

Online-only supplemental materials

The individual environment, not the family is the most important influence on preferences for common non-alcoholic beverages in adolescence

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Supplemental Table 1 Model fit and parameter estimates for the saturated, ADE model and submodels of beverage preferences

Beverage type	Additive genetic effect (A)	Dominant genetic effect (D)	Nonshared environment effect (E)	-2LL ³	Df ³	AIC ³	Δ -2LL	p-value
SSBs³								
Sat				9609.825	2832	3945.825		
ADE ¹	0.30 (0.24, 0.43)	0.08 (0.00, 0.17)	0.62 (0.55, 0.70)	9614.131	2835	3944.131	4.305359	0.23
AE ²	0.39 (0.32, 0.46)	-	0.61 (0.54, 0.68)	9616.851	2836	3944.851	2.719993	0.10
DE ²	-	0.24 (0.19, 0.29)	0.76 (0.71, 0.81)	9631.547	2836	3959.547	17.416468	<0.001
E ²	-	-	1.00 (1.00, 1.00)	9703.572	2837	4029.572	89.441158	<0.001
NNSBs³								
Sat				9545.841	2818	3909.841		
ADE ¹	0.23 (0.10, 0.36)	0.16 (0.07, 0.25)	0.61 (0.53, 0.68)	9546.322	2821	3904.322	4.804889	0.92
AE ²	0.43 (0.36, 0.49)	-	0.57 (0.51, 0.64)	9558.221	2822	3914.221	11.8991220	<0.001
DE ²	-	0.28 (0.23, 0.33)	0.72 (0.67, 0.77)	9557.576	2822	3913.576	11.2537105	<0.001
E ²	-	-	1.00 (1.00, 1.00)	9660.699	2823	4014.699	114.3772631	<0.001
Orange juice								
Sat				7844.431	2840	2164.431		
ADE ¹	0.24 (0.18, 0.32)	0.00 (0.00, 0.04)	0.76 (0.68, 0.83)	7854.672	2843	2168.672	10.241	0.02
AE ²	0.24 (0.20, 0.32)	-	0.76 (0.68, 0.80)	7854.672	2844	2166.672	0	1.00
DE ²	-	0.08 (0.03, 0.14)	0.92 (0.86, 0.97)	7873.266	2844	2185.266	18.594	<0.001
E ²	-	-	1.00 (1.00, 1.00)	7881.523	2845	2191.523	26.851	<0.001
Fruit cordial								
Sat				8031.215	2838	2355.215		
ADE ¹	0.28 (0.15, 0.41)	0.14 (0.05, 0.23)	0.58 (0.51, 0.65)	8034.727	2841	2352.727	3.511726	0.32
AE ²	0.44 (0.38, 0.51)	-	0.56 (0.49, 0.62)	8043.012	2842	2359.012	8.285402	<0.001
DE ²	-	0.29 (0.24, 0.34)	0.71 (0.66, 0.76)	8051.672	2842	2367.672	16.944929	<0.001
E ²	-	-	1.00 (1.00, 1.00)	8157.514	2843	2471.514	122.786607	<0.001
Milk								
Sat				7269.105	2698	1873.105		
ADE ¹	0.36 (0.21, 0.44)	0.00 (0.00, 0.11)	0.64 (0.56, 0.72)	7277.283	2701	1875.283	8.17838241	0.04
AE ²	0.36 (0.28, 0.44)	-	0.64 (0.56, 0.72)	7277.284	2702	1873.284	0.00117151	0.97
DE ²	-	0.20 (0.14, 0.26)	0.80 (0.74, 0.86)	7298.526	2702	1894.526	21.24340108	<0.001
E	-	-	1.00 (1.00, 1.00)	7340.874	2703	1934.874	63.59133945	<0.001
Tea								
Sat				7109.816	2409	2291.816	11.63	
ADE ¹	0.51 (0.42, 0.58)	0.00 (0.00, 0.03)	0.49 (0.42, 0.58)	7109.816	2410	2289.816	0	1.00
AE ²	0.50 (0.42, 0.58)	-	0.50 (0.42, 0.58)	7171.829	2410	2351.829	62.01	<0.001
DE ²	-	0.19 (0.12, 0.26)	0.81 (0.74, 0.88)	7201.412	2411	2379.412	91.6	<0.001
E	-	-	1.00 (1.00, 1.00)	7201.412	2411	2379.412	91.6	<0.001
Coffee								
Sat				6351.94	1896	2559.94		
ADE ¹	0.33 (0.14, 0.44)	0.00 (0.00, 0.12)	0.67 (0.56, 0.79)	6356.35	1899	2558.35	4.41	0.22
AE ²	0.33 (0.21, 0.44)	-	0.67 (0.56, 0.79)	6356.35	1900	2556.35	0.00	1.00
DE ²	-	0.17 (0.09, 0.25)	0.83 (0.75, 0.91)	6366.625	1900	2566.625	10.27	<0.001
E	-	-	1.00 (1.00, 1.00)	6382.128	1901	2580.128	25.78	<0.001

