# R<br/>01-FBS: Task EF x Risk Status Paper

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# 1 Participant Characteristics (Demographics Database)

Table 1: Demographic Characteristics

Characteristic	Low Risk, $N = 53$	$\mathbf{High} \ \mathbf{Risk},  N = 40$	Test Statistic	p-value
Age, yr	7.8 (0.7)	7.8 (0.6)	0.44	0.7
Sex			1.2	0.3
Male	30 (57%)	18 (45%)		
Female	23 (43%)	22~(55%)		
Ethnicity				> 0.9
Hispanic/Lantinx	0 (0%)	0 (0%)		
Not Hispanic/Lantinx	53 (100%)	40 (100%)		
Race				0.3
Asian	3(5.7%)	0 (0%)		
Black/AA	0 (0%)	0 (0%)		
White/Caucasian	50 (94%)	40 (100%)		
Income	(0 = 70)	(/-)	10	0.006
< \$51,000	4 (7.7%)	8 (21%)	-	
>\$100,000	26 (50%)	7 (18%)		
\$51,000 - \$100,000	22 (42%)	23 (61%)		
Unknown	1	2		
Mother's Education	1	2		0.008
> Bachelor Degree	23 (44%)	6 (15%)		0.000
AA/Technical Degree	3 (5.8%)	7 (18%)		
Bachelor Degree	23 (44%)	21 (52%)		
9	( , , ,	` '		
High School/GED	3 (5.8%)	6 (15%)		
Unknown Father's Education	1	0		<0.001
> Bachelor Degree	29 (55%)	4 (11%)		< 0.001
AA/Technical Degree	3 (5.7%)	11 (31%)		
AA/ Technical Degree	,	11 (5170)		
Bachelor Degree	15 (28%)	14 (40%)		
High School/GED	6 (11%)	5 (14%)		
Other/NA	0 (0%)	1 (2.9%)		
Unknown	0	5		
BMI %tile	41.7 (23.9)	55.7(23.6)	-2.8	0.006
Total Body Fat %	27.1(3.8)	30.6(4.3)	-4.1	< 0.001
Total Fat Mass	6,818.7 (1,419.0)	8,127.7 (1,833.3)	-3.7	< 0.001
Visceral Fat Mass	157.2 (51.7)	161.2 (55.2)	-0.36	0.7
Lean Fat Mass	17,420.5 (2,574.3)	17,337.7 (2,130.0)	0.17	0.9
IQ	116.1 (16.4)	110.4 (10.8)	1.7	0.085
Unknown	11	13		

<sup>&</sup>lt;sup>1</sup> Mean (SD); n (%)

 $<sup>^2</sup>$  Welch Two Sample t-test; Pearson's Chi-squared test; Fisher's exact test

# 1.1 income

```
Pearson's Chi-squared test

data: xtabs(~risk_status_mom + income, data = covar_demo)
X-squared = 10.368, df = 2, p-value = 0.005605
```

#### 1.2 mom education

Fisher's Exact Test for Count Data

```
data: xtabs(~risk_status_mom + mom_ed, data = covar_demo)
p-value = 0.008449
alternative hypothesis: two.sided
```

# 1.3 bmi percentile

```
Welch Two Sample t-test
```

```
data: bmi_percentile by risk_status_mom
t = -2.8098, df = 84.587, p-value = 0.006157
alternative hypothesis: true difference in means between group Low Risk and group High Risk is not equa
95 percent confidence interval:
   -23.873036  -4.086775
sample estimates:
   mean in group Low Risk mean in group High Risk
```

# 1.4 percent body fat

```
Welch Two Sample t-test
```

41.73509

```
data: dxa_total_body_perc_fat by risk_status_mom
t = -4.136, df = 77.38, p-value = 8.899e-05
alternative hypothesis: true difference in means between group Low Risk and group High Risk is not equa
95 percent confidence interval:
    -5.272136 -1.845600
sample estimates:
    mean in group Low Risk mean in group High Risk
```

30.64000

55.71500

# 1.5 WSI

```
Welch Two Sample t-test
```

```
data: wasi_fsiq2 by risk_status_mom
t = 1.7496, df = 66.923, p-value = 0.08477
```

27.08113

alternative hypothesis: true difference in means between group Low Risk and group High Risk is not equa 95 percent confidence interval:

-0.8078817 12.2787811

sample estimates:

mean in group Low Risk mean in group High Risk 116.1429 110.4074

Pearson's product-moment correlation

data: covar\_demo\$dxa\_total\_body\_perc\_fat and covar\_demo\$wasi\_fsiq2

t = -0.26716, df = 67, p-value = 0.7902

alternative hypothesis: true correlation is not equal to 0

95 percent confidence interval:

-0.2672392 0.2056466

sample estimates:

cor

-0.03262184

# 2 Effect of Risk Status

# 2.1 Go-NoGo

Table 2: Go-NoGo Performance Summary

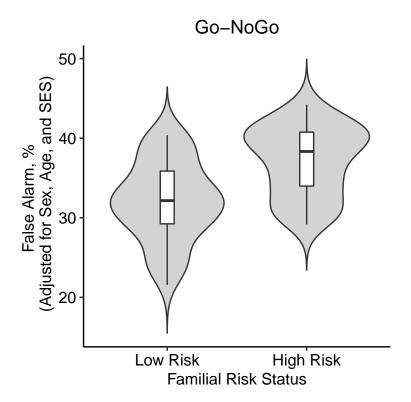
Characteristic	Low Risk, $N = 53$	High Risk, N = 39
Missed, N	4.6 (5.2)	3.9 (3.7)
False Alarm, N	16.0 (8.2)	18.9 (7.9)
Missed, %	3.1(3.5)	2.6(2.5)
False Alarm, %	32.0 (16.4)	37.8 (15.7)
Mean Hit RT, ms	543.6 (60.9)	544.9 (61.6)
Mean False Alarm RT, ms d', loglinear	432.5 (53.2) 2.5 (0.7)	426.6 (53.9) 2.3 (0.6)

<sup>&</sup>lt;sup>1</sup> Mean (SD)

# 2.1.1 Percent False Alarms

Table 3: Go-NoGo Percent False Alarms

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	53.906	22.840	2.360	0.021
mom_edAA/Technical Degree	3.097	6.475	0.478	0.634
mom_edBachelor Degree	-0.255	4.039	-0.063	0.950
$mom\_edHigh\ School/GED$	-2.799	7.983	-0.351	0.727
income> $$100,000$	5.961	6.929	0.860	0.392
income $$51,000 - $100,000$	-0.945	6.137	-0.154	0.878
sexFemale	-6.111	3.595	-1.700	0.093
$age\_yr$	-2.776	2.778	-0.999	0.321
risk_status_momHigh Risk	7.766	3.842	2.021	0.047



# 2.1.2 Percent Hits

Table 4: Go-NoGo - Percent Hits

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	93.843	4.581	20.484	0.000
mom_edAA/Technical Degree	2.066	1.299	1.591	0.116
$mom\_edBachelor Degree$	1.015	0.810	1.253	0.214
$mom\_edHigh\ School/GED$	-0.770	1.601	-0.481	0.632
income> $$100,000$	-1.324	1.390	-0.952	0.344
income $$51,000 - $100,000$	-1.598	1.231	-1.298	0.198
sexFemale	0.926	0.721	1.284	0.203
age_yr	0.439	0.557	0.788	0.433
risk_status_momHigh Risk	-0.075	0.771	-0.097	0.923

# 2.1.3 Go Reaction Time

Table 5: Go-NoGo - Go Reaction Time

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	771.113	86.643	8.900	0.000
mom_edAA/Technical Degree	-21.783	24.561	-0.887	0.378
$mom\_edBachelor Degree$	-21.430	15.322	-1.399	0.166
$mom\_edHigh\ School/GED$	-24.738	30.282	-0.817	0.416
income> $$100,000$	-26.475	26.284	-1.007	0.317
income\$51,000 - \$100,000	-16.345	23.279	-0.702	0.485
sexFemale	16.386	13.637	1.202	0.233
$age\_yr$	-25.797	10.539	-2.448	0.017
$risk\_status\_momHigh\ Risk$	3.206	14.575	0.220	0.826

# 2.1.4 d'

Table 6: Go-NoGo - d'

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	1.384	0.950	1.457	0.149
mom_edAA/Technical Degree	0.141	0.269	0.523	0.603
$mom\_edBachelor Degree$	0.068	0.168	0.402	0.689
$mom\_edHigh\ School/GED$	-0.082	0.332	-0.248	0.805
income> $$100,000$	-0.292	0.288	-1.013	0.314
income $$51,000 - $100,000$	-0.131	0.255	-0.513	0.610
sexFemale	0.272	0.150	1.820	0.073
age_yr	0.149	0.116	1.287	0.202
$risk\_status\_momHigh Risk$	-0.263	0.160	-1.645	0.104

# 2.2 Stop-Signal Task

Table 7: Stop-Signal Task Performance Summary: Risk Status across all trials

Characteristic	Low Risk, N = 48	High Risk, N = 34
race horse		
0	3(6.2%)	6 (18%)
1	45 (94%)	28 (82%)
Go RT, ms	655.5 (105.8)	646.7 (130.5)
L/R Response Error, N	5.3 (8.0)	5.1 (5.7)
Misses, N	2.9(4.0)	4.9(6.9)
SSD, ms	303.3 (86.8)	255.0 (89.7)
SSRT - Mean Method, ms	350.9 (61.9)	377.8 (85.5)
SSRT - Integration Method, ms	313.6 (82.0)	375.9 (124.4)

<sup>&</sup>lt;sup>1</sup> n (%); Mean (SD)

Table 8: Stop-Signal Task Performance Summary: Risk Status by Energy Density Condition

	Lov	v ED	Hig	h ED
Characteristic	Low Risk, N = 30	High Risk, N = 25	Low Risk, N = 30	High Risk, N = 25
Go RT, ms	673.6 (115.2)	668.9 (144.3)	677.1 (95.7)	656.5 (139.1)
L/R Response Error, N	2.6 (3.9)	2.3 (2.1)	1.6 (2.0)	2.3(2.2)
Misses, N	1.6(2.8)	2.9(4.1)	1.3(1.7)	2.4(4.0)
SSD, ms	326.4 (97.1)	283.8 (98.9)	324.4 (77.9)	266.6 (87.1)
SSRT - Mean Method, ms	342.3 (49.2)	378.2 (92.5)	347.7 (49.3)	386.4 (92.5)
SSRT - Integration Method, ms	299.4 (70.1)	367.6 (174.6)	294.8 (46.0)	373.1 (111.5)

