Supplementary File 1

English Version of the Questionnaire

Note to the editor and reviewers

This questionnaire was originally designed for a cohort study on maternal iodine nutrition (Shanghai Fourth Round of Public Health Three-Year Action Plan, 2017). In our study on vitamin A, HDP, and GDM, the core exposure and outcomes were extracted directly from hospital records. This questionnaire was used only for covariate collection. An English version is provided here as requested.

1 Part I: Personal Basic Information

Demographics

Demographics	
B1	Date of birth: _____ year _____ month _____ day
B2	ID number / Passport number: _____
B3	Ethnicity: 1 = Han 99 = Other
B4	Education level: 10 = Postgraduate, 20 = Bachelor, 30 = Associate, 40 = Vocational, 60 = High school, 70 = Middle school, 80 = Primary school, 91 = No schooling, 92 = Illiterate
B5	Years of education: _____ years
B6	Occupation: 00 = Official/manager, 01 = Professional, 03 = Clerk, 04 = Service, 05 = Agriculture, 06 = Operator, XX = Military, YY = Other, Z1 = Student, Z2 = Homemaker, Z3 = Unemployed, Z4 = Retired
B7	Marital status: 1 = Never married, 2 = Married/cohabiting, 3 = Divorced/separated, 4 = Widowed
B8	Current household size (including yourself): _____ persons
B9	Annual household income (2016, RMB): 1 = <29k, 2 = 29–49k, 3 = 50–99k, 4 = 100–149k, 5 = 150–199k, 6 = 200–249k, 7 = 250–349k, 8 = 350–399k, 9 = >= 400k
B10	Mother's age at your birth: 1 = <18, 2 = 18–24.9, 3 = 25–29.9, 4 = 30–34.9, 5 = >=35, 6 = Unknown
B11	Place of birth: 01 = Shanghai, 99 = Other province/municipality
B12	Duration of continuous residence in Shanghai: 1 = <1 year, 2 = 1–4.9 years, 3 = 5–9.9 years, 4 = >=10 years

Smoking

Smoking	
B13	Have you ever smoked? (1 = Yes, 0 = No)
B14	Do you currently smoke? (1 = Yes, 0 = No)
B15	Days per week exposed to secondhand smoke: 1 = Daily, 2 = 4–6 days/week, 3 = 1–3 days/week, 4 = <1 day/week, 5 = None

Alcohol consumption (non-pregnancy)

Alcohol (non-pregnancy)	
B16	Do you usually drink alcohol (non-pregnancy, excluding a few sips)? (1 = Yes, 0 = No)
B17	How often? 1 = Once a month or less, 2 = 2–4 times/month, 3 = 2–3 times/week, 4 = >=4 times/week

B18	Amount per drinking day (standard drinks): 1 = <1, 2 = 1, 3 = 2, 4 = 3, 5 = 4, 6 = 5, 7 = >=6

Alcohol consumption during pregnancy

Alcohol (during pregnancy)	
B19	Did you drink alcohol during pregnancy? (1 = Yes, 0 = No)
B20	How often during pregnancy? (same options as B17)
B21	Amount per drinking day during pregnancy (same options as B18)

2 Part II: Physical Activity

Work, agriculture, and household activities

Vigorous and moderate activities (work/agriculture/household)	
B1	Any **vigorous-intensity** activity lasting >=10 minutes? (1 = Yes, 0 = No)
B2	Days per week: _____ days
B3	Time per day: _____ hours _____ minutes
B4	Days per week of vigorous household chores: _____ days
B5	Time per day of vigorous household chores: _____ hours _____ minutes
B6	Any **moderate-intensity** activity lasting >=10 minutes? (1 = Yes, 0 = No)
B7	Days per week of moderate activity: _____ days
B8	Time per day of moderate activity: _____ hours _____ minutes
B9	Days per week of moderate household chores: _____ days
B10	Time per day of moderate household chores: _____ hours _____ minutes

Transport-related physical activity

Walking/cycling for transportation	
B11	Walk or cycle for >=10 minutes during outings? (1 = Yes, 0 = No)
B12	Days per week: _____ days
B13	Time per day: _____ hours _____ minutes

