1   Behavioral, neural, and psychiatric correlates of social feedback

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Table 1

Demographics of study sample

Variable	Sample (N=114)
Age	18.52 (1.1)
SES (income to need)	3.61 (2.35)
Sex (female)	57 (50%)
White or Caucasian	69 (60.53%)
Black or African American	33 (28.95%)
Multiracial	12 (10.53%)
Hispanic	3 (2.63%)
Recent psychotropic medication use	13 (12.38%)

Note. N=9 missing recent psychotropic medication use.
Mean (SD) for continuous variables or N (%) for
categorical variables presented.

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Table 2

Correlations between variables of interest

	Mean SD	RewP	FN	Reward Bias	Loss Avoidance	Depression	Social Anxiety
RewP	0 (1.02)	—	0.829	0.013	0.032	-0.08	0.049
FN	0 (1.01)	0.03	—	0.028	0.196	-0.007	0.116
Reward Bias	0.19 (0.57)	0.1	0.099	—	-0.053	0.074	0.024
Loss Avoidance	0.25 (0.61)	0.107	0.107	0.1	—	0.16	0.04
Depression	11.43 (12.91)	0.096	0.096	0.098	0.096	—	0.54
Social Anxiety	4.72 (4.18)	0.095	0.094	0.104	0.101	0.067	—

Note. Correlations coefficients (r) are presented in the upper diagonal, while residual standard errors (rse) are
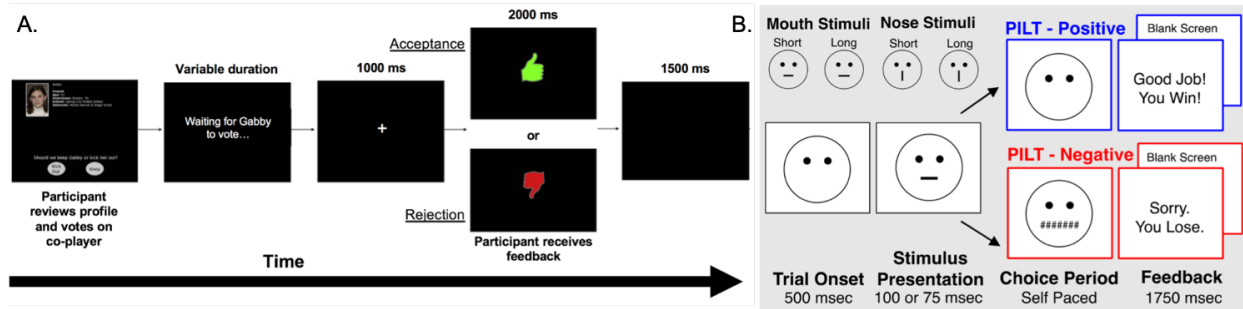
presented in the lower diagonal

Figure 1. Depiction of Island Getaway ERP task trial and schematic of Probabilistic Incentive

Learning Task (PILT)

(#fig:Figure 1)

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31  ## Warning: attributes are not identical across measure variables;
32  ## they will be dropped
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33 **Figure 3**

Table 3

Multiple regressions of RewP/FN predicted by behavioral reward bias and loss avoidance and psychopathology

Predictors	RewP			FN		
	β	CI	p	β	CI	p
Reward bias and loss avoidance						
Intercept	0.07	(-0.244, 0.386)	0.66	0.04	(-0.282, 0.353)	0.82
Reward Bias	-0.02	(-0.235, 0.189)	0.83	0.02	(-0.186, 0.223)	0.86
Loss Avoidance	0.12	(-0.119, 0.349)	0.33	0.25	(0.016, 0.487)	0.04
Age	0.06	(-0.13, 0.254)	0.52	0.01	(-0.181, 0.203)	0.91
Sex	-0.10	(-0.481, 0.277)	0.59	0.00	(-0.376, 0.383)	0.98
Black or AA	-0.12	(-0.6, 0.365)	0.63	-0.13	(-0.615, 0.357)	0.60
Multiracial	0.02	(-0.661, 0.705)	0.95	-0.15	(-0.831, 0.536)	0.67
Hispanic	0.44	(-0.8, 1.67)	0.49	0.56	(-0.674, 1.793)	0.37
SES	0.26	(0.02, 0.495)	0.03	0.17	(-0.073, 0.405)	0.17
Psychopathology						
Intercept	0.07	(-0.244, 0.387)	0.66	0.07	(-0.249, 0.395)	0.65
Depression	-0.12	(-0.367, 0.124)	0.33	-0.09	(-0.334, 0.162)	0.49
Social Anxiety	0.11	(-0.115, 0.336)	0.33	0.16	(-0.069, 0.389)	0.17
Age	0.04	(-0.155, 0.232)	0.69	-0.02	(-0.218, 0.178)	0.84
Sex	-0.11	(-0.488, 0.268)	0.56	-0.05	(-0.439, 0.331)	0.78
Black or AA	-0.12	(-0.596, 0.365)	0.64	-0.14	(-0.63, 0.35)	0.57
Multiracial	0.04	(-0.653, 0.731)	0.91	-0.20	(-0.903, 0.508)	0.58
Hispanic	0.50	(-0.735, 1.746)	0.42	0.58	(-0.68, 1.848)	0.36
SES	0.20	(-0.011, 0.417)	0.06	0.08	(-0.143, 0.293)	0.50

