

Supplementary Online Material

Genes, Economics, and Happiness

Jan-Emmanuel De Neve

Nicholas A. Christakis

James H. Fowler

Bruno S. Frey

Table 1: ACE twin models of life satisfaction, by gender

Figure 1: Longitudinal cross-twin correlations

Table 2: OLS models of association between 5-HTTLPR and life satisfaction that include all available Add Health genetic markers

Tables 3-6: Summary statistics

Figures 2-3: Sample distributions for life satisfaction

Table 7: Potential mediators

Table 6: ACE twin models of life satisfaction, by gender

Life satisfaction (females)			Fit statistics							
	a^2	c^2	e^2	ep	-2ll	df	AIC	diff -2ll	diff df	p
ACE	0.205	0.050	0.745	4	919.8	388	143.8	-	-	-
AE	0.263	-	0.737	3	919.8	389	141.8	0.05	1	0.83
CE	-	0.205	0.795	3	920.3	389	142.3	0.53	1	0.47
E	-	-	1	2	928.0	390	148.0	8.24	2	0.02

Life satisfaction (males)			Fit statistics							
	a^2	c^2	e^2	ep	-2ll	df	AIC	diff -2ll	diff df	p
ACE	0.389	0.000	0.611	4	951.3	400	151.3	-	-	-
AE	0.389	-	0.611	3	951.3	401	149.3	0	1	1
CE	-	0.308	0.692	3	955.0	401	153.0	3.73	1	0.05
E	-	-	1	2	972.4	402	168.4	21.11	2	0

Figure 3: Longitudinal cross-twin correlations

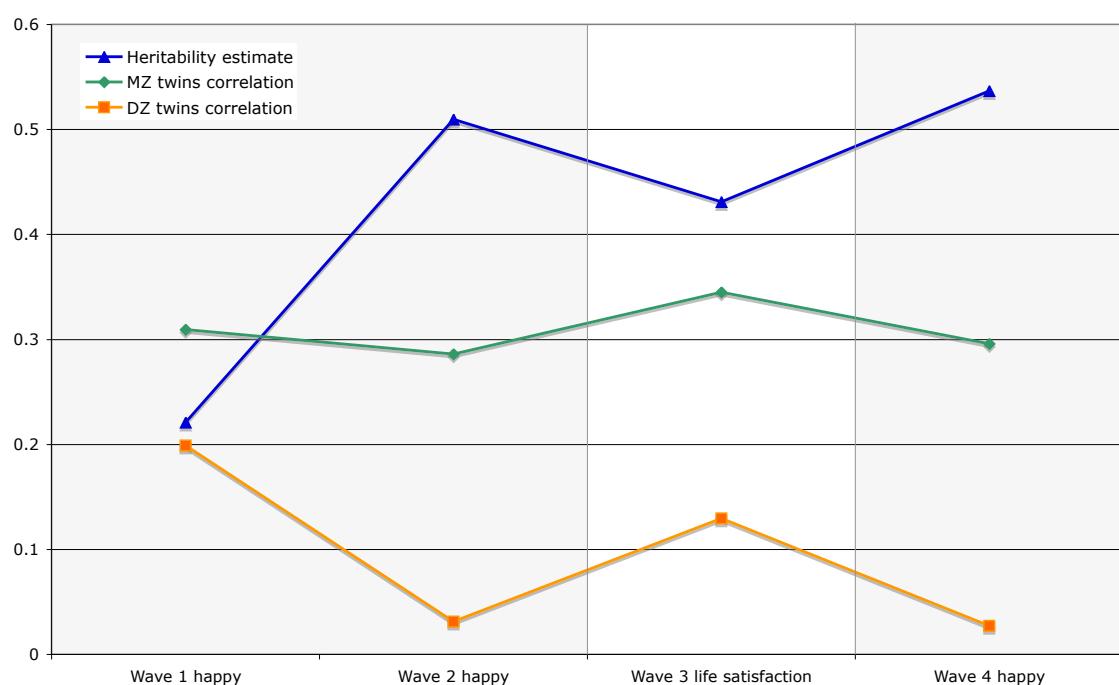


Table 7: OLS models of association between 5-HTTLPR and life satisfaction that include all available Add Health genetic markers. Standard errors (SE) and P-values are also presented.

