







Table S1. List of Questions

Personality Questionnaire					
This survey asks for your views about your personality. This information will be help keep track of your constitution. Answer every question by marking (✓) the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can. ② means the middle status.					
1. Are you broad-minded or delicate?	broad-minded	①	②	③	delicate
2. Do you tend to act quickly or slowly?	quickly	①	②	③	slowly
3. Do you tend be active or passive?	active	①	②	③	passive
4. When expressing your opinion, do you tend to do it straightly or indirectly?	directly	①	②	③	indirectly
5. Do you tend to be extrovert or introvert?	extrovert	①	②	③	introvert
6. Do you tend to be energetic or quiet?	energetic	①	②	③	quiet
7. Is it easy or hard for you to make quick decisions?	easy	①	②	③	hard
8. Do you tend to be masculine or feminine?	masculine	①	②	③	feminine
9. Do you tend to discuss or hide your private life from others?	open	①	②	③	hide
10. Do you tend to express your opinions or keep them inside?	express	①	②	③	keep inside
11. Do you tend to be excited or rational when you deal something?	excited	①	②	③	rational
12. Do you tend to act hastily or carefully?	hastily	①	②	③	carefully

Questionnaire on Habits	
Please check your habits within 6 months based on your usual life style. You can ask the person in charge when the question is ambiguous. You can check more than twice for the questions with *.	
Meal	13. How much do you eat daily? <input type="checkbox"/> much <input type="checkbox"/> medium <input type="checkbox"/> a little <input type="checkbox"/> irregular
	14. How fast do you eat? <input type="checkbox"/> fast <input type="checkbox"/> medium <input type="checkbox"/> slowly
Digestion	15. Do you digest well? <input type="checkbox"/> yes <input type="checkbox"/> no if No --> Does digestive dysfunction upset you? <input type="checkbox"/> yes <input type="checkbox"/> no
	16. How is your appetite? <input type="checkbox"/> Extremely good <input type="checkbox"/> good <input type="checkbox"/> medium <input type="checkbox"/> not good
	Do you suffer from these signs?

Questionnaire on Habits							
	Signs	Regularly	Some time	Never			
	17. Epigastric discomfort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	18. Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	19. Indigestion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Perspiration	20. Generally, how much do you perspire?	<input type="checkbox"/> a lot	<input type="checkbox"/> moderate	<input type="checkbox"/> little <input type="checkbox"/> Never			
	21. In hot weather, how much do you perspire?	<input type="checkbox"/> a lot	<input type="checkbox"/> moderate	<input type="checkbox"/> little <input type="checkbox"/> Never			
	22. How do you feel after perspiration?	<input type="checkbox"/> refreshed	<input type="checkbox"/> tired	<input type="checkbox"/> no feeling			
	23. Do you have cold sweat or perspire in below situations? (You can check several times)	<input type="checkbox"/> never	<input type="checkbox"/> sweat at night	<input type="checkbox"/> sweat during day	<input type="checkbox"/> sweat during meals		
Defecation	24. How about the condition of your stool? <input type="checkbox"/> Diarrhea <input type="checkbox"/> Constipation <input type="checkbox"/> Diarrhea and constipation alternatively <input type="checkbox"/> like indigested food <input type="checkbox"/> Normal						
	25. What is the shape of your stool? Chose the most appropriate shape.	<input type="checkbox"/>  Hard, dry, round, and small shape	<input type="checkbox"/>  Hard, compact, and sausage-shaped	<input type="checkbox"/>  Sausage-shaped with surface cracks across the surface	<input type="checkbox"/>  Soft and ice-cream shaped	<input type="checkbox"/>  Soft with chunks	<input type="checkbox"/>  Porridge consistency and scattered
Sleep	26. Your real sleeping time per day is <input type="text"/> hours and <input type="text"/> minutes (real sleeping time refers to the sleeping duration not the duration staying in bed)						
Heat and cold	27. In general, do you dislike cold or heat?	<input type="checkbox"/> cold	<input type="checkbox"/> heat	<input type="checkbox"/> both <input type="checkbox"/> both are ok			
	28. Your hands always are	<input type="checkbox"/> warm	<input type="checkbox"/> medium	<input type="checkbox"/> cold <input type="checkbox"/> not sure			
	29. Your feet always are	<input type="checkbox"/> warm	<input type="checkbox"/> medium	<input type="checkbox"/> cold <input type="checkbox"/> not sure			
	30. Your abdomen always are	<input type="checkbox"/> warm	<input type="checkbox"/> medium	<input type="checkbox"/> cold <input type="checkbox"/> not sure			
Drinking water	31. How much water do you drink a day? <input type="checkbox"/> a lot <input type="checkbox"/> medium <input type="checkbox"/> a little <input type="checkbox"/> frequently with small amount						
	32. How is the temperature of the water you drink? <input type="checkbox"/> usually hot water <input type="checkbox"/> usually cold water <input type="checkbox"/> not specific						
Catching common cold	33. If you catch a cold, which of the following symptoms do you have? (You can check several times)						
	<input type="checkbox"/> no symptoms	<input type="checkbox"/> fever	<input type="checkbox"/> headache	<input type="checkbox"/> dizzy			
	<input type="checkbox"/> runny or stuffy nose						
	<input type="checkbox"/> loss of hearing	<input type="checkbox"/> cough(phlegm)	<input type="checkbox"/> sore throat	<input type="checkbox"/> body pain			