Maximum Likelihood Structural Equation Modelling (MLSEM) was used to derive estimates of A, D and E, as well as provide two goodness-of-fit statistics; -2LL and the AIC respectively. The selection of the most parsimonious model was indicated by the lowest absolute value of the AIC and smallest Δχ².

¹ The full ADE model was nested within the saturated model

² Sub-models were nested within the full ADE model

³ Abbreviations; - 2LL: -2 times log-likelihood of data, AIC: Akaike Information Criterion (AIC), df: degrees of freedom, NNSBs: Non-nutritive sweetened beverages, SSB: Sugar-sweetened beverages

Supplemental Table 2 Beverage preference scores and tetrachoric correlations (TTC) by zygosity

Beverage item	n ¹ (%) ²	Mean preference score ³ (SD)	Median preference score ³ (SD)	MZ ⁴ TCC ⁴ (95% CI)	DZ ⁴ TCC ⁴ (95% CI)
SSBs⁴	2841 (99.2)	3.73 (1.37)	4.00 (1.38)	0.47 (0.34, 0.59)	0.11 (0.00, 0.23)
NNSBs⁴	2827 (98.7)	3.64 (1.34)	4.00 (1.33)	0.48 (0.34, 0.59)	0.22 (0.11, 0.34)
Orange juice	2849 (99.4)	4.43 (0.97)	5.00 (0.97)	0.23 (0.05, 0.39)	0.00 (0.00, 0.09)
Fruit cordial	2847 (99.3)	4.23 (1.02)	5.00 (1.02)	0.54 (0.42, 0.64)	0.20 (0.09, 0.31)
Milk	2707 (94.5)	4.22 (0.95)	5.00 (0.96)	0.60 (0.48, 0.70)	0.09 (0.02, 0.21)
Tea	2415 (84.3)	4.31 (1.08)	5.00 (1.08)	0.73 (0.62, 0.82)	0.04 (-0.09, 0.18)
Coffee	1905 (66.5)	3.85 (1.29)	4.00 (1.30)	0.48 (0.30, 0.60)	0.08 (-0.06, 0.25)

¹ Number of observations included in mean and median beverage liking score (excl. observations from individuals that never consume the specific beverage)

² Percentage of the full sample that reported occasional consumption of the beverage

³ Preference scores were rated on a 5-point Likert scale, with a higher score indicating a higher preference for the beverage item.

⁴ Abbreviations: TCCs: Tetrachoric Correlations; MZ: Monozygotic; DZ: Dizygotic; NNSBs: Non-nutritive sweetened beverages, SSB: Sugar-sweetened beverages

Supplemental Table 3 Threshold Model fit and parameter estimates for the saturated, ACE model and submodels of beverage preferences