	Model 1			Model 2			Model 3		
	Coeff.	SE	P-value	Coeff.	SE	P-value	Coeff.	SE	P-value
5-HTTLPR: long	0.061	0.026	0.021	0.066	0.025	0.009	0.080	0.032	0.011
MAOA: high	-0.014	0.022	0.518	-0.020	0.021	0.336	-0.017	0.027	0.528
DRD4: r7	-0.000	0.033	0.993	0.001	0.032	0.970	0.024	0.039	0.548
DRD2: a2	0.008	0.030	0.777	-0.000	0.029	0.991	0.048	0.036	0.243
DAT1: r10	0.043	0.032	0.169	0.045	0.030	0.135	0.047	0.036	0.191
rs2304297: G	-0.028	0.061	0.647	-0.012	0.059	0.842	0.018	0.085	0.837
rs892413: C	-0.010	0.051	0.837	-0.024	0.050	0.628	-0.024	0.073	0.744
rs4950: G	-0.042	0.065	0.520	-0.039	0.062	0.528	0.006	0.077	0.939
rs13280604: G	0.066	0.065	0.035	0.036	0.061	0.555	0.013	0.073	0.863
Black	-0.138	0.065	0.035	-0.150	0.065	0.020			
Hispanic	0.294	0.160	0.067	0.256	0.147	0.081			
Asian	-0.205	0.083	0.014	-0.250	0.079	0.002			
Age	0.006	0.010	0.581	-0.009	0.010	0.390	-0.027	0.013	0.033
Male	0.046	0.037	0.212	0.061	0.037	0.097	0.039	0.046	0.384
Job				0.108	0.046	0.019	0.104	0.057	0.071
College				0.154	0.037	0.000	0.245	0.048	0.000
Married				0.218	0.048	0.000	0.259	0.057	0.000
Divorced				-0.285	0.154	0.065	-0.265	0.159	0.096
Religiosity				0.160	0.020	0.000	0.131	0.026	0.000
Welfare				-0.205	0.112	0.068	-0.100	0.165	0.546
Medication				-0.072	0.037	0.053	-0.129	0.046	0.005
Intercept	3.960	0.246	0.000	3.932	0.243	0.000	4.227	0.304	0.000
<i>N</i>	1939			1910			1110		
<i>R</i> ²	0.015			0.087			0.102		

Summary Statistics

Table 8: Sample means.

	Mean	Std Dev	Min	Max
Life satisfaction	4.20	0.79	1	5
5-HTTLPR long	1.14	0.72	0	2
Age	21.9	1.7	18	26
Religiosity	1.43	0.92	0	3

Table 9: Percentage of subjects exhibiting these characteristics.

	Percent
White	70.9
Black	19.0
Hispanic	14.7
Asian	8.2
Male	47.8
College	54.9
Married	17.3
Divorced	1.4
Welfare	4.2
Medication	61.2