Questionnaire on Habits

	<input type="checkbox"/> ₁₀ numbness in my arms and legs <input type="checkbox"/> ₁₁ loss of appetite and/or indigestion
Condition	34. Which of the following do you experience when not feeling healthy? (You can check several times) <input type="checkbox"/> ₁ sweating <input type="checkbox"/> ₂ indigestion <input type="checkbox"/> ₃ bowel issues <input type="checkbox"/> ₄ urinary issues <input type="checkbox"/> ₅ not specific
Other	35. Do you experience any of the symptoms below? (You can check several times) <input type="checkbox"/> ₁ lateral sides of the head discomfort <input type="checkbox"/> ₂ feverish headache <input type="checkbox"/> ₃ discomfort at the head with empty feeling <input type="checkbox"/> ₄ loss of memory <input type="checkbox"/> ₅ mouth frequently blistered <input type="checkbox"/> ₆ eye pain <input type="checkbox"/> ₇ swelling <input type="checkbox"/> ₈ palpitation <input type="checkbox"/> ₉ shortness of breath <input type="checkbox"/> ₁₀ frequent sigh <input type="checkbox"/> ₁₁ dizziness <input type="checkbox"/> ₁₂ none of the above

Table S2. Result of estimated coefficients for Facial features for each SC type using LASSO

Features	Male			Female		
	$\hat{\beta}_{1,lasso}(\lambda)$	$\hat{\beta}_{2,lasso}(\lambda)$	$\hat{\beta}_{3,lasso}(\lambda)$	$\hat{\beta}_{1,lasso}(\lambda)$	$\hat{\beta}_{2,lasso}(\lambda)$	$\hat{\beta}_{3,lasso}(\lambda)$
$\hat{\beta}_{0,lasso}(\lambda)$	-0.03	0.01	0.02	-0.21	-0.06	0.27
AGE		0.00	0.00	0.00		0.00
FDV_47_52						
FDV_47_50						
FDV_10_21		0.03	-0.06	-0.08	0.01	
FDV_52_50		-0.03				
FDV_52_81				0.36		
FDV_81_50						
FD_43_143_aD	0.07				-0.24	
FD_53_153_aD					-0.13	
FD_94_194_aD		-0.01				
FDH_33_133_aD					-0.18	
FHD_33_133_43_143		0.01	-0.41			
FDD_53_153_43_143						
FDD_94_194_43_143						
FHD_33_133_53_153			-0.01	-0.29		
FDD_94_194_53_153						
FVV_47_52_52_81					0.25	
FVV_47_52_52_50						
FVV_47_52_81_50	-0.14	0.23				
FVV_52_81_81_50						
FVD_52_50_53_153_aD					0.07	
FVD_52_81_53_153_aD	-0.55					0.00
FVD_81_50_94_194_aD				-0.42	0.15	
FA_53_94				0.12	-0.01	
FAs_153_194	0.16		-0.39	0.26	-0.25	
FA_94_43				0.05		
FAs_194_143	-0.02	0.00		0.03		
FA_53_94_43		0.16				
FA_18_25_43			-0.16			
FA_118_125_143	0.10	-0.23			0.19	
FA_18_17_43	0.04					

