ DK 8				