Figure 4: Distribution of life satisfaction

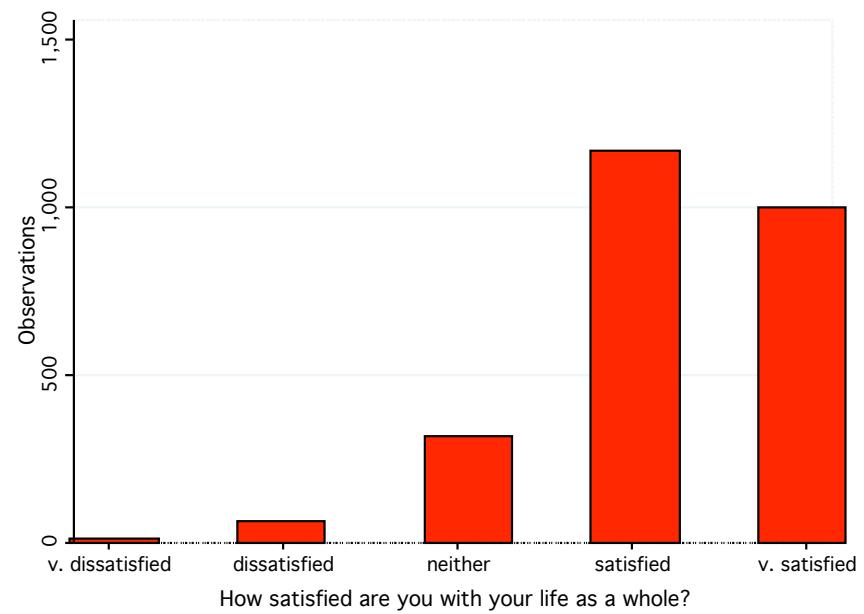


Figure 5: Distribution of life satisfaction, by zygosity

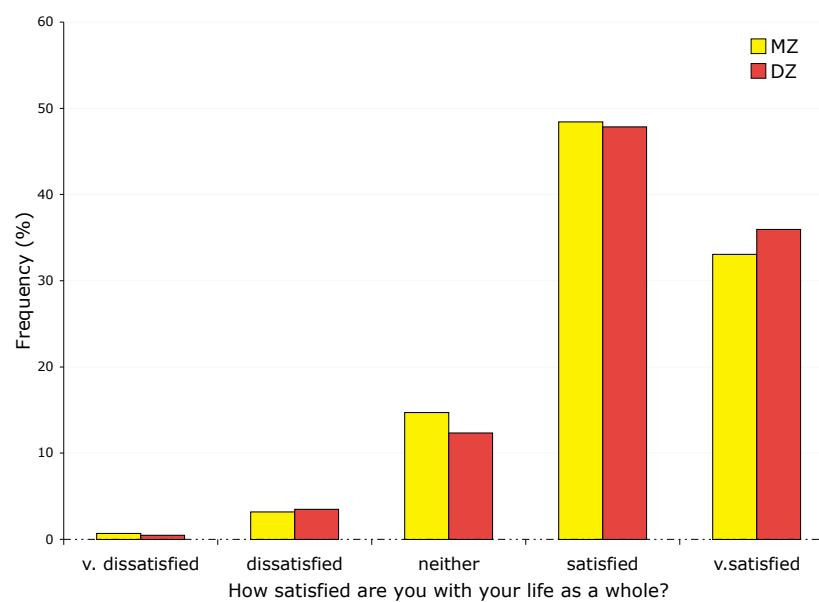


Table 10: Cross-tabs

Life satisfaction	5-HTTLPR long			Total
	0	1	2	
Very dissatisfied	4 (0.8%)	4 (0.3%)	5 (0.6%)	13 (0.5%)
Dissatisfied	17 3.3%	35 2.9%	13 1.6%	65 2.6%
Neither	72 14.2%	149 12.6%	97 11.3%	318 12.4%
Satisfied	226 44.4%	544 45.9%	394 45.7%	1,164 45.6%
Very satisfied	190 37.3%	453 38.2%	353 41.0%	996 39.0%
Total	509 100% (20%)	1,185 100% (46%)	862 100% (34%)	2,556 100%

Table 11: 5-HTTLPR genotype frequencies by race (with Hardy-Weinberg equilibrium test statistics)

Race	Mean	χ^2	p-value
White	1.12	0.28	0.60
Black	1.47	3.36	0.07
Hispanic	0.93	3.81	0.05
Asian	0.69	0.29	0.59

Potential Mediators

DV	<i>p</i> – value
Job	0.17
College	0.99
Married	0.33
Divorced	0.16
Religiosity	0.48
Welfare	0.25
Medication	0.08

Table 12: Table presents *p* values for 5-HTT long in models with job, college attendance, married, divorced, religious, welfare, and medication as dependent variables. Regressions also include race, age, and gender controls.