<sup>&</sup>lt;sup>1</sup> Mean (SD)

Table 9: Stop-Signal Task Performance Summary: Risk Status by Portion Size Condition

	Small PS		Large PS		
Characteristic	Low Risk, N = 33	High Risk, N = 25	Low Risk, N = 33	High Risk, N = 25	
Go RT, ms	664.1 (112.5)	664.8 (139.9)	672.4 (117.9)	666.0 (142.9)	
L/R Response Error, N	2.4 (3.4)	1.9 (1.7)	1.8 (2.9)	2.8 (2.4)	
Misses, N	1.8 (3.1)	2.9 (4.4)	1.5(2.0)	2.4 (3.8)	
SSD, ms	304.6 (95.9)	272.7 (90.0)	322.6 (92.0)	288.2 (86.6)	
SSRT - Mean Method, ms	355.0 (53.5)	381.4 (92.3)	346.2 (60.4)	373.0 (90.2)	
SSRT - Integration Method, ms	309.8 (66.4)	375.3 (121.6)	307.3 (67.9)	345.5 (113.8)	

<sup>&</sup>lt;sup>1</sup> Mean (SD)

# 2.2.1 Stop Signal Reaction Time

Table 10: Stop-Signal Task SSRT - ED x PS

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	498.188	142.863	32.66	3.487	0.001
mom_edAA/Technical Degree	45.098	44.200	32.00	1.020	0.315
$mom\_edBachelor Degree$	11.662	24.830	32.00	0.470	0.642
$mom\_edHigh\ School/GED$	-61.251	40.577	32.00	-1.509	0.141
income> $$100,000$	-72.180	37.009	32.00	-1.950	0.060
income\$51,000 - \$100,000	-40.158	33.421	32.00	-1.202	0.238
sexFemale	18.812	20.916	32.00	0.899	0.375
$age\_yr$	-19.723	18.130	32.00	-1.088	0.285
PSLarge PS	-3.502	23.531	117.00	-0.149	0.882
EDHigh ED	7.794	23.531	117.00	0.331	0.741
PSLarge PS:EDHigh ED	13.989	33.278	117.00	0.420	0.675

# 2.2.1.1 Design

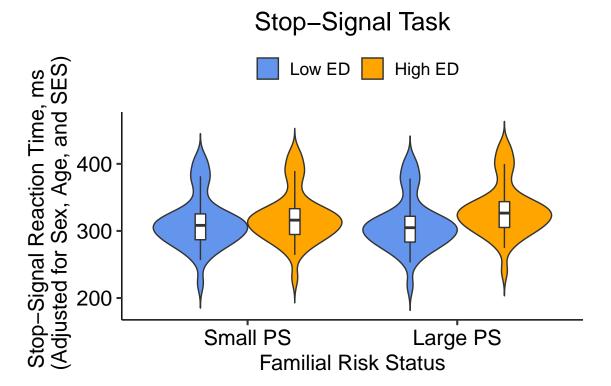
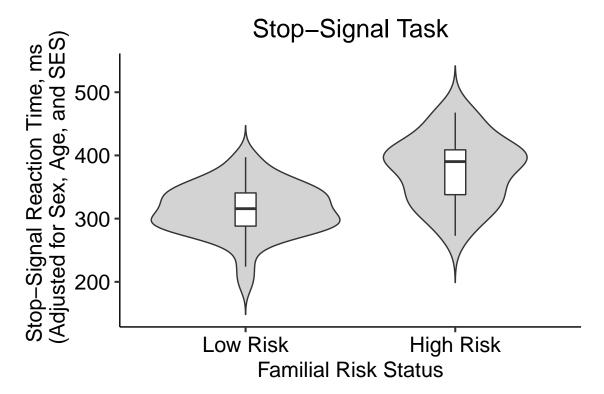


Table 11: Stop-Signal Task SSRT - Risk Status

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	668.116	164.378	4.065	0.000
mom_edAA/Technical Degree	51.718	50.279	1.029	0.308
$mom\_edBachelor Degree$	-24.764	28.895	-0.857	0.395
$mom\_edHigh\ School/GED$	-82.236	55.160	-1.491	0.141
income> $$100,000$	5.889	50.927	0.116	0.908
income\$51,000 - \$100,000	-6.496	47.774	-0.136	0.892
sexFemale	13.796	24.482	0.564	0.575
$age\_yr$	-44.512	20.017	-2.224	0.030
$risk\_status\_momHigh\ Risk$	69.065	27.516	2.510	0.015

# 2.2.1.2 Overall



#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 315 20.1 60 274 355 High Risk 384 22.3 60 339 428

Results are averaged over the levels of:  $mom_ed$ , income, sex Confidence level used: 0.95

### \$contrasts

contrast estimate SE df t.ratio p.value

Low Risk - High Risk -69.1 27.5 60 -2.510 0.0148

Results are averaged over the levels of:  $mom\_ed$ , income, sex

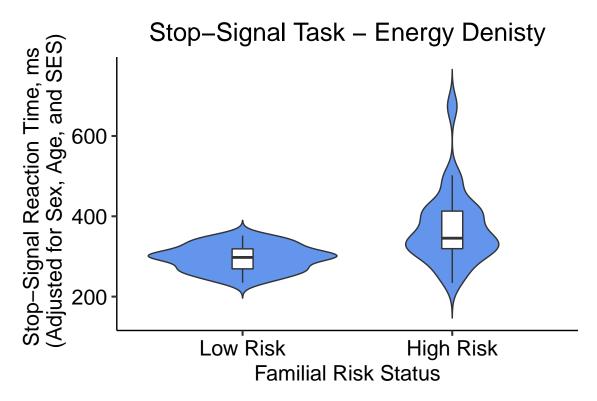
age\_yr age\_yr.trend SE df t.ratio p.value 7.78 -44.5 20 60 -2.224 0.0299

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom

Table 12: Stop-Signal Task SSRT - ED x Risk Status

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	652.049	175.664	43.308	3.712	0.001
mom_edAA/Technical Degree	47.054	56.412	43.000	0.834	0.409
mom_edBachelor Degree	-52.936	31.424	43.000	-1.685	0.099
$mom\_edHigh\ School/GED$	-105.585	53.747	43.000	-1.964	0.056
income> $$100,000$	-18.289	49.114	43.000	-0.372	0.711
income\$51,000 - \$100,000	-26.808	44.968	43.000	-0.596	0.554
sexFemale	-3.391	26.491	43.000	-0.128	0.899
age_yr	-39.442	21.795	43.000	-1.810	0.077
EDHigh ED	-1.467	20.974	50.000	-0.070	0.945
risk_status_momHigh Risk	85.698	32.568	67.892	2.631	0.011
EDHigh ED:risk_status_momHigh Risk	10.145	31.537	50.000	0.322	0.749

# 2.2.1.3 Energy Density Trials



#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 301 22.4 43 256 346 High Risk 392 22.6 43 346 438

Results are averaged over the levels of: mom\_ed, income, sex, ED

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

```
contrast estimate SE df t.ratio p.value Low Risk - High Risk -90.8 28.5 43 -3.185 0.0027
```

Results are averaged over the levels of: mom\_ed, income, sex, ED Degrees-of-freedom method: kenward-roger

#### \$emmeans

ED emmean SE df lower.CL upper.CL Low ED 345 19.1 60.3 307 383 High ED 348 19.1 60.3 310 387

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

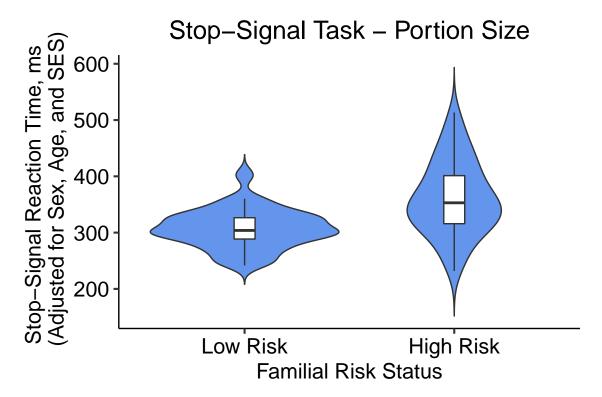
contrast estimate SE df t.ratio p.value Low ED - High ED -3.61 15.8 50 -0.229 0.8201

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Table 13: Stop-Signal Task SSRT - PS x Risk Status

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	562.167	145.687	45.369	3.859	0.000
mom_edAA/Technical Degree	-36.399	46.014	45.000	-0.791	0.433
mom_edBachelor Degree	-28.541	26.029	45.000	-1.097	0.279
$mom\_edHigh\ School/GED$	-99.459	46.569	45.000	-2.136	0.038
income > \$100,000	-27.560	42.456	45.000	-0.649	0.520
income\$51,000 - \$100,000	-11.140	38.657	45.000	-0.288	0.775
sexFemale	13.745	22.132	45.000	0.621	0.538
$age\_yr$	-28.772	18.028	45.000	-1.596	0.117
PSLarge PS	5.808	18.604	52.000	0.312	0.756
risk_status_momHigh Risk	78.080	27.484	75.372	2.841	0.006
PSLarge PS:risk_status_momHigh Risk	-34.724	28.507	52.000	-1.218	0.229

# 2.2.1.4 Portion Size Trials



#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 294 18.1 45 258 331 High Risk 355 20.4 45 314 396

Results are averaged over the levels of:  $mom\_ed$ , income, sex, PS

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

```
contrast estimate SE df t.ratio p.value Low Risk - High Risk -60.7 23.5 45 -2.584 0.0131
```

Results are averaged over the levels of: mom\_ed, income, sex, PS Degrees-of-freedom method: kenward-roger

#### \$emmeans

PS emmean SE df lower.CL upper.CL Small PS 330 16.9 64.1 297 364 Large PS 319 16.9 64.1 285 352

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Small PS - Large PS 11.6 14.3 52 0.811 0.4213