Leisure-time exercise

Leisure-time physical activity	
B14	Any **vigorous** leisure activity (e.g., running, swimming) lasting >=10 minutes? (1 = Yes, 0 = No)
B15	Days per week of vigorous leisure activity: _____ days
B16	Time per day of vigorous leisure activity: _____ hours _____ minutes
B17	Any **moderate** leisure activity (e.g., brisk walking, yoga) lasting >=10 minutes? (1 = Yes, 0 = No)
B18	Days per week of moderate leisure activity: _____ days
B19	Time per day of moderate leisure activity: _____ hours _____ minutes
B20	In the past week, days of walking during leisure (>=10 min): _____ days
B21	Usual walking time per day during leisure: _____ hours _____ minutes

Sedentary and sleep behavior

Sedentary behavior and sleep	
B22	Daily sitting/lying time (excluding sleep): _____ hours _____ minutes
B23	Sitting time during work/study: _____ hours _____ minutes
B24	Daily sleep duration: _____ hours _____ minutes

3 Part III: Female Reproductive and Fertility History

Reproductive history	
C1a	Age at first menstruation (menarche): _____ years
C1b	Menstrual cycle length: _____ days
C1c	Menstrual cycle regularity: 1 = Always regular, 2 = Usually regular, 3 = Usually irregular
C2a	Unprotected intercourse >1 year without pregnancy? (1 = Yes, 0 = No)
C2b	Ever had pregnancy loss due to preterm delivery or fetal demise? (1 = Yes, 0 = No)
C3	Total number of pregnancies (including current): _____
C3a	Number of live births: _____
C3b	Any twin/multiple pregnancies: _____ times, _____ children
C3c	Any preterm birth (<37 weeks)? (1 = Yes, 0 = No)
C3d	Any low birth weight (<2500 g)? (1 = Yes, 0 = No)
C4	Weight gain during last pregnancy: _____ kg (for _____ fetus/fetuses)
C5a	Previous pregnancy: Gestational hypertension? (1 = Yes, 0 = No) Age: _____
C5b	Previous pregnancy: Gestational diabetes? (1 = Yes, 0 = No) Age: _____
C5c	Previous pregnancy: Hypothyroidism or subclinical hypothyroidism? (1 = Yes, 0 = No) Age: _____
C6a	Current pregnancy: Vaginal bleeding? (1 = Yes, 0 = No)
C6b	Current pregnancy: Paroxysmal lower abdominal pain? (1 = Yes, 0 = No)
C6c	Current pregnancy: Threatened abortion? (1 = Yes, 0 = No)
C6d	Current pregnancy: Calf cramps (spasms)? (1 = Yes, 0 = No)
C7a	Current pregnancy: Gestational diabetes diagnosed? (1 = Yes, 0 = No, 9 = Not tested)
C7b	Current pregnancy: Hypertensive disorder diagnosed? (1 = Yes, 0 = No, 9 = Not tested)
C7c	Current pregnancy: Thyroid abnormality diagnosed? (1 = Yes, 0 = No, 9 = Not tested)
C8a	OGTT screening result: 1 = Negative, 2 = Positive, 9 = Not done
C8b	Down syndrome screening result: 1 = Negative, 2 = Positive, 9 = Not done
C8c	Anomaly scan result: 1 = Negative, 2 = Positive, 9 = Not done
C9a	Fetal diagnosis: Placenta previa? (1 = Yes, 2 = No, 9 = Not done)
C9b	Fetal diagnosis: Oligohydramnios? (1 = Yes, 2 = No, 9 = Not done)
C9c	Fetal diagnosis: Malpresentation? (1 = Yes, 2 = No, 9 = Not done)
C9d	Fetal diagnosis: Fetal growth restriction? (1 = Yes, 2 = No, 9 = Not done)

4 Part IV: Current and Past Medical Conditions

Thyroid diseases (physician-diagnosed)