FA_118_117_143	0.18	-0.30			
FA_17_25_43					-0.13
FA_117_125_143				-0.03	
FA_18_25_94				0.13	
FA_18_43_50	-0.15				0.01
FA_18_94_50		0.09			
FArea02_aD	0.39				
FArea03_aD					0.01
FArea02_03	0.06			-0.29	0.18
FDV_47_10				0.03	-0.07
FDH_18_25					
FDH_118_125					-0.05
FDH_18_118					
FDH_25_125					-0.18
FDH_21_121		-0.23			
FD_17_26					-0.14
FD_117_126	0.19	-0.11			
FD_17_25		-0.30	0.04		
FD_117_125			-0.14	0.19	
FD_18_25					
FD_118_125				0.10	
FDH_17_26_18_25					
FDH_117_126_118_125					0.09
FDH_52_50_18_118					-0.15
FRE_H01			0.18		0.04
FRE_H02_aD					-0.08
FRE_H05_aD					
FHD_18_118_53_153_a D		0.11			
FHD_25_125_53_153_a D				-0.05	0.02
FDD_17_26_52_81		0.20			
FDD_17_26_52_50		0.00			0.10
FA_18_17_25			-0.06		-0.28
FA_118_117_125				0.04	-0.14
FAi_25_17	-0.12				0.02

FAis_125_117	-0.05	0.01		-0.03	0.05
FAis_18_17		-0.30	0.02		-0.09
FAi_118_117					
FAis_18_25					
FAi_118_125		-0.20			
FDH_36_136					
FHD_36_136_53_153_a D	0.00			0.00	0.09
FVH_52_81_36_136	0.20				
FArea_52_36_136			-0.04		0.00
FDV_80_50	0.15			0.22	-0.01
FVV_80_50_52_50					
FVV_80_50_81_50	-0.18	0.23			-0.06
PD_7_77	0.03				-0.04
PDV_7_9		-0.13	0.10		-0.02
PAi_9_7	0.02		-0.04		0.00
PAi_71_72				0.01	-0.04
PAi_72_73	0.00	0.22		-0.04	0.01
PDV_9_12	0.31	-0.16		0.25	-0.05
PDH_9_12					-0.28
PA_9_12			-0.18		-0.19
PA_10_12	-0.32		0.10	-0.15	0.16
PDH_12_14			-0.26	0.05	-0.21
PDH_14_21					-0.15
PDL_14_12_21					
PDV_12_14					0.02
PDV_14_21		-0.07			
PDV_12_21		-0.26			0.05
PD_12_21					
PArea_12_14_21			-0.06		
PAi_14_12		-0.01			
PA_14_21					
PA_12_14_21		-0.04	0.03		
PAi_13_84	0.06	0.00		0.05	
PA_87_21		0.00	-0.21		0.02

$\hat{\beta}_{1,lasso}(\hat{\lambda}), \hat{\beta}_{2,lasso}(\hat{\lambda}), \hat{\beta}_{3,lasso}(\hat{\lambda})$ represent result of estimated coefficients via LASSO for each SC group, TE, SE, and SY, respectively, where $\hat{\lambda} = e^{\log(\hat{\lambda})}$, chosen from the result of ten-fold cross validation.