Beverage type	Additive genetic effect (A)	Shared environment effect (C)	Nonshared environment effect (E)	-2LL ³	Df ³	AIC ³	Δ -2LL	p-value
SSBs^{1,3}								
Sat				3724.058	2830	-1935.94		
ACE ³	0.42 (0.25, 0.52)	0.00 (0.00, 0.11)	0.58 (0.48, 1.00)	3737.736	2837	-1936.26	13.68	0.06
AE⁴	0.42 (0.30, 0.52)	-	0.58 (0.48, 1.00)	3737.736	2838	-1938.26	0.00	1.00
CE ⁴	-	0.26 (0.17, 0.34)	0.74 (0.65, 1.00)	3750.700	2838	-1925.3	12.96	<0.001
E ⁴	-	-	1.00 (1.00, 1.00)	3782.678	2839	-1895.32	44.94	<0.001
NNSBs^{1,3}								
Sat				3510.043	2816	-2121.957		
ACE ³	0.47 (0.15, 0.58)	0.00 (0.00, 0.24)	0.53 (0.42, 1.00)	3515.951	2823	-2130.05	5.91	0.55
AE⁴	0.47 (0.41, 0.58)	-	0.53 (0.42, 1.00)	3515.951	2824	-2132.05	0.00	1.00
CE ⁴	-	0.33 (0.24, 0.41)	0.67 (0.59, 1.00)	3523.844	2824	-2124.16	7.89	<0.001
E ⁴	-	-	1.00 (1.00, 1.00)	3572.634	2825	-2077.37	56.68	<0.001
Orange juice²								
Sat				2751.467	2495	-2238.53		
ACE ³	0.23 (0.05, 0.39)	0.00 (0.00, 0.09)	0.77 (0.61, 0.95)	2902.347	2502	-2101.65	150.88	0.00
AE⁴	0.23 (0.05, 0.39)	-	0.77 (0.61, 0.95)	2902.347	2503	-2103.65	0.00	1.00
CE ⁴	-	0.07 (0.00, 0.19)	0.92 (0.81, 1.00)	2907.614	2503	-2098.39	5.27	0.02
E ⁴	-	-	1.00 (1.00, 1.00)	2908.933	2504	-2099.07	6.59	0.04
Fruit cordial²								
Sat				3868.794	2836	-1803.21		
ACE ³	0.51 (0.40, 0.61)	0.00 (0.00, 0.14)	0.49 (0.39, 0.60)	3874.622	2843	-1811.38	5.83	0.56
AE⁴	0.51 (0.40, 0.61)	-	0.49 (0.39, 0.60)	3874.622	2844	-1813.38	0.00	1.00
CE ⁴	-	0.33 (0.25, 0.41)	0.67 (0.59, 1.00)	3889.705	2844	-1798.30	15.08	<0.001
E ⁴	-	-	1.00 (1.00, 1.00)	3946.426	2845	-1743.57	71.80	<0.001
Milk²								
Sat				3671.885	2696	-1720.12		
ACE ³	0.51 (0.39, 0.61)	0.00 (0.00, 0.07)	0.49 (0.39, 1.00)	3685.956	2703	-1720.04	14.07	0.05
AE⁴	0.51 (0.39, 0.61)	-	0.49 (0.39, 1.00)	3685.956	2704	-1722.04	0.00	1.00
CE ⁴	-	0.29 (0.20, 0.38)	0.71 (0.62, 1.00)	3709.498	2704	-1698.50	23.54	<0.001
E ⁴	-	-	1.00 (1.00, 1.00)	3749.390	2705	-1660.61	63.43	<0.001
Tea²								
Sat				3142.318	2404	-1665.68		
ACE ³	0.62 (0.50, 1.00)	0.00 (0.00, 0.06)	0.38 (0.27, 1.00)	3164.124	2411	-1657.88	21.81	0.00
AE⁴	0.62 (0.50, 1.00)	-	0.38 (0.27, 1.00)	3164.124	2412	-1659.88	0.00	1.00
CE ⁴	-	0.34 (0.24, 0.43)	0.66 (0.57, 1.00)	3198.295	2412	-1625.71	34.17	<0.001
E ⁴	-	-	1.00 (1.00, 1.00)	3240.230	2413	-1585.77	76.11	<0.001
Coffee¹								
Sat				2541.410	1894	-1246.59		
ACE ³	0.41 (0.25, 0.56)	0.00 (0.00, 0.01)	0.59 (0.00, 1.00)	2548.027	1901	-1253.97	6.62	0.47
AE⁴	0.41 (0.25, 0.56)	-	0.59 (0.00, 1.00)	2548.027	1902	-1255.97	0.00	1.00
CE ⁴	-	0.25 (0.12, 0.36)	0.75 (0.64, 1.00)	2555.393	1902	-1248.61	7.37	0.01
E ⁴	-	-	1.00 (1.00, 1.00)	2570.613	1903	-1235.39	22.59	<0.001

Maximum Likelihood Structural Equation Modelling (MLSEM) was used to derive estimates of A, C and E, as well as provide two goodness-of-fit statistics; -2LL and the AIC respectively. The selection of the most parsimonious model was indicated by the p-value and the lowest absolute value of the AIC.