Thyroid diseases	
D1	Any benign thyroid disease? (1 = Yes, 0 = No)
D1a	Goiter (1 = Yes, 0 = No) Age at diagnosis: _____
D1b	Thyroid nodule (1 = Yes, 0 = No) Age: _____
D1c	Thyroid adenoma (1 = Yes, 0 = No) Age: _____
D1d	Hyperthyroidism (1 = Yes, 0 = No) Age: _____
D1e	Hypothyroidism (1 = Yes, 0 = No) Age: _____
D1f	Graves' disease (1 = Yes, 0 = No) Age: _____
D1g	Hashimoto's thyroiditis (1 = Yes, 0 = No) Age: _____
D1h	Other thyroid disease (specify): _____ (1 = Yes, 0 = No) Age: _____
D2	Thyroidectomy performed? (1 = Yes, 0 = No) Age at surgery: _____

Female-specific diseases

Breast and gynecologic diseases	
D3	Any benign breast disease? (1 = Yes, 0 = No)
D3a	Breast fibroadenoma (1 = Yes, 0 = No) Age: _____
D3b	Breast cyst (1 = Yes, 0 = No) Age: _____
D3c	Breast lobular hyperplasia (1 = Yes, 0 = No) Age: _____
D3d	Breast nodule (1 = Yes, 0 = No) Age: _____
D3e	Intraductal papilloma (1 = Yes, 0 = No) Age: _____
D3f	Duct ectasia (1 = Yes, 0 = No) Age: _____
D3g	Other breast disease (specify): _____ (1 = Yes, 0 = No) Age: _____
D4	Any benign gynecologic disease? (1 = Yes, 0 = No)
D4a	Uterine fibroid (1 = Yes, 0 = No) Age: _____
D4b	Ovarian cyst (1 = Yes, 0 = No) Age: _____
D4c	Dysfunctional uterine bleeding (1 = Yes, 0 = No) Age: _____
D4d	Polycystic ovary syndrome (PCOS) (1 = Yes, 0 = No) Age: _____
D4e	Dysmenorrhea (1 = Yes, 0 = No) Age: _____
D4f	Other gynecologic disease (specify): _____ (1 = Yes, 0 = No) Age: _____

Pre-pregnancy medical history

Pre-pregnancy diagnoses	
D5a	Obesity diagnosed before pregnancy? (1 = Yes, 0 = No) Age: _____
D5b	Hypertension diagnosed before pregnancy? (1 = Yes, 0 = No) Age: _____
D5c	Any blood glucose abnormality before pregnancy? (1 = Yes, 0 = No)
D5ca	Type 1 diabetes (1 = Yes, 0 = No) Age: _____
D5cb	Type 2 diabetes (1 = Yes, 0 = No) Age: _____
D5cc	Impaired glucose tolerance (IGT) (1 = Yes, 0 = No) Age: _____
D5cd	Impaired fasting glucose (IFG) (1 = Yes, 0 = No) Age: _____
D5d	Hyperlipidemia before pregnancy? (1 = Yes, 0 = No)
D5da	Hypercholesterolemia (1 = Yes, 0 = No) Age: _____
D5db	Hypertriglyceridemia (1 = Yes, 0 = No) Age: _____
D5dc	Mixed hyperlipidemia (1 = Yes, 0 = No) Age: _____
D5dd	Low HDL cholesterolemia (1 = Yes, 0 = No) Age: _____

5 Part V: Occupational Stress

Response scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree

Occupational stress items		Score
Z1	My job requires quick responses	
Z2	My work responsibilities are very heavy	
Z3	My job demands too much effort	
Z4	My job demands a fast pace without interruption	
Z5	There are often conflicting requirements in my work	
Z6	I have the freedom to decide how to do my work	
Z7	I have the freedom to decide what to do at work	
Z8	My work allows me to learn new things	
Z9	My work requires high-level skills	
Z10	I have the freedom to be creative at work	
Z11	My work is monotonous and repetitive	
Z12	My family supports my work	
Z13	My colleagues support my work	
Z14	I have a good relationship with my colleagues	
Z15	I get along well with my supervisor	
Z16	Our unit/department has strong team spirit	
ZZ1	I always feel there is not enough time because of heavy workload	
ZZ2	I am often interrupted and disturbed at work	
ZZ3	I have a lot of responsibility at work	
ZZ4	I often have to work overtime	
ZZ5	My job has physical demands	
ZZ6	My job demands have been increasing in recent years	
ZZ7	My supervisor does not give me the respect I deserve	
ZZ8	My colleagues do not give me the respect I deserve	
ZZ9	My experience cannot help me continue working in difficult situations	
ZZ10	I am treated unfairly at work	
ZZ11	My promotion prospects are poor	
ZZ12	My job position has undergone unnecessary changes	
ZZ13	The stability of my job is poor	
ZZ14	My current position is not commensurate with my education/training	
ZZ15	I have not received the respect and prestige that match my effort	
ZZ16	My career prospects do not match my effort and achievements	