Table S3. Result of estimated coefficients for Voice features for each SC type using LASSO

Features	Male			Female		
	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$
$\hat{\beta}_{0,lasso}(\hat{\lambda})$	0.10	0.02	-0.12	-0.47	0.25	0.22
AGE		0.00	0.00	0.02		0.00
sF10	0.11	-0.38		0.17		-0.15
sF50	-0.46	0.04			0.19	-0.42
sF90			0.23		0.40	-0.44
sFHL	-0.20	0.20			-0.06	0.08
sF0	0.17		-0.37		-0.26	0.95
sFCV		-0.22	0.00		-0.13	0.12
sDT		-0.01	0.06	0.02	-0.02	
sMFCC1	0.11		-0.25	0.04	0.00	
sMFCC2		-0.16	0.15		0.21	-0.08
sMFCC3		0.01	-0.18	-0.15	0.10	
sMFCC4		-0.03	0.07	0.02	-0.09	
sMFCC5	-0.06	0.17		0.05	-0.08	
sMFCC6		0.25	-0.12		-0.03	0.09
sMFCC7		0.24	-0.23	-0.05	0.19	
sMFCC8	0.12		-0.20	0.18		-0.20
sMFCC9	0.21	-0.16		0.22	-0.08	
sMFCC10		-0.20	0.13	0.02		-0.01
sMFCC11	0.01	-0.18		-0.12	0.04	
sMFCC12		-0.11		-0.13		0.11
sHNR35		0.01	-0.18		-0.02	0.10
sCPP	0.00		0.08		0.01	-0.06

$\hat{\beta}_{1,lasso}(\hat{\lambda}), \hat{\beta}_{2,lasso}(\hat{\lambda}), \hat{\beta}_{3,lasso}(\hat{\lambda})$ represent result of estimated coefficients via LASSO for each SC group, TE, SE, and SY, respectively, where $\hat{\lambda} = e^{\log(\hat{\lambda})}$, chosen from the result of ten-fold cross validation.

Table S4. Result of estimated coefficients for Body shape features for each SC type using LASSO

Features	Male			Female		
	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$
$\hat{\beta}_{0,lasso}(\hat{\lambda})$	0.02	0.17	-0.19	-0.26	-0.08	0.34
AGE		-0.01	0.01	0.01	0.00	
HEIGHT	-0.14	0.06			0.18	-0.09
WEIGHT						
BMI						
FC	1.12		-0.47	-0.10		0.29
NC	-0.52		0.82	0.56	-1.41	
AC				0.51		-2.77
CC				-0.28		1.84
RC						
WC				0.00		-0.07
HC		-0.56				
NC/FC	0.71			0.00		0.18
AC/FC	0.62		-0.12	0.00		2.07
CC/FC				-0.30	0.00	
RC/FC		0.15	-0.39	0.00	-0.17	
WC/FC				0.53		-0.13
HC/FC	0.21				0.76	-1.10
AC/NC						-2.45
CC/NC	-0.22		0.10	1.04	-0.41	
RC/NC				-1.02		
WC/NC	-0.19		0.15	-0.76		1.58
HC/NC		-0.02			-1.59	0.87
CC/AC	-0.25		0.19	1.44	-0.17	
RC/AC					2.25	-0.19
WC/AC					2.64	-0.55
HC/AC	1.03		-0.02	0.33	-1.95	
RC/CC	-0.64	0.18			0.82	-0.26
WC/CC	1.23		-0.83	1.12	-1.80	
HC/CC	-0.75		1.07		-0.95	0.04
WC/RC	-0.70		0.03	-1.01	0.33	
HC/RC	-0.01	0.99			3.54	-0.70
HC/WC			-0.76	-1.03	0.51	

$\hat{\beta}_{1,lasso}(\hat{\lambda}), \hat{\beta}_{2,lasso}(\hat{\lambda}), \hat{\beta}_{3,lasso}(\hat{\lambda})$ represent result of estimated coefficients via LASSO for each SC group, TE, SE, and SY,

respectively, where $\hat{\lambda} = e^{\log(\hat{\lambda})}$, chosen from the result of ten-fold cross validation.