¹ Preference score were split by the median value as =<4 vs >4

² Preference score were split by the median value as =<5 vs >=5

³ The full ACE model was nested within the saturated model

⁴ Sub-models were nested within the full ACE model

⁵ Abbreviations; - 2LL: -2 times log-likelihood of data, df: degrees of freedom, AIC: Akaike Information Criterion (AIC), NNSBs: Non-nutritive sweetened beverages, SSB: Sugar-sweetened beverages

Supplemental Table 4 Drink preference score intraclass correlations (ICC) by zygosity and sex

Drink item (n ¹)	MZ ² ICC ² (95% CI)		MZ ² ICC ² (95% CI)		DZ ICC ² (95% CI)		DZ ² ICC ² (95% CI)		DZ ² ICC ² (95% CI)	
	MM		FF		MM		FF		os	
SSBs (n=2841)	0.294	(0.145, 0.429)	0.414	(0.314, 0.504)	0.265	(0.102, 0.412)	0.207	(0.093, 0.314)	0.000	(-0.106, 0.104)
NNSBs (n=2827)	0.363	(0.220, 0.489)	0.408	(0.307, 0.500)	0.214	(0.045, 0.368)	0.306	(0.198, 0.403)	0.162	(0.061, 0.258)
Fruit squash (n=2847)	0.359	(0.202, 0.494)	0.440	(0.346, 0.526)	0.234	(0.057, 0.393)	0.162	(0.057, 0.263)	0.271	(0.160, 0.371)
Orange juice (n=2849)	0.111	(-0.042, 0.258)	0.316	(0.207, 0.415)	-0.020	(-0.190, 0.152)	0.005	(-0.105, 0.114)	-0.041	(-0.146, 0.066)
Milk (n=2707)	0.263	(0.113, 0.400)	0.431	(0.322, 0.527)	-0.043	(-0.230, 0.147)	0.126	(0.012, 0.235)	0.040	(-0.090, 0.168)
Tea	0.111	(-0.042, 0.258)	0.316	(0.207, 0.415)	-0.020	(-0.190, 0.152)	0.005	(-0.105, 0.114)	-0.041	(-0.146, 0.066)
Coffee	0.263	(0.113, 0.400)	0.431	(0.322, 0.527)	-0.043	(-0.230, 0.147)	0.126	(0.012, 0.235)	0.040	(-0.090, 0.168)

Preference scores were rated on a 5-point Likert scale, with a higher score indicating a higher preference for the drink item.

¹ Number of observations included in mean drink liking score (excl. observations from individuals that never consuming the specific drink)

² Abbreviations: ICCs: Intraclass Correlations; MZ: Monozygotic; DZ: Dizygotic; FF: same sex female pairs only; MM: same sex male pairs only; os: opposite-sex pairs only

Supplemental Table 5 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences for the liking for sugar-sweetened beverages

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.11 (0.00-0.48)	0.26 (0.04-0.44)	0.63 (0.51-0.76)	0.36 (0.12-0.48)	0.04 (0.00-0.24)	0.60 (0.50-0.68)	0.24 (0.00-0.50)	1.00
Full sex limitation (r_C=free)	0.09 (0.00-0.37)	0.28 (0.06-0.44)	0.63 (0.51-0.76)	0.35 (0.08-0.48)	0.05 (0.00-0.27)	0.60 (0.52-0.69)	0.5	1.00 (0.33-1.00)
Common effects model ($r_A=0.5$, $r_C=1$)	0.09 (0.00-0.37)	0.28 (0.06-0.45)	0.63 (0.51-0.76)	0.35 (0.12-0.48)	0.05 (0.00-0.24)	0.60 (0.52-0.69)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.35 (0.27-0.42)		0.00 (0.00-0.06)		0.65 (0.58-0.73)		1.09 (1.03-1.15)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.35 (0.27-0.42)		0.00 (0.00-0.06)		0.65 (0.58-0.73)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 5.1 Heterogeneity model fit statistics for the liking of sugar-sweetened beverages

Model	Comparison	E_p^1	-2LL ¹	df^1	AIC ¹	Δ -2LL	Δdf	p-value	Δ AIC
1 Saturated model		23	9626.144	2818	3990.144				
2 Full sex limitation (r_A =free)	1	9	9699.952	2832	4035.952	73.808	14	<0.001	-45.808
3 Full sex limitation (r_C =free)	1	9	9699.952	2832	4035.952	73.808	14	<0.001	-45.808
4 Common effects model ($r_A=0.5$, $r_C=1$)	2 & 3	8	9699.952	2833	4033.952	0.000	1	1.00	-2.000
5 Scalar Model	4	6	9722.293	2835	4052.293	22.341	2	<0.001	-18.341
6 Homogeneity model (no sex differences)	5	5	9732.027	2836	4060.027	9.734	1	0.002	-7.734