Table 4

Multiple regressions of Reward bias/loss avoidance predicted by psychopathology

	Reward bias			Loss avoidance		
	β	CI	p	β	CI	p
Intercept	-0.01	(-0.358, 0.332)	0.94	0.22	(-0.117, 0.562)	0.20
Depression	0.07	(-0.18, 0.312)	0.60	0.20	(-0.037, 0.438)	0.10
Social Anxiety	-0.02	(-0.262, 0.216)	0.85	-0.04	(-0.269, 0.182)	0.70
Age	-0.09	(-0.29, 0.106)	0.36	-0.06	(-0.255, 0.127)	0.51
Sex	-0.18	(-0.614, 0.265)	0.43	-0.21	(-0.62, 0.197)	0.30
Black or AA	0.21	(-0.296, 0.709)	0.42	-0.21	(-0.728, 0.304)	0.42
Multiracial	0.51	(-0.244, 1.268)	0.18	-0.49	(-1.165, 0.179)	0.15
Hispanic	-0.52	(-1.762, 0.728)	0.41	-0.13	(-1.317, 1.059)	0.83
SES	0.23	(0.005, 0.461)	0.04	-0.35	(-0.581, -0.119)	0.00

Table 5

Model fit of SEM model of hypotheses

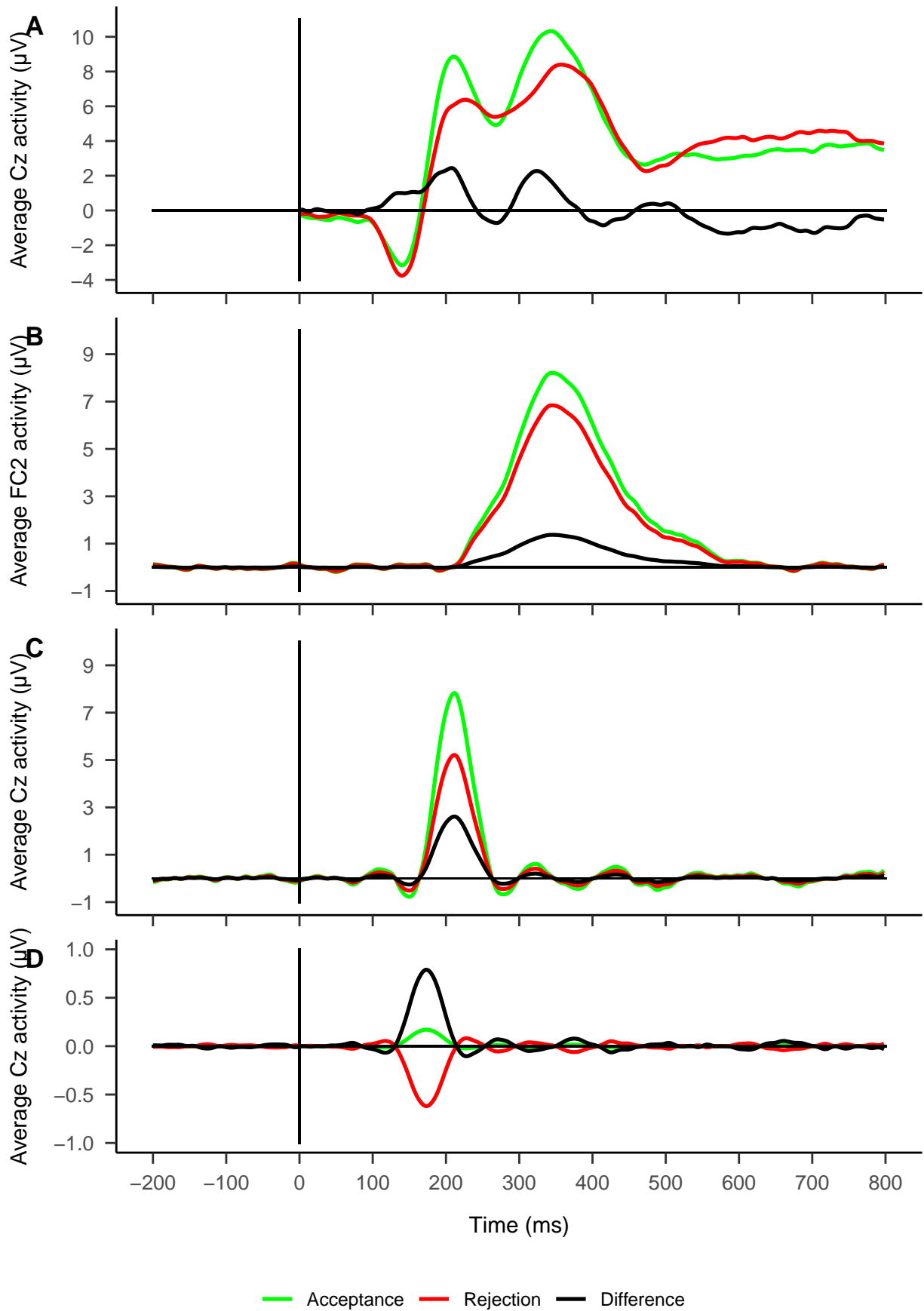| Fit measure	Simplified model	Full model
chisq	18.97	7.11
df	12.00	4.00
pvalue	0.09	0.13
cfi	0.96	0.98
rmsea	0.07	0.08
srmr	0.06	0.03
aic	2,372.37	2,376.52
bic	2,413.42	2,439.45