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

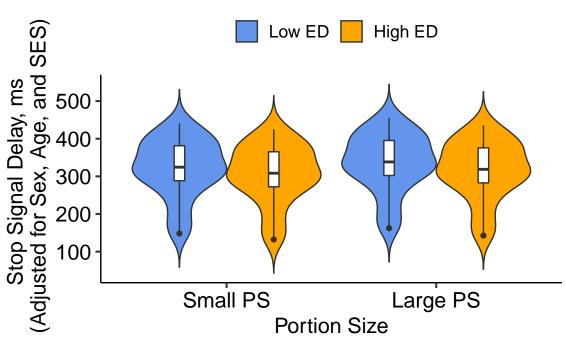
# 2.2.2 Stop Signal Delay

Table 14: Stop-Signal Task SSD - ED x PS

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	228.237	183.535	32.118	1.244	0.223
mom_edAA/Technical Degree	-100.066	57.022	32.000	-1.755	0.089
mom_edBachelor Degree	-39.245	32.032	32.000	-1.225	0.229
$mom\_edHigh\ School/GED$	-5.423	52.348	32.000	-0.104	0.918
income > \$100,000	36.098	47.744	32.000	0.756	0.455
income\$51,000 - \$100,000	17.549	43.116	32.000	0.407	0.687
sexFemale	36.847	26.984	32.000	1.366	0.182
$age\_yr$	10.464	23.390	32.000	0.447	0.658
PSLarge PS	13.964	12.832	117.000	1.088	0.279
EDHigh ED	-16.042	12.832	117.000	-1.250	0.214
PSLarge PS:EDHigh ED	-3.600	18.148	117.000	-0.198	0.843

# 2.2.2.1 Design





# \$emmeans

ED emmean SE df lower.CL upper.CL Low ED 316 18.5 36.2 279 354 High ED 298 18.5 36.2 261 336

Results are averaged over the levels of: mom\_ed, income, sex, PS

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

# \$contrasts

contrast estimate SE df t.ratio p.value Low ED - High ED 17.8 9.07 117 1.966 0.0516

Results are averaged over the levels of: mom\_ed, income, sex, PS Degrees-of-freedom method: kenward-roger

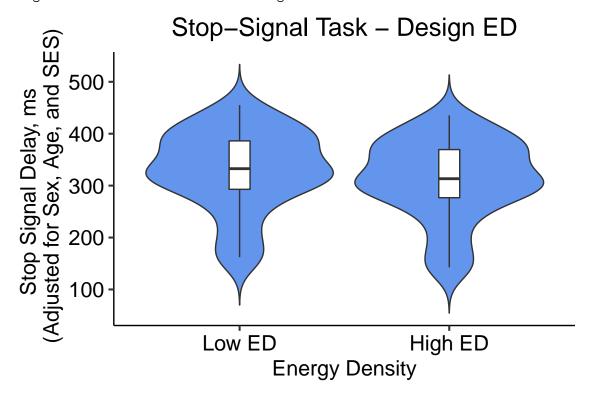
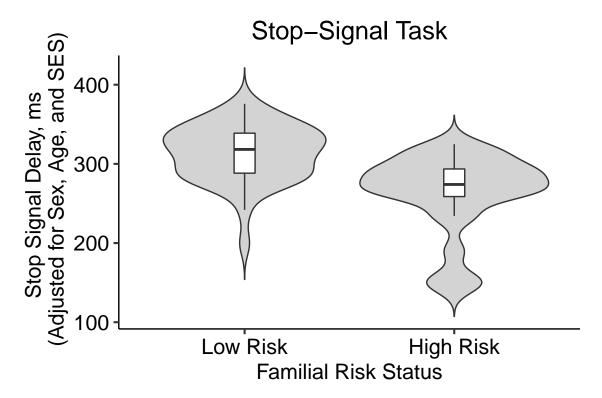


Table 15: Stop-Signal Task SSD - Risk Status

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	156.277	135.022	1.157	0.252
mom_edAA/Technical Degree	-101.175	41.300	-2.450	0.017
$mom\_edBachelor Degree$	-9.519	23.734	-0.401	0.690
$mom\_edHigh\ School/GED$	29.141	45.309	0.643	0.523
income> $$100,000$	1.571	41.832	0.038	0.970
income\$51,000 - \$100,000	14.707	39.243	0.375	0.709
sexFemale	39.853	20.110	1.982	0.052
$age\_yr$	17.845	16.442	1.085	0.282
$risk\_status\_momHigh\ Risk$	-52.107	22.602	-2.305	0.025

# 2.2.2.2 All Trials



#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 300 16.5 60 267 333 High Risk 248 18.3 60 211 285

Results are averaged over the levels of:  $mom_ed$ , income, sex Confidence level used: 0.95

### \$contrasts

contrast estimate SE df t.ratio p.value

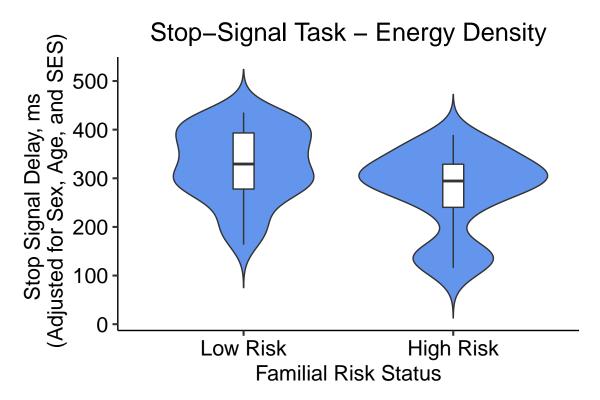
Low Risk - High Risk 52.1 22.6 60 2.305 0.0246

Results are averaged over the levels of:  $mom\_ed$ , income, sex

Table 16: Stop-Signal Task SSD - Risk Status x $\rm ED$ 

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	179.451	165.393	43.096	1.085	0.284
mom_edAA/Technical Degree	-64.496	53.179	43.000	-1.213	0.232
mom_edBachelor Degree	3.666	29.623	43.000	0.124	0.902
$mom\_edHigh\ School/GED$	44.748	50.667	43.000	0.883	0.382
income> $$100,000$	9.070	46.299	43.000	0.196	0.846
income\$51,000 - \$100,000	18.598	42.390	43.000	0.439	0.663
sexFemale	56.130	24.972	43.000	2.248	0.030
$age\_yr$	14.287	20.546	43.000	0.695	0.491
EDHigh ED	-4.775	11.059	50.000	-0.432	0.668
risk_status_momHigh Risk	-59.444	28.120	51.230	-2.114	0.039
EDHigh ED:risk_status_momHigh Risk	-15.299	16.629	50.000	-0.920	0.362

# 2.2.2.3 Energy Density Trials



#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 321 21.1 43 278 363 High Risk 254 21.3 43 211 297

Results are averaged over the levels of:  $mom\_ed$ , income, sex, ED

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

\$contrasts estimate SE df t.ratio p.value Low Risk - High Risk 67.1 26.9 43 2.498 0.0164

Results are averaged over the levels of: mom\_ed, income, sex, ED Degrees-of-freedom method: kenward-roger

#### \$emmeans

ED emmean SE df lower.CL upper.CL Low ED 294 16.9 48.5 260 328 High ED 281 16.9 48.5 247 315

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

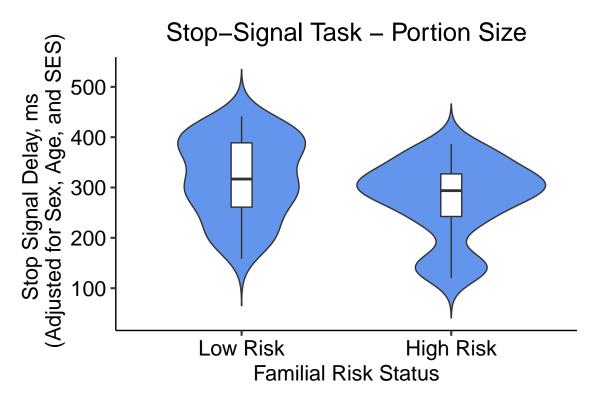
contrast estimate SE df t.ratio p.value Low ED - High ED 12.4 8.31 50 1.494 0.1414

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Table 17: Stop-Signal Task SSD - Risk Status x $\operatorname{PS}$ 

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	179.797	161.060	45.104	1.116	0.270
mom_edAA/Technical Degree	-75.372	50.944	45.000	-1.480	0.146
mom_edBachelor Degree	-7.256	28.818	45.000	-0.252	0.802
$mom\_edHigh\ School/GED$	38.690	51.558	45.000	0.750	0.457
income> $$100,000$	15.141	47.004	45.000	0.322	0.749
income\$51,000 - \$100,000	11.721	42.798	45.000	0.274	0.785
sexFemale	50.047	24.503	45.000	2.043	0.047
$age\_yr$	13.766	19.959	45.000	0.690	0.494
PSLarge PS	14.587	10.952	52.000	1.332	0.189
risk_status_momHigh Risk	-58.315	27.337	54.338	-2.133	0.037
$PSLarge\ PS:risk\_status\_momHigh\ Risk$	2.101	16.781	52.000	0.125	0.901

#### 2.2.2.4 Portion Size Trials



# \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 317 20.1 45 277 358 High Risk 260 22.6 45 214 305

Results are averaged over the levels of:  ${\tt mom\_ed},$  income,  ${\tt sex},$   ${\tt PS}$ 

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Low Risk - High Risk 57.3 26 45 2.201 0.0329

Results are averaged over the levels of: mom\_ed, income, sex, PS Degrees-of-freedom method: kenward-roger

#### \$emmeans

PS emmean SE df lower.CL upper.CL Small PS 281 17.4 50.5 246 316 Large PS 296 17.4 50.5 261 331

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Small PS - Large PS -15.6 8.39 52 -1.864 0.0680

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

#### \$emmeans

 sex
 emmean
 SE df lower.CL upper.CL

 Male
 264 22.0 45 219 308

 Female
 314 19.8 45 274 353

Results are averaged over the levels of: mom\_ed, income, PS, risk\_status\_mom Degrees-of-freedom method: kenward-roger Confidence level used: 0.95

#### \$contrasts

Results are averaged over the levels of: mom\_ed, income, PS, risk\_status\_mom Degrees-of-freedom method: kenward-roger