Supplemental Table 6 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences in the liking for non-nutritive sweetened beverages

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.34 (0.05-0.50)	0.04 (0.00-0.32)	0.61 (0.50-0.26)	0.18 (0.08-0.46)	0.22 (0.08-0.41)	0.60 (0.51-0.70)	0.5 (0.39-0.50)	1.00
Full sex limitation (r_C=free)	0.34 (0.12-0.50)	0.04 (0.00-0.36)	0.61 (0.50-0.76)	0.18 (0.04-0.46)	0.22 (0.08-0.41)	0.60 (0.51-0.70)	0.5	1.00 (0.88-1.00)
Common effects model ($r_A=0.5$, $r_C=1$)	0.39 (0.24-0.50)	0.00 (0.00-0.34)	0.61 (0.18-0.26)	0.18 (0.07-0.46)	0.22 (0.10-0.41)	0.60 (0.51-0.70)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.36 (0.15-0.47)		0.04 (0.00-0.19)		0.60 (0.17-0.21)		1.03 (0.97-1.09)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.35 (0.15-0.47)		0.05 (0.04-0.19)		0.60 (0.53-0.68)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 6.1 Heterogeneity model fit statistics for the liking of non-nutritive sweetened beverages

Model	Comparison	E_p^1	-2LL ¹	df ¹	AIC ¹	Δ -2LL	Δ df	p-value	Δ AIC
1 Saturated model		23	9537.307	2804	3929.307				
2 Full sex limitation (r_A =free)	1	9	9545.274	2818	3909.274	7.967	14	0.891	20.033
3 Full sex limitation (r_C =free)	1	9	9545.274	2818	3909.274	7.967	14	0.891	20.033
4 Common effects model ($r_A=0.5$, $r_C=1$)	2 & 3	8	9545.325	2819	3907.325	0.052	1	0.820	-2.00
5 Scalar Model	4	6	9549.760	2821	3907.760	4.4345	2	0.109	0.435
6 Homogeneity model (no sex differences)	5	5	9551.006	2822	3907.006	1.2462	1	0.264	-0.754

Supplemental Table 7 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences in the liking for fruit cordial

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.10 (0.36-0.36)	0.28 (0.15-0.45)	0.62 (0.18-0.78)	0.28 (0.11-0.41)	0.12 (0.03-0.25)	0.60 (0.52-0.69)	0.5 (0.00-0.50)	1.00
Full sex limitation (r_C=free)	0.38 (0.23-0.55)	0.05 (0.22-0.36)	0.57 (0.45-0.71)	0.42 (0.51-0.50)	0.00 (0.00-0.16)	0.58 (0.50-0.67)	0.5	1.00 (0.88-1.00)
Common effects model Both fixes ($r_A=0.5, r_C=1$)	0.38 (0.23-0.55)	0.05 (0.22-0.36)	0.57 (0.45-0.71)	0.42 (0.51-0.50)	0.00 (0.00-0.15)	0.58 (0.50-0.67)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.32 (0.49-0.67)		0.00 (0.15-9.21)		0.68 (0.17-0.21)		-1.17 (-1.24-; -1.11)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.42 (0.36-0.49)		0.00 (0.00-0.15)		0.58 (0.52-0.64)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 7.1 Heterogeneity model fit statistics for the liking of fruit cordial

Model	Comparison	E_p^1	-2LL ¹	df ¹	AIC ¹	Δ -2LL	Δ df	p-value	Δ AIC
1 Saturated model		23	7980.13	2824	2332.13				
2 Full sex limitation (r_A =free)	1	9	8001.96	2838	2325.96	21.829	14	0.082	-6.17
3 Full sex limitation (r_C =free)	1	9	8001.96	2838	2325.96	21.829	14	0.082	-6.17
4 Common effects model ($r_A=0.5, r_C=1$)	2 & 3	8	8001.96	2839	2323.96	0	1	1.00	-2.00
5 Scalar Model	4	6	8063.671	2841	2381.67	61.7113	2	<0.001	-57.71
6 Homogeneity model (no sex differences)	5	5	8038.078	2842	2354.08	-25.593	1	1.00	-27.59