ZZ17	My income does not match my effort and performance	
ZZ18	Time pressure at work easily breaks me down	
ZZ19	As soon as I wake up, I start thinking about work	
ZZ20	People say I sacrifice too much for my work	
ZZ21	I think about work even in bed and rarely feel completely relaxed	
ZZ22	If I postpone today's tasks, I will have insomnia at night	

6 Part VI: Food and Nutrient Intake

Salt type (current and past)

Salt type	
O4	Current salt type: 1 = Iodized, 2 = Non-iodized, 3 = Mainly iodized, 4 = Mainly non-iodized, 5 = Half/half
O5	Past 0–3 months (same codes)
O6	Past 4–6 months (same codes)
O7	Past 7–12 months (same codes)

Nutritional supplements during pregnancy

Supplement		Taken (1=Yes,0=No)
E1	Folic acid	
E2	Calcium supplement	
E3	Multivitamin	
E4	Other 1 (specify): _____	
E5	Other 2 (specify): _____	
E6	Other 3 (specify): _____	
E7	Other 4 (specify): _____	
E8	Other 5 (specify): _____	
(Frequency and dosage recorded separately in the original form)		

7 Part VII: Physical Examination

Physical measurements	
Y1	Height: _____ . ___ cm
Y2	Weight at enrollment: _____ . ___ kg
Y3	Fundal height (measured: 1 = Yes, 0 = No): _____ . ___ cm
Y4	Abdominal circumference: _____ . ___ cm
Y5	Blood pressure: Systolic _____ mmHg, Diastolic _____ mmHg
Y6	Pre-pregnancy weight: _____ . ___ kg

8 Part VIII: Postpartum Follow-up (0–42 days)

Offspring growth and delivery outcomes

Maternal and neonatal outcomes	
1	Survey date: _____ year _____ month _____ day
2	Gestational age at delivery: _____ weeks _____ days
3	Child's birth date (first child): _____ year _____ month _____ day
4	Child's sex (first child): 1 = Male, 2 = Female
5	Birth length (first child): _____ . ___ cm
6	Birth weight (first child): _____ g
7	Birth head circumference (first child): _____ . ___ cm
8	Apgar score (first child): _____
9	Mode of delivery: 1 = Vaginal, 2 = Assisted (e.g., forceps), 3 = Cesarean
10	Postpartum hemorrhage: 1 = Yes, 2 = No
11	Puerperal infection: 1 = Yes, 2 = No
12	Wound healing: 1 = Good, 2 = Infection
13	Postpartum urinary retention: 1 = Yes, 2 = No
14	Maternal hospital stay: _____ days
15	Maternal weight after delivery: _____ . ___ kg
(For twins, second child data collected similarly)	

EPDS (Edinburgh Postnatal Depression Scale)

Response scale: 0–3 (varies slightly by item; see original)

EPDS items (past 7 days)	
E1	I have been able to laugh and see the funny side of things
E2	I have looked forward with enjoyment to things
E3	I have blamed myself unnecessarily when things went wrong
E4	I have been anxious or worried for no good reason
E5	I have felt scared or panicky for no good reason
E6	Things have been getting on top of me
E7	I have been so unhappy that I have had difficulty sleeping
E8	I have felt sad or miserable
E9	I have been so unhappy that I have been crying
E10	The thought of harming myself has occurred to me

Acknowledgment

The original Chinese version was developed by the Shanghai Municipal Center for Disease Control and Prevention for the project: *Monitoring the Effect of Maternal Iodine Nutrition on the Growth and Development of Offspring* (Shanghai Fourth Round of Public Health Three-Year Action Plan, 2017). This English version is provided as a supplementary file for the manuscript on vitamin A, HDP, and GDM.