# 2.3 N-back

Table 18: Nback Performance Summary

	0-F	Back	1-F	Back	2-J	2-Back		
Characteristic	Low Risk, N = 50	High Risk, N = 37	Low Risk, N = 50	High Risk, N = 37	Low Risk, N = 50	High R		
Hits, N	15.5 (1.6)	15.9 (0.3)	15.2 (1.2)	14.7 (1.8)	10.1 (3.2)	8.7		
Hits, %	97.1 (8.8)	99.3 (2.0)	95.1(7.4)	91.7 (11.0)	62.9 (19.8)	54.4		
False Alarm, N	2.0 (6.2)	0.9(1.2)	0.7(1.2)	0.5(0.7)	0.8 (1.2)	1.7		
False Alarm, %	4.6 (14.4)	2.1(2.8)	1.6(2.8)	1.2(1.5)	1.9(2.7)	3.9		
Ballanced Acc, $\%$	96.2 (10.3)	98.6 (1.6)	96.7 (4.0)	95.3 (5.4)	80.5 (9.8)	75.2		
Target RT, ms	634.5 (93.9)	633.6 (68.1)	739.7 (119.4)	767.3 (98.1)	810.5 (188.1)	871.7		

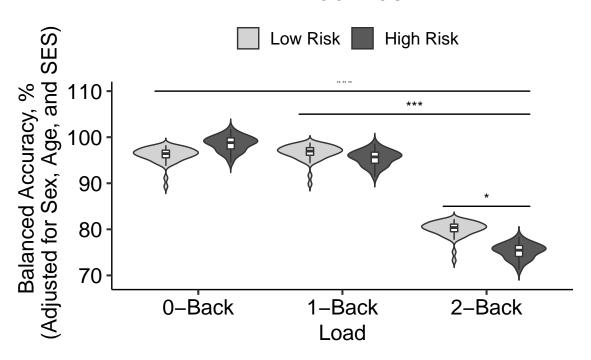
<sup>&</sup>lt;sup>1</sup> Mean (SD)

# 2.3.1 Ballanced Accuracy

Table 19: Nback Balanced Accuracy - Risk Status x Load

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	91.899	7.717	76.026	11.908	0.000
mom_edAA/Technical Degree	-3.262	2.137	74.000	-1.527	0.131
mom_edBachelor Degree	0.455	1.331	74.000	0.342	0.733
$mom\_edHigh\ School/GED$	0.172	2.459	74.000	0.070	0.944
income>\$100,000	2.137	2.234	74.000	0.957	0.342
income $$51,000 - $100,000$	2.149	2.011	74.000	1.069	0.289
sexFemale	-0.917	1.169	74.000	-0.785	0.435
$age\_yr$	0.339	0.949	74.000	0.358	0.722
block1-Back	0.549	1.551	162.000	0.354	0.724
block2-Back	-16.052	1.551	162.000	-10.352	0.000
risk_status_momHigh Risk	3.104	1.853	218.046	1.675	0.095
block1-Back:risk_status_momHigh Risk	-3.658	2.388	162.000	-1.532	0.128
block2-Back:risk_status_momHigh Risk	-7.300	2.388	162.000	-3.057	0.003

# N-Back Task



### \$emmeans

block	${\tt emmean}$	SE	df	lower.CL	upper.CL
0-Back	96.4	1.01	191	94.4	98.4
1-Back	95.1	1.01	191	93.1	97.1
2-Back	76.7	1.01	191	74.7	78.7

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value (0-Back) - (1-Back) 1.28 1.19 162 1.072 0.2854 (0-Back) - (2-Back) 19.70 1.19 162 16.501 <.0001 (1-Back) - (2-Back) 18.42 1.19 162 15.429 <.0001

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 89.7 0.952 74 87.8 91.6 High Risk 89.1 0.983 74 87.2 91.1

Results are averaged over the levels of: mom\_ed, income, sex, block

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Low Risk - High Risk 0.549 1.24 74 0.443 0.6592

Results are averaged over the levels of: mom\_ed, income, sex, block Degrees-of-freedom method: kenward-roger

#### \$emmeans

block	risk_status_mom	emmean	SE	df	lower.CL	upper.CL
0-Back	Low Risk	94.9	1.31	194	92.3	97.4
1-Back	Low Risk	95.4	1.31	194	92.8	98.0
2-Back	Low Risk	78.8	1.31	194	76.2	81.4
0-Back	High Risk	98.0	1.44	213	95.1	100.8
1-Back	High Risk	94.8	1.44	213	92.0	97.7
2-Back	High Risk	74.6	1.44	213	71.8	77.4

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

# \$contrasts

contrast SE df t.ratio p.value estimate -0.54908 1.55 162 -0.354 0.7237 (0-Back Low Risk) - (1-Back Low Risk) (0-Back Low Risk) - (2-Back Low Risk) 16.05248 1.55 162 10.352 <.0001 (0-Back Low Risk) - (0-Back High Risk) -3.10395 1.85 218 -1.675 0.0954 (0-Back Low Risk) - (1-Back High Risk) 0.00482 1.85 218 0.003 0.9979 (0-Back Low Risk) - (2-Back High Risk) 20.24836 1.85 218 10.924 <.0001 (1-Back Low Risk) - (2-Back Low Risk) 16.60156 1.55 162 10.706 <.0001 (1-Back Low Risk) - (0-Back High Risk) -2.55487 1.85 218 -1.378 0.1695 (1-Back Low Risk) - (1-Back High Risk) 0.55390 1.85 218 0.299 0.7653