Note. Delta chi^2 = 13.61

Figure 2. ERP waveforms to acceptance and rejection feedback
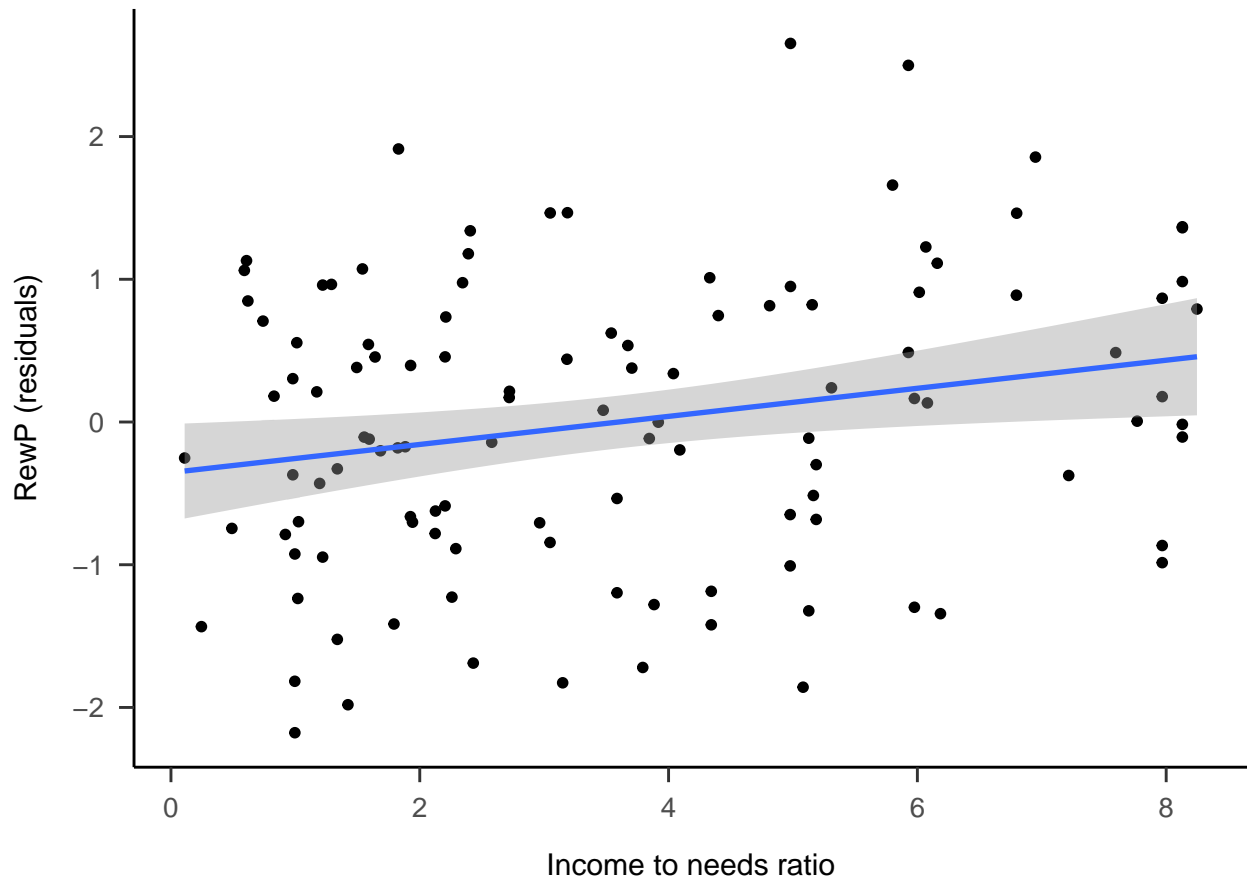
(#fig:Facet plots together)