Supplemental Table 8 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences in the liking for orange juice

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.11 (0.00-0.27)	0.00 (0.00-0.16)	0.89 (0.73-1.00)	0.25 (0.10-0.35)	0.00 (0.00-0.10)	0.75 (0.65-0.85)	0.00 (0.00-0.50)	1.00
Full sex limitation (r_C=free)	0.07 (0.00-0.23)	0.01 (0.00-0.16)	0.92 (0.77-1.0)	0.25 (0.13-0.35)	0.00 (0.00-0.09)	0.75 (0.65-0.85)	0.5	1.00 (0.00-1.00)
Common effects model ($r_A=0.5$, $r_C=1$)	0.07 (0.00-0.23)	0.01 (0.00-0.16)	0.92 (0.77-1.0)	0.25 (0.13-0.35)	0.00 (0.00-0.09)	0.75 (0.65-0.85)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.17 (0.08-0.25)		0.00 (0.00-0.05)		0.83 (0.75-0.91)		1.11 (1.05-1.17)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.18 (0.09-0.25)		0.00 (0.00-0.04)		0.82 (0.74-0.90)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 8.1 Heterogeneity model fit statistics for the liking of orange juice

Model	Comparison	E_p^1	$-2LL^1$	df^1	AIC^1	$\Delta-2LL$	Δdf	p-value	ΔAIC
1 Saturated model		23	7794.922	2826	2142.922				
2 Full sex limitation (r_A =free)	1	9	7843.993	2840	2163.993	49.07021	14	<0.001	21.071
3 Full sex limitation (r_C =free)	1	9	7843.993	2840	2163.993	49.07021	14	<0.001	21.071
4 Common effects model ($r_A=0.5$, $r_C=1$)	2 & 3	8	7843.993	2841	2161.993	0.00	1	1	-2.00
5 Scalar Model	4	6	7852.797	2843	2166.797	8.804509	2	0.012	4.804
6 Homogeneity model (no sex differences)	5	5	7866.917	2844	2178.917	14.11965	1	<0.001	12.120

Supplemental Table 9 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences for the liking for milk

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.26 (0.07-0.41)	0.00 (0.00-0.21)	0.74 (0.59-0.90)	0.38 (0.19-0.47)	0.00 (0.10-0.32)	0.62 (0.14-0.19)	0.5 (0.30-0.50)	1.00
Full sex limitation (r_C=free)	0.14 (0.00-0.34)	0.09 (0.00-0.28)	0.78 (0.62-0.94)	0.33 (0.12-0.46)	0.04 (0.00-0.20)	0.63 (0.54-0.73)	0.5	1.00 (0.00-1.00)
Common effects model ($r_A=0.5$, $r_C=1$)	0.14 (0.00-0.34)	0.09 (0.00-0.28)	0.78 (0.62-0.94)	0.33 (0.17-0.46)	0.04 (0.00-0.20)	0.63 (0.54-0.72)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.31 (0.22-0.39)		0.00 (0.00-0.05)		0.69 (0.61-0.77)		1.13 (1.07-1.19)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.32 (0.22-0.39)		0.00 (0.00-0.05)		0.68 (0.61-0.76)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 9.1 Heterogeneity model fit statistics for the liking of milk

Model	Comparison	E_p^1	-2LL ¹	df ¹	AIC ¹	Δ -2LL	Δ df	p-value	Δ AIC
1 Saturated model		23	7256.141	2684	1888.141				
2 Full sex limitation (r_A =free)	1	9	7319.099	2698	1923.099	62.95796	14	<0.001	45.808
3 Full sex limitation (r_C =free)	1	9	7319.099	2698	1923.099	62.95796	14	<0.001	45.808
4 Common effects model ($r_A=0.5$, $r_C=1$)	2 & 3	8	7319.099	2699	1921.099	0.00	1	0.102	2.00
5 Scalar Model	4	6	7325.083	2701	1923.083	5.984397	2	0.050	1.984
6 Homogeneity model (no sex differences)	5	5	7344.600	2702	1940.600	19.51656	1	<0.001	17.517

Supplemental Table 10 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences for the liking for coffee