Table S5. Result of estimated coefficients for Questionnaire features for each SC type using LASSO

Features	Male			Female		
	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$
$\hat{\beta}_{0,lasso}(\hat{\lambda})$	0.20	-0.27	0.07	0.34	-0.26	-0.08
Q_1_1		-0.24			-0.28	
Q_1_2						
Q_1_3		0.26			0.23	
Q_2_1	-0.66		0.26	-0.36		0.09
Q_2_2						
Q_2_3						
Q_3_1					-0.29	
Q_3_2						
Q_3_3						-0.05
Q_4_1						
Q_4_2						
Q_4_3						-0.02
Q_5_1		-0.02	0.07			
Q_5_2						
Q_5_3						-0.01
Q_6_1		-0.28				
Q_6_2						
Q_6_3		0.28			0.11	-0.21
Q_7_1		-0.15		-0.15		
Q_7_2						
Q_7_3						
Q_8_1		-0.10		0.03		
Q_8_2						0.04
Q_8_3					0.14	
Q_9_1						0.08
Q_9_2						
Q_9_3				0.06		-0.07
Q_10_1						
Q_10_2			-0.21		-0.07	
Q_10_3						
Q_11_1		-0.12	0.00		-0.23	
Q_11_2						0.00
Q_11_3						
Q_12_1						
Q_12_2						

Q_12_3		0.04		0.02	
Q_13_1			0.22	-0.17	
Q_13_2					
Q_13_3					
Q_13_4			0.22	-0.19	
Q_14_1	0.06		0.17	-0.11	
Q_14_2					
Q_14_3			-0.19		
Q_15_1				-0.13	
Q_15_2				0.21	
Q_15_3					
Q_16_1			0.20		
Q_16_2	0.12	-0.13	0.01	-0.19	
Q_16_3	-0.11		-0.03		
Q_16_4					
Q_17_1			-0.09		
Q_17_2			0.03		-0.05
Q_17_3					
Q_18_1				-0.18	
Q_18_2					
Q_18_3				0.18	
Q_19_1					
Q_19_2					
Q_19_3			-0.04		
Q_20_1		-0.19	0.20	-0.24	
Q_20_2					
Q_20_3	-0.22	0.21			
Q_20_4			-0.07		0.09
Q_21_1		-0.01			
Q_21_2			0.02		
Q_21_3				0.43	
Q_21_4					
Q_22_1		-0.09	0.08	-0.23	
Q_22_2	-0.18			0.31	
Q_22_3			-0.20		
Q_23_1					
Q_23_2					
Q_23_3					
Q_23_4				-0.31	
Q_24_1				0.05	
Q_24_2			0.01		

Q_24_3					
Q_24_4			-0.25		0.05
Q_24_5					
Q_25_1				-0.03	
Q_25_2			0.06		
Q_25_3					-0.19
Q_25_4					0.02
Q_25_5					-0.30
Q_25_6					
Q_25_7					
Q_26_1			-0.04	0.03	
Q_26_2	-0.01	0.00			
Q_27_1	-0.11	0.17			
Q_27_2	0.21	-0.23	0.06		
Q_27_3					
Q_27_4					
Q_28_1	0.26	-0.07	0.16		
Q_28_2					
Q_28_3	-0.03	0.06	-0.53		0.03
Q_28_4				0.50	
Q_29_1					
Q_29_2					
Q_29_3	-0.02		0.03		
Q_29_4					
Q_30_1					
Q_30_2	-0.04				
Q_30_3					-0.13
Q_30_4					
Q_31_1			0.20	-0.15	
Q_31_2					
Q_31_3					
Q_31_4					0.16
Q_32_1		0.13	-0.05	0.37	
Q_32_2					
Q_32_3				-0.15	
Q_33_1				-0.39	
Q_33_2					
Q_33_3	-0.04			0.01	
Q_33_4			-0.03	0.15	
Q_33_5					
Q_33_6					

