Supplementary 1:

Neonatal behavioral neurological assessments (NBNA)

Item	State	Scores		
		0	1	2
1 response to light	sleep	≥11	7 - 10	≤6
2 response to voice	sleep	≥11		≤6
3 scarf sign	awake	surrounding neck	7 - 10	elbow not reaching midline, activity can be repeated
			elbow exceed midline	
4 arm recoil	awake	none		≤3s
5 popliteal angle	awake	> 110°		< 90°
6 lag recoil	awake	None	slowly and weak > 3s	activity can be repeated ≤3s
7 head control	awake		90 - 110°	
		lacking	slowly and weak > 3s	good, keeping head for 1-2s
8 grasp reflex	awake			
9 Moro reflex	awake	none		can be repeated
10 startle reflex	awake	none		raising all body
11 comfort	cry	none	difficult to obtain but present	good , complete
12 static reflex	awake	can't		
		none	weak	easy and freely
13 stepping reflex	awake		raising partial body	support all body powerfully
14 sucking reflex	awake	none	weak , incomplete	good and can persist
		none		good and can swallow synchronically
15 consciousness	awake		difficult	
16 cry	cry	coma	incomplete and transient	normal
17 activity	awake	none	difficult to begin	normal
		lack or too much	weak	
18 voice responsiveness	awake			normal
	quietly	awaken quietly	somnolence	
Non biological auditory orientation reaction			weak、 sharp、 too much	head or eye rotating head or eye rotating
19 reaction to speakers	awake			
	quietly	head or eye don't rotate	decrease or increase slightly	< 60°
Biological visual and auditory orientation reaction			head or eye don't	head or eye rotating

20 reaction to red balls	awake quietly	head or eye don't rotate	rotate **< 60°**	**< 60°**
Non biological visual orientation reaction			head or eye rotating **< 60°**	head or eye rotating **< 60°**
			head or eye rotating **< 60°**	

Statistic scores:

Behavior 1 2 11 18 19 20	
Passive tone 3 4 5 6	
Active tone 7 8 9 12	
Primary reflexes 10 13 14	
General assessment 15 16 17	

Supplementary 2 :

Puerpera Questionaire

Part 1. General situation of puerpera

Name:_____   No.: _____

Date:__/__/__

1. Education (years)

1)1 to 6   2)7 to 9   3) more than 10

2. Where do you live?   Guiyu or other area _____

    How many years have you been here? _____

3. How many months were you in Guiyu during pregnant period?

4. Classification of jobs:

    A. E-waste recycling

A-1. burning board   A-2. plastics   A-3. cutting plastics A-4.

 Dismantling machine A-5. dismantling screw A-6. selecting copper

 piece A-7.selecting electric spare parts A-8. washing plastics A-9.

 transportation

B. Other jobs

B-1. food attendant B-2. transportation B-3. at home B-4. architecture

B-5.farmer B-6. teacher B-7. government staff   B-8. doctor B-9. laid off

You can select the jobs above.

1) Which was your job before or during pregnant period?

2) How many months had you been doing this job?

3) Your husband' job?

4) How many months your husband had been in his job?

5) Were your families living and working in the same place?   Yes / No

5. Do you smoke?   Yes / No

  How long are you smoking (years)?

1) More than 1   2) 1 to 5   3) more than 5

6. Are any other families smoking at home?   Yes / No

7. How many times you drink tea every day?

1) Never   2)1 to 3   3) more than 3

Part 2. Health condition of the mother

8. History during pregnant period

1) Healthy

2) Falling ill about 1 to 3 times

3) Falling ill about 3 to 4 times

4) Falling ill more than 5 times

5) Did you catch cold during pregnant period?   Yes / No

9. How many hours had you been roaming in road during pregnant period?

   1) Half an hour   2) 0.5 to 1   3) 1 to 2   4) more than 2

10. Characteristic of your diet during pregnant period:

1) How many preserved eggs you consumed every week during pregnant period?

2) How much milk you consumed every week during pregnant period?

3) How much bean you consumed every week during pregnant period?

4) Alcohol consumption   Yes/ No

Drinks per day_____

11. How many days were you out of your job during pregnant period?

Part 3. General health of the neonate

12. Height (cm)_____

13. Weight (kg)_____

14. Sex _____

15. Gestational age (week)_____

16. The way of delivery

1) Spontaneous delivery   2) Cesarean delivery

17. Is there any abnormity? Which kind?   Yes/ No

18. Apgar scores_____

19. Parity___(times)   Premature birth__(times)

    Miscarriage___(times)   Fetal death___(times)

Signature_____