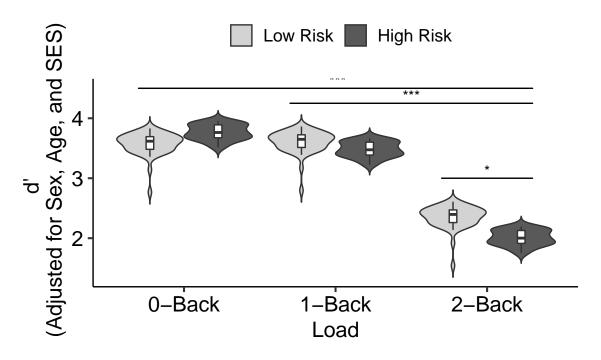
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(1-Back Low Risk) - (2-Back High Risk) 20.79745 1.85 218 11.221 <.0001 (2-Back Low Risk) - (0-Back High Risk) -19.15643 1.85 218 -10.335 <.0001 (2-Back Low Risk) - (1-Back High Risk) -16.04766 1.85 218 -8.658 <.0001 (2-Back Low Risk) - (2-Back High Risk) 4.19588 1.85 218 2.264 0.0246 (0-Back High Risk) - (1-Back High Risk) 3.10877 1.82 162 1.712 0.0888 (0-Back High Risk) - (2-Back High Risk) 23.35231 1.82 162 12.859 <.0001 (1-Back High Risk) - (2-Back High Risk) 20.24354 1.82 162 11.147 <.0001
```

Results are averaged over the levels of: mom\_ed, income, sex Degrees-of-freedom method: kenward-roger

Table 20: N<br/>back Balanced Accuracy - Risk Status  ${\bf x}$  Load

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	3.435	0.660	75.724	5.202	0.000
mom_edAA/Technical Degree	-0.222	0.183	74.000	-1.214	0.229
mom_edBachelor Degree	0.031	0.114	74.000	0.276	0.784
mom_edHigh School/GED	0.021	0.211	74.000	0.100	0.921
income> $$100,000$	0.116	0.191	74.000	0.605	0.547
income\$51,000 - \$100,000	0.139	0.172	74.000	0.808	0.422
sexFemale	0.003	0.100	74.000	0.035	0.972
$age\_yr$	0.003	0.081	74.000	0.034	0.973
block1-Back	0.031	0.123	162.000	0.255	0.799
block2-Back	-1.222	0.123	162.000	-9.972	0.000
risk_status_momHigh Risk	0.216	0.152	207.117	1.419	0.158
block1-Back:risk_status_momHigh Risk	-0.319	0.189	162.000	-1.693	0.092
$block 2\text{-}Back: risk\_status\_momHigh~Risk$	-0.540	0.189	162.000	-2.863	0.005

# N-Back Task



# \$emmeans

block	risk_status_mom	${\tt emmean}$	SE	df	lower.CL	upper.CL
0-Back	Low Risk	3.50	0.108	181	3.29	3.71
1-Back	Low Risk	3.53	0.108	181	3.32	3.74
2-Back	Low Risk	2.28	0.108	181	2.07	2.49
0-Back	High Risk	3.72	0.118	201	3.48	3.95
1-Back	High Risk	3.43	0.118	201	3.20	3.66

2-Back High Risk 1.95 0.118 201 1.72 2.19

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast	estimate SE df t.ratio p.value	9
(0-Back Low Risk) - (1-Back Low Risk)	-0.0313 0.123 162 -0.255 0.7990	)
(O-Back Low Risk) - (2-Back Low Risk)	1.2217 0.123 162 9.972 <.0001	L
(O-Back Low Risk) - (O-Back High Risk)	-0.2157 0.152 207 -1.419 0.1575	5
(O-Back Low Risk) - (1-Back High Risk)	0.0725 0.152 207 0.477 0.6338	3
(O-Back Low Risk) - (2-Back High Risk)	1.5461 0.152 207 10.168 <.0001	L
(1-Back Low Risk) - (2-Back Low Risk)	1.2530 0.123 162 10.227 <.0001	L
(1-Back Low Risk) - (0-Back High Risk)	-0.1844 0.152 207 -1.213 0.2265	5
(1-Back Low Risk) - (1-Back High Risk)	0.1038 0.152 207	3
(1-Back Low Risk) - (2-Back High Risk)	1.5773 0.152 207 10.374 <.0001	L
(2-Back Low Risk) - (0-Back High Risk)	-1.4374 0.152 207 -9.453 <.0001	L
(2-Back Low Risk) - (1-Back High Risk)	-1.1492 0.152 207 -7.558 <.0001	L
(2-Back Low Risk) - (2-Back High Risk)	0.3244 0.152 207 2.133 0.0341	L
(0-Back High Risk) - (1-Back High Risk)	0.2882 0.143 162 2.009 0.0462	2
(0-Back High Risk) - (2-Back High Risk)	1.7618 0.143 162 12.280 <.0001	L
(1-Back High Risk) - (2-Back High Risk)	1.4735 0.143 162 10.271 <.0001	L

Results are averaged over the levels of: mom\_ed, income, sex Degrees-of-freedom method: kenward-roger

#### \$emmeans

block emmean SE df lower.CL upper.CL 0-Back 3.61 0.0838 178 3.44 3.77 1-Back 3.48 0.0838 178 3.31 3.65 2-Back 2.12 0.0838 178 1.95 2.28

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value (0-Back) - (1-Back) 0.128 0.0943 162 1.362 0.1751 (0-Back) - (2-Back) 1.492 0.0943 162 15.814 <.0001 (1-Back) - (2-Back) 1.363 0.0943 162 14.452 <.0001

Results are averaged over the levels of: mom\_ed, income, sex, risk\_status\_mom Degrees-of-freedom method: kenward-roger

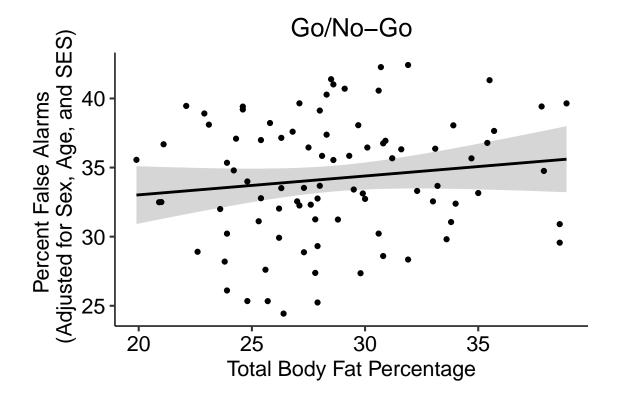
# 3 Effect of Total Body Fat Percentage

# 3.1 Go-NoGo

# 3.1.1 Percent False Alarms

Table 21: Go-NoGo Percent False Alarms - Body Fat Percentage

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	44.029	26.885	1.638	0.105
mom_edAA/Technical Degree	5.348	6.477	0.826	0.411
$mom\_edBachelor Degree$	1.316	4.018	0.328	0.744
$mom\_edHigh\ School/GED$	-2.863	8.260	-0.347	0.730
income> $$100,000$	3.060	6.908	0.443	0.659
income $$51,000 - $100,000$	-1.736	6.241	-0.278	0.782
sexFemale	-5.970	3.924	-1.521	0.132
$age\_yr$	-2.632	2.843	-0.926	0.357
$dxa\_total\_body\_perc\_fat$	0.434	0.446	0.972	0.334



# 3.1.2 Percent Hits

Table 22: Go-NoGo - Percent Hits - Body Fat Percentage

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	94.783	5.286	17.932	0.000
mom_edAA/Technical Degree	2.111	1.273	1.657	0.101
mom_edBachelor Degree	1.023	0.790	1.295	0.199
$mom\_edHigh\ School/GED$	-0.670	1.624	-0.412	0.681
income> $$100,000$	-1.297	1.358	-0.955	0.342
income $$51,000 - $100,000$	-1.598	1.227	-1.302	0.197
sexFemale	1.028	0.772	1.333	0.187
age_yr	0.422	0.559	0.755	0.452
dxa_total_body_perc_fat	-0.032	0.088	-0.365	0.716

# 3.1.3 Go Reaction Time

Table 23: Go-NoGo - Go Reaction Time

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	776.690	100.069	7.762	0.000
mom_edAA/Technical Degree	-20.090	24.109	-0.833	0.407
$mom\_edBachelor Degree$	-20.516	14.954	-1.372	0.174
$mom\_edHigh\ School/GED$	-23.621	30.746	-0.768	0.445
income> $$100,000$	-27.689	25.712	-1.077	0.285
income\$51,000 - \$100,000	-16.752	23.228	-0.721	0.473
sexFemale	17.626	14.607	1.207	0.231
$age\_yr$	-25.916	10.581	-2.449	0.017
$dxa\_total\_body\_perc\_fat$	-0.139	1.660	-0.084	0.934

# 3.1.4 d'

Table 24: Go-NoGo - d'

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.707	1.111	1.536	0.128
mom_edAA/Technical Degree	0.064	0.268	0.238	0.813
mom_edBachelor Degree	0.014	0.166	0.084	0.933
$mom\_edHigh\ School/GED$	-0.082	0.341	-0.239	0.812
income> $$100,000$	-0.194	0.286	-0.678	0.500
income\$51,000 - \$100,000	-0.104	0.258	-0.403	0.688
sexFemale	0.266	0.162	1.640	0.105
age_yr	0.144	0.118	1.226	0.224
$dxa\_total\_body\_perc\_fat$	-0.014	0.018	-0.777	0.440

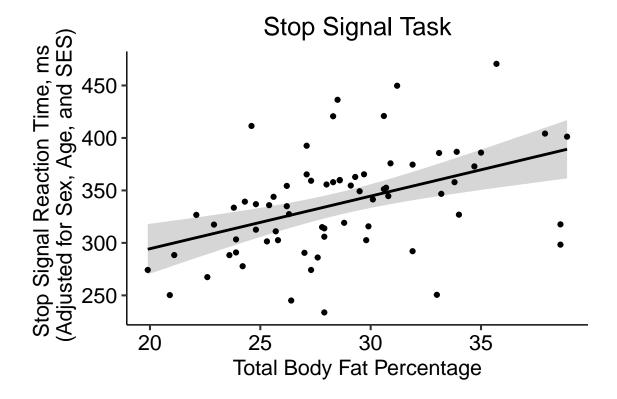
# 3.2 Stop-Signal Task

# 3.2.1 Stop Signal Reaction Time

Table 25: Stop-Signal Task SSRT - Body Fat Percentage

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	502.206	206.079	2.437	0.018
mom_edAA/Technical Degree	76.204	50.563	1.507	0.137
$mom\_edBachelor Degree$	-2.917	28.659	-0.102	0.919
$mom\_edHigh\ School/GED$	-71.793	57.289	-1.253	0.215
income> $$100,000$	-6.392	52.543	-0.122	0.904
income $$51,000 - $100,000$	-3.815	49.405	-0.077	0.939
sexFemale	14.367	26.955	0.533	0.596
age_yr	-37.897	21.108	-1.795	0.078
dxa_total_body_perc_fat	4.551	3.260	1.396	0.168

# **3.2.1.1** Overall



# 3.2.2 Energy Density Trials

Table 26: Stop-Signal Task SSRT - ED x Body Fat Percentage

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	551.769	187.720	43.148	2.939	0.005
mom_edAA/Technical Degree	94.737	57.930	43.000	1.635	0.109
$mom\_edBachelor Degree$	-22.832	32.019	43.000	-0.713	0.480
$mom\_edHigh\ School/GED$	-94.068	58.300	43.000	-1.614	0.114
income> $$100,000$	-36.382	52.690	43.000	-0.690	0.494
income\$51,000 - \$100,000	-22.773	48.370	43.000	-0.471	0.640
sexFemale	-2.417	30.618	43.000	-0.079	0.937
$age\_yr$	-23.624	23.446	43.000	-1.008	0.319
EDHigh ED	2.882	15.541	50.000	0.185	0.854
bfp_center	7.758	3.991	64.205	1.944	0.056
EDHigh ED:bfp_center	-3.423	3.603	50.000	-0.950	0.347

bfp\_center bfp\_center.trend SE df t.ratio p.value -0.0406 6.05 3.56 43 1.698 0.0968

Results are averaged over the levels of: mom\_ed, income, sex, ED Degrees-of-freedom method: kenward-roger

#### \$emmeans

ED emmean SE df lower.CL upper.CL Low ED 342 20.3 57.5 301 383 High ED 345 20.3 57.5 304 386

Results are averaged over the levels of:  ${\tt mom\_ed},$  income,  ${\tt sex}$ 

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

# \$contrasts

contrast estimate SE df t.ratio p.value
Low ED - High ED -3.02 15.5 50 -0.194 0.8467

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

#### 3.2.3 Portion Size Trials

Table 27: Stop-Signal Task SSRT - PS x Body Fat Percentage

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	512.847	153.224	45.195	3.347	0.002
mom_edAA/Technical Degree	-30.682	47.800	45.000	-0.642	0.524
mom_edBachelor Degree	-14.543	26.247	45.000	-0.554	0.582
$mom\_edHigh\ School/GED$	-97.409	49.128	45.000	-1.983	0.054
income> $$100,000$	-38.401	44.106	45.000	-0.871	0.389
income\$51,000 - \$100,000	-12.132	40.269	45.000	-0.301	0.765
sexFemale	12.510	24.867	45.000	0.503	0.617
$age\_yr$	-18.626	19.268	45.000	-0.967	0.339
PSLarge PS	-8.906	14.255	52.000	-0.625	0.535
bfp_center	5.662	3.284	70.126	1.724	0.089
PSLarge PS:bfp_center	-1.728	3.132	52.000	-0.552	0.583

bfp\_center bfp\_center.trend SE df t.ratio p.value 0.0436 4.8 2.89 45 1.662 0.1035

Results are averaged over the levels of:  $mom\_ed$ , income, sex, PS Degrees-of-freedom method: kenward-roger

#### \$emmeans

PS emmean SE df lower.CL upper.CL Small PS 322 17.4 62.8 287 357 Large PS 313 17.4 62.8 278 348

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Small PS - Large PS 8.98 14.3 52 0.630 0.5314

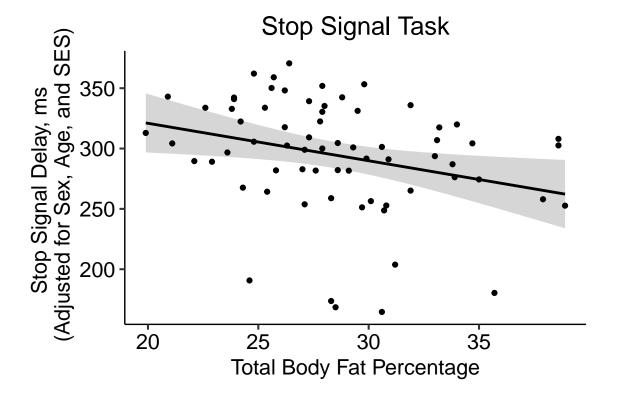
Results are averaged over the levels of: mom\_ed, income, sex Degrees-of-freedom method: kenward-roger

# 3.2.4 Stop Signal Delay

Table 28: Stop-Signal Task SSD - Body Fat Percentage

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	343.930	165.397	2.079	0.042
mom_edAA/Technical Degree	-116.200	40.582	-2.863	0.006
mom_edBachelor Degree	-26.438	23.001	-1.149	0.255
$mom\_edHigh\ School/GED$	28.045	45.979	0.610	0.544
income> $$100,000$	11.667	42.170	0.277	0.783
income $$51,000 - $100,000$	13.165	39.652	0.332	0.741
sexFemale	45.588	21.634	2.107	0.039
age_yr	10.650	16.941	0.629	0.532
dxa_total_body_perc_fat	-5.183	2.616	-1.981	0.052

# 3.2.4.1 Overall



# 3.2.4.2 Energy Density Trials

Table 29: Stop-Signal Task SSD - Body Fat Percentage x ED

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	266.333	165.836	43.054	1.606	0.116
mom_edAA/Technical Degree	-96.110	51.204	43.000	-1.877	0.067
mom_edBachelor Degree	-17.471	28.302	43.000	-0.617	0.540
$mom\_edHigh\ School/GED$	47.224	51.532	43.000	0.916	0.365
income> $$100,000$	24.248	46.573	43.000	0.521	0.605
income\$51,000 - \$100,000	16.907	42.754	43.000	0.395	0.694
sexFemale	66.397	27.063	43.000	2.453	0.018
$age\_yr$	-0.045	20.724	43.000	-0.002	0.998
EDHigh ED	-11.493	8.297	50.000	-1.385	0.172
bfp_center	-7.882	3.292	51.020	-2.394	0.020
EDHigh ED:bfp_center	1.201	1.924	50.000	0.624	0.535

bfp\_center bfp\_center.trend SE df t.ratio p.value -0.0406 -7.28 3.15 43 -2.313 0.0256

Results are averaged over the levels of: mom\_ed, income, sex, ED Degrees-of-freedom method: kenward-roger

#### \$emmeans

ED emmean SE df lower.CL upper.CL Low ED 297 17.1 48.4 262 331 High ED 285 17.1 48.4 251 319

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

# \$contrasts

contrast estimate SE df t.ratio p.value Low ED - High ED 11.5 8.3 50 1.391 0.1703

Results are averaged over the levels of:  ${\tt mom\_ed},$  income,  ${\tt sex}$ 

Degrees-of-freedom method: kenward-roger

Table 30: Stop-Signal Task SSD - Body Fat Percentage x PS

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	245.057	164.891	45.057	1.486	0.144
mom_edAA/Technical Degree	-78.078	51.479	45.000	-1.517	0.136
$mom\_edBachelor Degree$	-19.506	28.267	45.000	-0.690	0.494
$mom\_edHigh\ School/GED$	42.825	52.909	45.000	0.809	0.423
income > \$100,000	26.385	47.501	45.000	0.555	0.581
income\$51,000 - \$100,000	13.937	43.369	45.000	0.321	0.749
sexFemale	57.258	26.781	45.000	2.138	0.038
$age\_yr$	1.919	20.752	45.000	0.092	0.927
PSLarge PS	15.446	8.284	52.000	1.865	0.068
bfp_center	-6.372	3.239	52.707	-1.967	0.054
PSLarge PS:bfp_center	0.806	1.820	52.000	0.443	0.660

#### 3.2.4.3 Portion Size Trials

Results are averaged over the levels of: mom\_ed, income, sex, PS Degrees-of-freedom method: kenward-roger

#### \$emmeans

PS emmean SE df lower.CL upper.CL Small PS 288 17.6 50.3 253 323 Large PS 304 17.6 50.3 268 339

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Small PS - Large PS -15.5 8.28 52 -1.869 0.0673

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

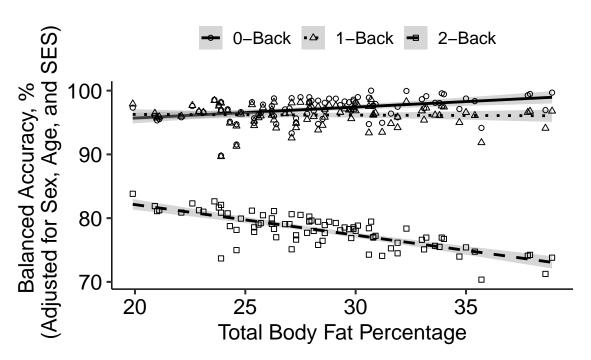
## 3.3 N-back

#### 3.3.1 Ballanced Accuracy

Table 31: Nback Balanced Accuracy - Body Fat Percentage x Load

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	93.461	7.685	75.199	12.161	0.000
mom_edAA/Technical Degree	-3.366	2.092	74.000	-1.609	0.112
$mom\_edBachelor Degree$	0.380	1.304	74.000	0.291	0.772
$mom\_edHigh\ School/GED$	0.300	2.493	74.000	0.120	0.905
income> $$100,000$	2.380	2.219	74.000	1.073	0.287
income\$51,000 - \$100,000	2.253	2.019	74.000	1.116	0.268
sexFemale	-0.744	1.267	74.000	-0.588	0.559
$age\_yr$	0.281	0.961	74.000	0.292	0.771
block1-Back	-0.986	1.192	162.003	-0.828	0.409
block2-Back	-19.106	1.192	162.003	-16.030	0.000
bfp_center	0.201	0.219	216.262	0.919	0.359
block1-Back:bfp_center	-0.183	0.280	162.003	-0.653	0.515
block2-Back:bfp_center	-0.651	0.280	162.003	-2.325	0.021

# N-Back Task



#### ${\tt \$emmeans}$

block	${\tt emmean}$	SE	df	lower.CL	upper.CL
0-Back	96.2	1.01	191	94.2	98.2
1-Back	95.2	1.01	191	93.2	97.2
2-Back	77.0	1.01	191	75.0	79.0

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