Figure 3. RewP to social acceptance and income to needs ratio

(#fig:I2N plot)

34 **Supplement**

Table 6

Multiple regressions of RewP/FN predicted by behavioral reward bias and loss avoidance covarying for accuracy

	RewP			FN		
	β	CI	p	β	CI	p
Intercept	0.12	(-0.537, 0.774)	0.72	0.22	(-0.443, 0.891)	0.51
Reward Bias	0.02	(-0.211, 0.257)	0.85	0.06	(-0.154, 0.284)	0.56
Loss Avoidance	0.12	(-0.122, 0.355)	0.33	0.24	(0.002, 0.486)	0.05
PILT-P Accuracy	-0.29	(-0.895, 0.311)	0.33	-0.37	(-0.924, 0.192)	0.19
PILT-N Accuracy	0.26	(-0.321, 0.832)	0.37	0.23	(-0.347, 0.799)	0.42
Age	0.07	(-0.123, 0.268)	0.46	0.02	(-0.181, 0.211)	0.88
Sex	-0.13	(-0.51, 0.256)	0.51	-0.02	(-0.402, 0.367)	0.93
Black or AA	-0.23	(-0.763, 0.298)	0.39	-0.26	(-0.785, 0.268)	0.33
Multiracial	0.08	(-0.613, 0.764)	0.83	-0.09	(-0.775, 0.599)	0.80
Hispanic	0.38	(-0.855, 1.615)	0.54	0.51	(-0.72, 1.741)	0.41
SES	0.24	(0.004, 0.485)	0.05	0.16	(-0.086, 0.396)	0.20

Table 7

Multiple regressions of RewP/FN predicted by behavioral reward bias and loss avoidance and psychopathology covarying for recent psychotropic medication use

Predictors	RewP			FN		
	β	CI	p	β	CI	p
Reward bias and loss avoidance						
Intercept	0.07	(-0.244, 0.386)	0.66	0.04	(-0.282, 0.353)	0.82
Reward Bias	-0.02	(-0.235, 0.189)	0.83	0.02	(-0.186, 0.223)	0.86
Loss Avoidance	0.12	(-0.119, 0.349)	0.33	0.25	(0.016, 0.487)	0.04
Age	0.06	(-0.13, 0.254)	0.52	0.01	(-0.181, 0.203)	0.91
Sex	-0.10	(-0.481, 0.277)	0.59	0.00	(-0.376, 0.383)	0.98
Black or AA	-0.12	(-0.6, 0.365)	0.63	-0.13	(-0.615, 0.357)	0.60
Multiracial	0.02	(-0.661, 0.705)	0.95	-0.15	(-0.831, 0.536)	0.67
Hispanic	0.44	(-0.8, 1.67)	0.49	0.56	(-0.674, 1.793)	0.37
SES	0.26	(0.02, 0.495)	0.03	0.17	(-0.073, 0.405)	0.17
Psychopathology						
Intercept	0.07	(-0.244, 0.387)	0.66	0.07	(-0.249, 0.395)	0.65
Depression	-0.12	(-0.367, 0.124)	0.33	-0.09	(-0.334, 0.162)	0.49
Social Anxiety	0.11	(-0.115, 0.336)	0.33	0.16	(-0.069, 0.389)	0.17
Age	0.04	(-0.155, 0.232)	0.69	-0.02	(-0.218, 0.178)	0.84
Sex	-0.11	(-0.488, 0.268)	0.56	-0.05	(-0.439, 0.331)	0.78
Black or AA	-0.12	(-0.596, 0.365)	0.64	-0.14	(-0.63, 0.35)	0.57
Multiracial	0.04	(-0.653, 0.731)	0.91	-0.20	(-0.903, 0.508)	0.58
Hispanic	0.50	(-0.735, 1.746)	0.42	0.58	(-0.68, 1.848)	0.36
SES	0.20	(-0.011, 0.417)	0.06	0.08	(-0.143, 0.293)	0.50

