

**Interaction between oxytocin receptor polymorphism and interdependence on
human empathy**

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**Supplementary
Tables S1-7**

Table S1. Demographic information (mean \pm SD) of three genotype groups in Experiment 1

	Total	G/G	G/A	A/A	<i>p</i>
Gender	824 M,708 F	93 M,68 F	378 M,305 F	353 M,335 F	0.183
Age	19.41 \pm 2.43	19.33 \pm 2.58	19.47 \pm 2.51	19.38 \pm 2.31	0.736
Income	2.86 \pm 1.72	2.96 \pm 1.22	2.84 \pm 2.13	2.87 \pm 1.31	0.765
Urban-rural	2.94 \pm 1.74	2.97 \pm 1.74	2.94 \pm 1.75	2.92 \pm 1.73	0.946
Family size	3.46 \pm 0.89	3.46 \pm 0.86	3.46 \pm 0.87	3.47 \pm 0.93	0.997
Only-child	0.71 \pm 0.45	0.68 \pm 0.47	0.70 \pm 0.46	0.73 \pm 0.44	0.326
Father age	47.03 \pm 4.83	46.36 \pm 6.55	47.13 \pm 4.84	47.11 \pm 4.33	0.177
Mother age	45.61 \pm 4.72	45.31 \pm 5.29	45.51 \pm 5.17	45.79 \pm 4.08	0.385
Father education	2.58 \pm 1.05	2.56 \pm 1.03	2.52 \pm 1.07	2.63 \pm 1.03	0.157
Mother education	2.35 \pm 1.15	2.34 \pm 0.98	2.29 \pm 1.37	2.41 \pm 0.94	0.185

*One-way ANOVAs were conducted to examine the difference in the demographic information among the three variants of OXTR rs53576.

Table S2. Interdependence and IRI rating scores (mean \pm SD) of three genotype groups in Experiment 1

	Total	G/G	G/A	A/A	<i>p</i>
Interdependence	0.41 \pm 0.83	0.38 \pm 1.01	0.39 \pm 0.82	0.43 \pm 0.79	0.633
Interdependent	5.15 \pm 0.66	5.15 \pm 0.77	5.12 \pm 0.65	5.18 \pm 0.64	0.246
Independent	4.74 \pm 0.72	4.77 \pm 0.71	4.73 \pm 0.72	4.75 \pm 0.71	0.750
IRI	67.06 \pm 10.54	66.90 \pm 11.69	67.47 \pm 10.21	66.72 \pm 10.60	0.413
Perspective Taking	17.73 \pm 3.79	17.90 \pm 4.16	17.78 \pm 3.68	17.66 \pm 3.81	0.701
Empathic Concern	18.37 \pm 4.17	17.89 \pm 4.21	18.60 \pm 4.16	18.26 \pm 4.17	0.092
Fantasy	17.30 \pm 4.87	17.49 \pm 5.36	17.43 \pm 4.77	17.14 \pm 4.85	0.484
Personal Distress	13.65 \pm 3.73	13.62 \pm 3.85	13.66 \pm 3.62	13.67 \pm 3.82	0.989

*One-way ANOVAs were conducted to examine the difference in interdependence and empathy measures among the three variants of OXTR rs53576.

Table S3. Results of the hierarchical regression analysis of interdependence and IRI score in Experiment 1

	Step1 β	Step2 β
Interdependence	0.23 ^{***}	0.22 ^{***}
OXTR rs53576 genotype	0.03	0.03
Interdependence \times genotype		0.07 ^{**}
R ² change	0.05	0.004
F change	41.46 ^{***}	6.61 ^{**}
R ²	0.05	0.06
Adjusted R ²	0.05	0.05
Over all F	41.46 ^{***}	29.94 ^{***}
df	1523	1522

** p<0.01; *** p<0.001;

Table S4. Results of the hierarchical regression analysis of interdependence and perspective taking in Experiment 1

	Step1 β	Step2 β
Interdependence	0.14 ^{***}	0.13 ^{***}
OXTR rs53576 genotype	0.03	0.03
Interdependence \times genotype		0.06 [*]
R ² change	0.02	0.003
F change	15.02 ^{***}	5.07 [*]
R ²	0.02	0.02
Adjusted R ²	0.02	0.02
Over all F	15.02 ^{***}	11.73 ^{***}
df	1523	1522

* p<0.05; *** p<0.001;

Table S5. Results of the hierarchical regression analysis of interdependence and empathic concern in Experiment 1

	Step1 β	Step2 β
Interdependence	0.24***	0.23***
OXTR rs53576 genotype	0.01	0.01
Interdependence \times genotype		0.03
R ² change	0.06	0.001
F change	44.77***	1.60
R ²	0.06	0.06
Adjusted R ²	0.05	0.05
Over all F	44.77***	30.39***
df	1523	1522

*** p<0.001;

Table S6. Subject information of the two homozygote groups in Experiment 2

	G/G homozygote	A/A homozygote
Gender	16 male, 14 female	16 male, 14 female
Age	20.33 \pm 1.65	20.17 \pm 1.64
Interdependence	0.64 \pm 1.12	0.50 \pm 0.69
IRI	70.73 \pm 8.93	66.17 \pm 12.90
Self-esteem	29.90 \pm 4.55	29.10 \pm 3.98
SES	6.20 \pm 1.59	6.30 \pm 1.99

SES: subjective social economic status

Table S7. Subjective ratings of pain intensity and self-unpleasantness in Experiment 2

	G/G homozygote		A/A homozygote	
	Pain intensity	Self-unpleasantness	Pain intensity	Self-unpleasantness
Pain	6.92 \pm 0.38	5.76 \pm 0.52	7.33 \pm 0.35	6.59 \pm 0.40
Nopain	0.64 \pm 0.17	0.73 \pm 0.22	0.77 \pm 0.14	1.48 \pm 0.30

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