```
contrast estimate SE df t.ratio p.value (0-Back) - (1-Back) 0.993 1.19 162 0.834 0.6828 (0-Back) - (2-Back) 19.131 1.19 162 16.052 <.0001 (1-Back) - (2-Back) 18.137 1.19 162 15.218 <.0001
```

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

P value adjustment: tukey method for comparing a family of 3 estimates

block	bfp_center	<pre>bfp_center.trend</pre>	SE	df	t.ratio	p.value
0-Back	0.0381	0.2011	0.219	216	0.919	0.3592
1-Back	0.0381	0.0181	0.219	216	0.083	0.9343
2-Back	0.0381	-0.4503	0.219	216	-2.058	0.0408

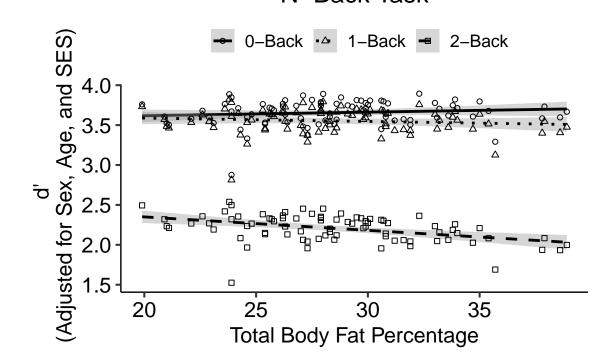
Results are averaged over the levels of: mom\_ed, income, sex Degrees-of-freedom method: kenward-roger

3.3.2 d'

Table 32: Nback Balanced Accuracy - Body Fat Percentage x Load

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	3.544	0.659	75.041	5.381	0.000
mom_edAA/Technical Degree	-0.240	0.179	74.000	-1.335	0.186
$mom\_edBachelor Degree$	0.020	0.112	74.000	0.177	0.860
$mom\_edHigh\ School/GED$	0.027	0.214	74.000	0.124	0.901
income > \$100,000	0.143	0.190	74.000	0.753	0.454
income $$51,000 - $100,000$	0.149	0.173	74.000	0.859	0.393
sexFemale	0.015	0.109	74.000	0.137	0.891
$age\_yr$	-0.001	0.082	74.000	-0.017	0.986
block1-Back	-0.103	0.095	162.000	-1.083	0.281
block2-Back	-1.449	0.095	162.000	-15.208	0.000
bfp_center	0.003	0.018	206.521	0.163	0.871
block1-Back:bfp_center	-0.009	0.022	162.000	-0.389	0.697
block2-Back:bfp_center	-0.021	0.022	162.000	-0.951	0.343

# N-Back Task



\$emmeans

```
block emmean SE df lower.CL upper.CL 0-Back 3.59 0.0843 179 3.42 3.76 1-Back 3.49 0.0843 179 3.32 3.65 2-Back 2.14 0.0843 179 1.97 2.31
```

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

```
contrast estimate SE df t.ratio p.value (0-Back) - (1-Back) 0.103 0.0953 162 1.086 0.5239 (0-Back) - (2-Back) 1.449 0.0953 162 15.217 <.0001 (1-Back) - (2-Back) 1.346 0.0953 162 14.131 <.0001
```

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

P value adjustment: tukey method for comparing a family of 3 estimates