Table 8

Multiple regressions of Reward bias/loss avoidance predicted by psychopathology covarying for recent psychotropic medication use

	Reward bias			Loss avoidance		
	β	CI	p	β	CI	p
Intercept	-0.04	(-0.424, 0.334)	0.81	0.21	(-0.157, 0.581)	0.25
Depression	0.09	(-0.172, 0.349)	0.50	0.22	(-0.034, 0.472)	0.09
Social Anxiety	-0.08	(-0.362, 0.202)	0.57	-0.08	(-0.334, 0.182)	0.56
Age	-0.12	(-0.338, 0.088)	0.25	-0.09	(-0.296, 0.111)	0.37
Sex	-0.28	(-0.745, 0.186)	0.23	-0.16	(-0.591, 0.282)	0.48
Black or AA	0.23	(-0.319, 0.786)	0.40	-0.22	(-0.798, 0.352)	0.44
Multiracial	0.55	(-0.258, 1.352)	0.18	-0.37	(-1.095, 0.351)	0.31
Hispanic	-0.50	(-1.771, 0.776)	0.44	-0.22	(-1.437, 0.987)	0.71
SES	0.26	(0.019, 0.511)	0.04	-0.31	(-0.558, -0.069)	0.01
Psychotropic medicine use	0.32	(-0.337, 0.98)	0.33	-0.31	(-0.926, 0.307)	0.32

Table 9

Multiple regressions of P2/N1 predicted by behavioral reward bias and loss avoidance and psychopathology covarying for recent psychotropic medication use

Predictors	P2			N1		
	β	CI	p	β	CI	p
Reward bias and loss avoidance						
Intercept	0.07	(-0.244, 0.386)	0.66	0.04	(-0.282, 0.353)	0.82
Reward Bias	-0.02	(-0.235, 0.189)	0.83	0.02	(-0.186, 0.223)	0.86
Loss Avoidance	0.12	(-0.119, 0.349)	0.33	0.25	(0.016, 0.487)	0.04
Age	0.06	(-0.13, 0.254)	0.52	0.01	(-0.181, 0.203)	0.91
Sex	-0.10	(-0.481, 0.277)	0.59	0.00	(-0.376, 0.383)	0.98
Black or AA	-0.12	(-0.6, 0.365)	0.63	-0.13	(-0.615, 0.357)	0.60
Multiracial	0.02	(-0.661, 0.705)	0.95	-0.15	(-0.831, 0.536)	0.67
Hispanic	0.44	(-0.8, 1.67)	0.49	0.56	(-0.674, 1.793)	0.37
SES	0.26	(0.02, 0.495)	0.03	0.17	(-0.073, 0.405)	0.17
Psychopathology						
Intercept	0.07	(-0.244, 0.387)	0.66	0.07	(-0.249, 0.395)	0.65
Depression	-0.12	(-0.367, 0.124)	0.33	-0.09	(-0.334, 0.162)	0.49
Social Anxiety	0.11	(-0.115, 0.336)	0.33	0.16	(-0.069, 0.389)	0.17
Age	0.04	(-0.155, 0.232)	0.69	-0.02	(-0.218, 0.178)	0.84
Sex	-0.11	(-0.488, 0.268)	0.56	-0.05	(-0.439, 0.331)	0.78
Black or AA	-0.12	(-0.596, 0.365)	0.64	-0.14	(-0.63, 0.35)	0.57
Multiracial	0.04	(-0.653, 0.731)	0.91	-0.20	(-0.903, 0.508)	0.58
Hispanic	0.50	(-0.735, 1.746)	0.42	0.58	(-0.68, 1.848)	0.36
SES	0.20	(-0.011, 0.417)	0.06	0.08	(-0.143, 0.293)	0.50