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.06 (0.00-0.41)	0.15 (0.04-0.34)	0.79 (0.51-0.95)	0.34 (0.12-0.46)	0.00 (0.00-0.14)	0.66 (0.53-0.81)	0.50 (0.00-0.50)	1.00
Full sex limitation (r_C=free)	0.06 (0.00-0.37)	0.15 (0.00-0.34)	0.79 (0.61-0.95)	0.34 (0.12-0.47)	0.00 (0.00-0.15)	0.66 (0.53-0.81)	0.5	1.00 (0.00-1.00)
Common effects model ($r_A=0.5$, $r_C=1$)	0.06 (0.00-0.37)	0.15 (0.00-0.34)	0.79 (0.61-0.95)	0.34 (0.12-0.47)	0.00 (0.00-0.14)	0.66 (0.53-0.81)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.29 (0.11-0.39)		0.00 (0.00-0.06)		0.71 (0.61-0.83)		1.06 (1.00-1.14)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.29 (0.11-0.39)		0.00 (0.00-0.11)		0.71 (0.61-0.82)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 10.1 Heterogeneity model fit statistics for the liking of SSBs

Model	Comparison	E_p^1	-2LL ¹	df ¹	AIC ¹	Δ -2LL	Δ df	p-value	Δ AIC
1 Saturated model		23	6333.358	1882	2569.358				
2 Full sex limitation (r_A =free)	1	9	6349.578	1896	2557.578	16.220	14	0.30	11.78
3 Full sex limitation (r_C =free)	1	9	6349.578	1896	2557.578	16.220	14	0.30	11.78
4 Common effects model ($r_A=0.5$, $r_C=1$)	2 & 3	8	6349.578	1897	2555.578	0	1	0.999	2
5 Scalar Model	4	6	6351.370	1899	2553.370	1.7917	2	0.408	2.208
6 Homogeneity model (no sex differences)	5	5	6355.027	1900	2555.027	3.6571	1	0.056	-1.657

Supplemental Table 11 Parameters estimates (95% Confidence intervals) for A, C and E for males and females considering qualitative and quantitative sex differences for the liking for tea

Model	Male			Female			r_A^1	r_C^1
	A_m^1	C_m^1	E_m^1	A_f^1	C_f^1	E_f^1		
Full sex limitation (r_A=free)	0.42 (0.23-0.55)	0.00 (0.00-0.12)	0.58 (0.45-0.74)	0.49 (0.12-0.48)	0.00 (0.00-0.06)	0.51 (0.42-0.62)	0.02 (0.00-0.32)	1.00
Full sex limitation (r_C=free)	0.24 (0.00-0.37)	0.10 (0.06-0.44)	0.66 (0.51-0.76)	0.44 (0.28-0.48)	0.03 (0.00-0.27)	0.53 (0.43-0.69)	0.5	1.00 (0.00-1.00)
Common effects model ($r_A=0.5$, $r_C=1$)	0.26 (0.00-0.46)	0.09 (0.00-0.29)	0.66 (0.50-0.84)	0.45 (0.28-0.48)	0.02 (0.00-0.13)	0.53 (0.43-0.65)	0.5	1.00
	A		C		E		Scalar	
Scalar Model	0.41 (0.37-0.50)		0.00 (0.00-0.03)		0.59 (0.50-0.68)		1.05 (0.99-1.11)	
	A		C		E		r_A	r_C
Homogeneity model (no sex differences)	0.41 (0.32-0.50)		0.00 (0.00-0.03)		0.59 (0.50-0.68)		0.5	1.00

¹ Abbreviations: A: additive genetic component of variance; C: shared environmental component of variance; E: unique environmental component of variance; r_A : genetic correlation, r_C : shared environmental correlation, r_E : non-shared environmental correlation.

Supplemental Table 11.1 Heterogeneity model fit statistics for the liking of SSBs

Model	Comparison	E_p^1	-2LL ¹	df ¹	AIC ¹	Δ -2LL	Δ df	p-value	Δ AIC
1 Saturated model		23	7087.299	2392	2303.299				
2 Full sex limitation (r_A =free)	1	9	7130.539	2406	2318.539	43.2395	14	<0.001	-15.24
3 Full sex limitation (r_C =free)	1	9	7130.539	2406	2318.539	43.2395	14	<0.001	11.78
4 Common effects model ($r_A=0.5$, $r_C=1$)	2 & 3	8	7129.800	2407	2315.800	0.73889	1	1.00	2.739
5 Scalar Model	4	6	7136.686	2410	2316.686	2.55734	2	0.110	-0.886
6 Homogeneity model (no sex differences)	5	5	7134.129	2409	2316.129	4.32895	1	0.115	0.557