```
bfp_center bfp_center.trend SE df t.ratio p.value 0.0381 -0.00706 0.0126 74 -0.559 0.5780
```

Results are averaged over the levels of: mom\_ed, income, sex, block Degrees-of-freedom method: kenward-roger

# 4 Exploratory Analyses: relative impact of risk and body fat percentage

#### 4.1 Go-NoGo

#### 4.1.1 Percent False Alarms

Table 33: Go-No Go Percent False Alarms - Body Fat Percentage<br/> + Risk Status

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	49.377	26.691	1.850	0.068
mom_edAA/Technical Degree	2.917	6.534	0.446	0.657
$mom\_edBachelor Degree$	-0.272	4.062	-0.067	0.947
$mom\_edHigh\ School/GED$	-3.270	8.152	-0.401	0.689
income> $$100,000$	5.797	6.985	0.830	0.409
income\$51,000 - \$100,000	-0.959	6.172	-0.155	0.877
sexFemale	-6.586	3.887	-1.695	0.094
$age\_yr$	-2.694	2.805	-0.961	0.340
$risk\_status\_momHigh Risk$	7.310	4.099	1.783	0.078
$dxa\_total\_body\_perc\_fat$	0.156	0.467	0.333	0.740

Table 34: Go-NoGo Percent False Alarms - Relative Weighting Analysis

Variables	Raw.RelWeight	Rescaled.RelWeight	$\operatorname{Sign}$
mom_ed_num	0.003	2.406	+
income_num	0.013	9.666	+
sex_num	0.054	39.855	-
$age\_yr$	0.014	10.542	-
$risk\_status\_mom\_num$	0.037	27.181	+
$dxa\_total\_body\_perc\_fat$	0.014	10.351	+

## 4.2 Stop-Signal Task

#### ${\bf 4.2.1}\quad {\bf Stop\ Signal\ Reaction\ Time}$

Table 35: Stop-Signal Task SSRT - Body Fat Percentage + Risk Status

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	583.055	203.472	2.866	0.006
mom_edAA/Technical Degree	50.080	50.537	0.991	0.326
$mom\_edBachelor Degree$	-22.290	29.219	-0.763	0.449
$mom\_edHigh\ School/GED$	-88.884	56.161	-1.583	0.119
income> $$100,000$	3.842	51.216	0.075	0.940
income\$51,000 - \$100,000	-6.790	47.972	-0.142	0.888
sexFemale	6.941	26.386	0.263	0.793
$age\_yr$	-41.441	20.552	-2.016	0.048
$dxa\_total\_body\_perc\_fat$	2.373	3.320	0.715	0.478
$risk\_status\_momHigh Risk$	62.789	28.990	2.166	0.034

Table 36: Stop-Signal Task SSRT - Relative Weighting Analysis

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
mom_ed_num	0.005	2.819	+
$income\_num$	0.007	3.795	+
sex_num	0.006	3.120	+
$age\_yr$	0.085	43.778	-
$risk\_status\_mom\_num$	0.077	39.463	+
$dxa\_total\_body\_perc\_fat$	0.014	7.025	+

#### **4.2.1.1** Overall

#### 4.2.2 Energy Density Trials

Table 37: Stop-Signal Task SSRT - ED + Body Fat Percentage + Risk Status

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	633.014	177.965	42.16	3.557	0.001
mom_edAA/Technical Degree	48.601	56.759	42.00	0.856	0.397
$mom\_edBachelor Degree$	-51.092	31.696	42.00	-1.612	0.114
$mom\_edHigh\ School/GED$	-112.659	54.899	42.00	-2.052	0.046
income> $$100,000$	-21.219	49.544	42.00	-0.428	0.671
income\$51,000 - \$100,000	-27.402	45.220	42.00	-0.606	0.548
sexFemale	-11.397	28.796	42.00	-0.396	0.694
$age\_yr$	-36.098	22.386	42.00	-1.612	0.114
EDHigh ED	3.020	15.525	51.00	0.195	0.847
bfp_center	2.606	3.564	42.00	0.731	0.469
risk_status_momHigh Risk	82.736	30.685	42.00	2.696	0.010

## 4.2.3 Portion Size Trials

Table 38: Stop-Signal Task SSRT - PS + Body Fat Percentage + Risk Status

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	470.062	183.367	44.131	2.564	0.014
mom_edAA/Technical Degree	-39.473	46.243	44.000	-0.854	0.398
$mom\_edBachelor Degree$	-28.114	26.091	44.000	-1.078	0.287
$mom\_edHigh\ School/GED$	-107.786	47.588	44.000	-2.265	0.028
income> $$100,000$	-30.376	42.665	44.000	-0.712	0.480
income\$51,000 - \$100,000	-13.078	38.802	44.000	-0.337	0.738
sexFemale	5.035	24.219	44.000	0.208	0.836
$age\_yr$	-24.264	18.756	44.000	-1.294	0.203
PSLarge PS	-8.981	14.160	53.000	-0.634	0.529
$dxa\_total\_body\_perc\_fat$	2.651	2.960	44.000	0.896	0.375
$risk\_status\_momHigh\ Risk$	53.023	25.070	44.000	2.115	0.040

## 4.2.4 Stop Signal Delay

Table 39: Stop-Signal Task SSD - Body Fat Percentage + Risk Status

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	289.493	165.216	1.752	0.085
mom_edAA/Technical Degree	-98.610	41.035	-2.403	0.019
$mom\_edBachelor Degree$	-13.394	23.725	-0.565	0.575
$mom\_edHigh\ School/GED$	39.552	45.602	0.867	0.389
income> $$100,000$	4.776	41.587	0.115	0.909
income\$51,000 - \$100,000	15.168	38.953	0.389	0.698
sexFemale	50.588	21.425	2.361	0.022
$age\_yr$	13.037	16.688	0.781	0.438
$dxa\_total\_body\_perc\_fat$	-3.717	2.696	-1.379	0.173
$risk\_status\_momHigh Risk$	-42.277	23.540	-1.796	0.078

Table 40: Stop-Signal Task SSD - Relative Weighting Analysis

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
mom_ed_num	0.011	6.395	+
income_num	0.002	1.310	-
sex_num	0.069	39.244	+
age_yr	0.028	15.587	+
$risk\_status\_mom\_num$	0.052	29.453	-
$dxa\_total\_body\_perc\_fat$	0.014	8.012	-

#### 4.2.4.1 Overall

## 4.2.4.2 Energy Density Trials

Table 41: Stop-Signal Task SSD - ED + Body Fat Percentage + Risk Status

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	362.164	198.810	42.036	1.822	0.076
mom_edAA/Technical Degree	-67.554	52.336	42.000	-1.291	0.204
$mom\_edBachelor Degree$	0.020	29.226	42.000	0.001	0.999
$mom\_edHigh\ School/GED$	58.731	50.621	42.000	1.160	0.253
income> $$100,000$	14.862	45.683	42.000	0.325	0.747
income\$51,000 - \$100,000	19.773	41.696	42.000	0.474	0.638
sexFemale	71.955	26.552	42.000	2.710	0.010
$age\_yr$	7.676	20.642	42.000	0.372	0.712
EDHigh ED	-11.541	8.247	51.000	-1.400	0.168
$risk\_status\_momHigh~Risk$	-51.209	28.294	42.000	-1.810	0.077
$dxa\_total\_body\_perc\_fat$	-5.152	3.286	42.000	-1.568	0.124

Table 42: Stop-Signal Task SSD - PS + Body Fat Percentage + Risk Status

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	334.604	201.071	44.037	1.664	0.103
mom_edAA/Technical Degree	-70.575	50.735	44.000	-1.391	0.171
mom_edBachelor Degree	-7.922	28.625	44.000	-0.277	0.783
$mom\_edHigh\ School/GED$	51.682	52.211	44.000	0.990	0.328
income> $$100,000$	19.535	46.810	44.000	0.417	0.678
income\$51,000 - \$100,000	14.745	42.572	44.000	0.346	0.731
sexFemale	63.639	26.572	44.000	2.395	0.021
$age\_yr$	6.731	20.578	44.000	0.327	0.745
PSLarge PS	15.481	8.220	53.000	1.883	0.065
$risk\_status\_momHigh~Risk$	-45.258	27.505	44.000	-1.645	0.107
$dxa\_total\_body\_perc\_fat$	-4.137	3.248	44.000	-1.274	0.209

#### 4.2.4.3 Portion Size Trials

#### 4.3 N-back

#### 4.3.1 Ballanced Accuracy

Table 43: Nback Balanced Accuracy - Body Fat Percentage x Load + Risk Status x Load

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	92.300	7.783	75.081	11.859	0.000
mom_edAA/Technical Degree	-3.239	2.150	73.000	-1.506	0.136
mom_edBachelor Degree	0.458	1.339	73.000	0.342	0.733
mom_edHigh School/GED	0.360	2.517	73.000	0.143	0.887
income> $$100,000$	2.263	2.269	73.000	0.998	0.322
income\$51,000 - \$100,000	2.233	2.033	73.000	1.098	0.276
sexFemale	-0.715	1.278	73.000	-0.560	0.577
$age\_yr$	0.276	0.968	73.000	0.285	0.777
block1-Back	0.506	1.595	160.000	0.317	0.752
block2-Back	-16.558	1.595	160.000	-10.380	0.000
risk_status_momHigh Risk	2.821	1.975	216.676	1.428	0.155
bfp_center	0.081	0.232	213.592	0.350	0.727
block1-Back:risk_status_momHigh Risk	-3.551	2.559	160.000	-1.388	0.167
block2-Back:risk_status_momHigh Risk	-6.065	2.559	160.000	-2.370	0.019
block1-Back:bfp_center	-0.034	0.297	160.000	-0.115	0.908
$block 2\text{-}Back: bfp\_center$	-0.397	0.297	160.000	-1.338	0.183

#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 89.6 0.968 73 87.7 91.6 High Risk 89.2 1.025 73 87.2 91.3

Results are averaged over the levels of: mom\_ed, income, sex, block

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Low Risk - High Risk 0.384 1.31 73 0.293 0.7704

Results are averaged over the levels of: mom\_ed, income, sex, block Degrees-of-freedom method: kenward-roger

#### \$emmeans

block risk\_status\_mom emmean SE df lower.CL upper.CL O-Back Low Risk 95.0 1.34 193 92.3 97.6 1-Back Low Risk 95.5 1.34 193 92.9 98.1 2-Back Low Risk 78.4 1.34 193 75.8 81.1 O-Back High Risk 97.8 1.50 210 94.9 100.8 1-Back High Risk 94.8 1.50 210 91.8 97.7 2-Back High Risk 75.2 1.50 210 72.2 78.1