Q_33_7			0.10	-0.03	
Q_33_8			-0.03		0.03
Q_33_9	0.00		0.05		
Q_33_10				-0.01	
Q_33_11					
Q_34_1			0.04		
Q_34_2		0.90		0.22	
Q_34_3			0.00	-0.19	
Q_34_4					
Q_34_5					
Q_35_1			-0.24	0.04	-0.27
Q_35_2					
Q_35_3				-0.21	
Q_35_4		-0.14			0.10
Q_35_5					0.12
Q_35_6					
Q_35_7		-0.14	0.47		
Q_35_8					
Q_35_9			-0.16		
Q_35_10					
Q_35_11					
Q_35_12					-0.25

$\hat{\beta}_{1,lasso}(\hat{\lambda}), \hat{\beta}_{2,lasso}(\hat{\lambda}), \hat{\beta}_{3,lasso}(\hat{\lambda})$ represent result of estimated coefficients via LASSO for each SC group, TE, SE, and SY,

respectively, where $\hat{\lambda} = e^{\log(\hat{\lambda})}$, chosen from the result of ten-fold cross validation.

Table S6. Result of estimated coefficients for Questionnaire continuous features for each SC type using OLS

SC type	Features	Male			Female		
		β	S.E	p	β	S.E	p
TE	Intercept	0.098	0.590	0.999	-0.350	0.429	0.414
	AGE	0.002	0.012	0.884	0.009	0.009	0.282
	Q_{TE}	0.648	0.228	0.005	0.785	0.146	0.000
	Q_{SE}	-0.183	0.193	0.343	-0.084	0.142	0.556
	Q_{SY}	-0.453	0.210	0.031	-0.513	0.149	0.001
SE	Intercept	-0.600	0.625	0.337	-0.420	0.432	0.330
	AGE	-0.003	0.012	0.806	0.001	0.009	0.881
	Q_{TE}	-0.146	0.227	0.519	-0.004	0.149	0.979
	Q_{SE}	0.933	0.199	0.000	0.913	0.149	0.000
	Q_{SY}	-0.501	0.220	0.023	-0.418	0.146	0.004

Reference category : SY S.E : standard error of β

Table S7. Result of estimated coefficients for estimated probability of individual diagnostic model for each SC type using LASSO

Features	Male			Female		
	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$	$\hat{\beta}_{1,lasso}(\hat{\lambda})$	$\hat{\beta}_{2,lasso}(\hat{\lambda})$	$\hat{\beta}_{3,lasso}(\hat{\lambda})$
$\hat{\beta}_{0,lasso}(\hat{\lambda})$	0.38	0.08	-0.46	0.30	-0.39	0.09
$(\pi_{i1})_1$	0.98			1.13		
$(\pi_{i2})_1$	-0.03	2.42			1.13	
$(\pi_{i3})_1$		-0.09	2.91			1.55
$(\pi_{i1})_2$	3.04		-0.07	2.27		
$(\pi_{i2})_2$	-0.61	0.87		-0.47	2.21	
$(\pi_{i3})_2$		-1.32	0.44			
$(\pi_{i1})_3$	1.17	-0.20		1.09		
$(\pi_{i2})_3$		3.09	-0.40		1.75	
$(\pi_{i3})_3$	-1.42		1.16			2.02
$(\pi_{i1})_4$			-0.65	0.92		
$(\pi_{i2})_4$					2.06	
$(\pi_{i3})_4$		-0.44	2.40			2.36

$\hat{\beta}_{1,lasso}(\hat{\lambda}), \hat{\beta}_{2,lasso}(\hat{\lambda}), \hat{\beta}_{3,lasso}(\hat{\lambda})$ represent result of estimated coefficients via LASSO for each SC group, TE, SE, and SY,

respectively, where $\hat{\lambda} = e^{\log(\hat{\lambda})}$, chosen from the result of ten-fold cross validation.

Figure S1. The procedure of generating continuous variables with the response categories of the questions in the questionnaire.