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast	estimate	SE	df	t.ratio	p.value
(O-Back Low Risk) - (1-Back Low Risk)	-0.504	1.60	160	-0.316	0.7528
(O-Back Low Risk) - (2-Back Low Risk)	16.573	1.60	160	10.372	<.0001
(0-Back Low Risk) - (0-Back High Risk)	-2.821	1.98	217	-1.428	0.1547
(0-Back Low Risk) - (1-Back High Risk)	0.226	1.92	210	0.118	0.9065
(0-Back Low Risk) - (2-Back High Risk)	19.817	1.92	210	10.310	<.0001
(1-Back Low Risk) - (2-Back Low Risk)	17.078	1.60	160	10.687	<.0001
(1-Back Low Risk) - (0-Back High Risk)	-2.317	1.92	210	-1.205	0.2294
(1-Back Low Risk) - (1-Back High Risk)	0.730	1.98	217	0.370	0.7120
(1-Back Low Risk) - (2-Back High Risk)	20.321	1.92	210	10.572	<.0001
(2-Back Low Risk) - (0-Back High Risk)	-19.395	1.92	210	-10.091	<.0001
(2-Back Low Risk) - (1-Back High Risk)	-16.347	1.92	210	-8.505	<.0001
(2-Back Low Risk) - (2-Back High Risk)	3.243	1.98	217	1.642	0.1021
(0-Back High Risk) - (1-Back High Risk)	3.047	1.89	160	1.611	0.1092
(0-Back High Risk) - (2-Back High Risk)	22.638	1.89	160	11.966	<.0001
(1-Back High Risk) - (2-Back High Risk)	19.591	1.89	160	10.355	<.0001

Results are averaged over the levels of: mom\_ed, income, sex Degrees-of-freedom method: kenward-roger

Results are averaged over the levels of: mom\_ed, income, sex, block, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Table 44: Nback Balanced Accuracy - Relative Weighting Analysis

${\bf Raw. Rel Weight}$	Rescaled. Rel Weight	$\operatorname{Sign}$
0.002	0.484	+
0.002	0.404	+
0.000	0.109	-
0.000	0.046	+
0.333	73.212	-
0.015	3.284	+
0.001	0.261	+
0.096	21.072	-
0.005	1.129	-
	0.002 0.002 0.000 0.000 0.333 0.015 0.001 0.096	0.002     0.484       0.002     0.404       0.000     0.109       0.000     0.046       0.333     73.212       0.015     3.284       0.001     0.261       0.096     21.072

#### 4.3.2 d'

Table 45: Nback dprime - Body Fat Percentage x Load + Risk Status x Load

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	3.449	0.666	74.794	5.179	0.000
mom_edAA/Technical Degree	-0.220	0.184	73.000	-1.196	0.235
mom_edBachelor Degree	0.032	0.115	73.000	0.276	0.783
$mom\_edHigh\ School/GED$	0.036	0.216	73.000	0.166	0.869
income> $$100,000$	0.126	0.194	73.000	0.646	0.520
income\$51,000 - \$100,000	0.146	0.174	73.000	0.837	0.406
sexFemale	0.019	0.109	73.000	0.176	0.861
$age\_yr$	-0.002	0.083	73.000	-0.027	0.979
block1-Back	0.038	0.127	160.000	0.300	0.764
block2-Back	-1.220	0.127	160.000	-9.614	0.000
risk_status_momHigh Risk	0.236	0.163	207.070	1.450	0.149
bfp_center	-0.007	0.019	203.450	-0.378	0.706
block1-Back:risk_status_momHigh Risk	-0.336	0.204	160.000	-1.652	0.101
block2-Back:risk_status_momHigh Risk	-0.545	0.204	160.000	-2.677	0.008
$block1-Back:bfp\_center$	0.005	0.024	160.000	0.227	0.821
block2-Back:bfp_center	0.002	0.024	160.000	0.065	0.948

#### \$emmeans

risk\_status\_mom emmean SE df lower.CL upper.CL Low Risk 3.10 0.0829 73 2.93 3.26 High Risk 3.04 0.0878 73 2.87 3.22

Results are averaged over the levels of: mom\_ed, income, sex, block

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast estimate SE df t.ratio p.value Low Risk - High Risk 0.058 0.112 73 0.516 0.6074

Results are averaged over the levels of: mom\_ed, income, sex, block Degrees-of-freedom method: kenward-roger

#### \$emmeans

block	risk_status_mom	emmean	SE	df	lower.CL	upper.CL
0-Back	Low Risk	3.49	0.111	181	3.27	3.71
1-Back	Low Risk	3.53	0.111	181	3.31	3.75
2-Back	Low Risk	2.27	0.111	181	2.06	2.49
0-Back	High Risk	3.73	0.123	199	3.49	3.97
1-Back	High Risk	3.43	0.123	199	3.19	3.67
2-Back	High Risk	1.96	0.123	199	1.72	2.21

Results are averaged over the levels of: mom\_ed, income, sex

Degrees-of-freedom method: kenward-roger

Confidence level used: 0.95

#### \$contrasts

contrast	estimate SE df t.ratio p.value
(0-Back Low Risk) - (1-Back Low Risk)	-0.0383 0.127 160 -0.301 0.7636
(O-Back Low Risk) - (2-Back Low Risk)	1.2197 0.127 160 9.597 <.0001
(O-Back Low Risk) - (O-Back High Risk)	-0.2357 0.163 207 -1.450 0.1485
(O-Back Low Risk) - (1-Back High Risk)	0.0622 0.158 200 0.392 0.6952
(O-Back Low Risk) - (2-Back High Risk)	1.5288 0.158 200 9.649 <.0001
(1-Back Low Risk) - (2-Back Low Risk)	1.2580 0.127 160 9.899 <.0001
(1-Back Low Risk) - (0-Back High Risk)	-0.1974 0.158 200 -1.246 0.2142
(1-Back Low Risk) - (1-Back High Risk)	0.1005 0.163 207
(1-Back Low Risk) - (2-Back High Risk)	1.5671 0.158 200 9.890 <.0001
(2-Back Low Risk) - (0-Back High Risk)	-1.4554 0.158 200 -9.185 <.0001
(2-Back Low Risk) - (1-Back High Risk)	-1.1575 0.158 200 -7.305 <.0001
(2-Back Low Risk) - (2-Back High Risk)	0.3091 0.163 207 1.902 0.0586
(O-Back High Risk) - (1-Back High Risk)	0.2979 0.150 160 1.980 0.0494
(O-Back High Risk) - (2-Back High Risk)	1.7645 0.150 160 11.727 <.0001
(1-Back High Risk) - (2-Back High Risk)	1.4667 0.150 160 9.748 <.0001

Results are averaged over the levels of: mom\_ed, income, sex Degrees-of-freedom method: kenward-roger

Results are averaged over the levels of: mom\_ed, income, sex, block, risk\_status\_mom Degrees-of-freedom method: kenward-roger

Table 46: Nback d<br/>prime - Relative Weighting Analysis  $\,$ 

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
mom_ed_num	0.002	0.410	+
income_num	0.001	0.272	+
sex_num	0.000	0.090	+
$age\_yr$	0.000	0.027	-
block_num	0.318	73.655	-
risk_status_mom_num	0.014	3.352	+
bfp_center	0.001	0.135	-
$blockrisk\_status\_mom$	0.093	21.511	-
blockbfp_center	0.002	0.547	-

## 5 Exploratory Analyses: BMI-Z score (reviewer comment)

#### 5.1 Go-NoGo

#### 5.1.1 Percent False Alarms

Table 47: Go-NoGo Percent False Alarms - Body Fat Percentage

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	57.419	23.023	2.494	0.015
mom_edAA/Technical Degree	4.191	6.492	0.645	0.520
$mom\_edBachelor Degree$	1.394	3.970	0.351	0.726
$mom\_edHigh\ School/GED$	-3.664	8.178	-0.448	0.655
income> $$100,000$	0.735	7.010	0.105	0.917
income $$51,000 - $100,000$	-3.421	6.270	-0.546	0.587
sexFemale	-4.295	3.526	-1.218	0.227
$age\_yr$	-2.582	2.814	-0.918	0.362
$\mathrm{bmi}_{-}\mathrm{z}$	3.623	2.360	1.535	0.129

#### 5.1.2 Percent Hits

Table 48: Go-No<br/>Go - Percent Hits - Body Fat Percentage

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	93.820	4.568	20.541	0.000
mom_edAA/Technical Degree	1.950	1.288	1.514	0.134
mom_edBachelor Degree	0.985	0.788	1.251	0.215
mom_edHigh School/GED income>\$100,000	-0.875 -1.383	1.622 $1.391$	-0.539 -0.995	$0.591 \\ 0.323$
,	-1.363	1.391	-0.995	0.323
income\$51,000 - \$100,000	-1.650	1.244	-1.326	0.189
sexFemale	0.912	0.699	1.303	0.196
age_yr	0.451	0.558	0.809	0.421
bmi_z	0.138	0.468	0.295	0.769

#### 5.1.3 Go Reaction Time

Table 49: Go-NoGo - Go Reaction Time

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	771.926	85.905	8.986	0.000
mom_edAA/Technical Degree	-15.063	24.225	-0.622	0.536
mom_edBachelor Degree	-19.937	14.813	-1.346	0.182
$mom\_edHigh\ School/GED$	-18.364	30.515	-0.602	0.549
income> $$100,000$	-22.066	26.156	-0.844	0.401
income $$51,000 - $100,000$	-12.877	23.393	-0.550	0.584
sexFemale	16.958	13.156	1.289	0.201
$age\_yr$	-26.554	10.498	-2.529	0.013
$\mathrm{bmi}_{-}\mathrm{z}$	-8.837	8.806	-1.004	0.319

## 5.1.4 d'

Table 50: Go-NoGo - d'

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.268	0.960	1.320	0.191
mom_edAA/Technical Degree	0.073	0.271	0.270	0.788
$mom\_edBachelor Degree$	0.008	0.166	0.047	0.963
$mom\_edHigh\ School/GED$	-0.086	0.341	-0.252	0.802
income> $$100,000$	-0.147	0.292	-0.503	0.617
income\$51,000 - \$100,000	-0.069	0.262	-0.264	0.793
sexFemale	0.211	0.147	1.438	0.154
$age\_yr$	0.146	0.117	1.246	0.217
$\mathrm{bmi}_{-}\mathrm{z}$	-0.072	0.098	-0.734	0.465

## 5.2 Stop-Signal Task

## 5.2.1 Stop Signal Reaction Time

Table 51: Stop-Signal Task SSRT - Body Fat Percentage

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	668.004	172.267	3.878	0.000
mom_edAA/Technical Degree	78.031	51.982	1.501	0.139
$mom\_edBachelor Degree$	-5.682	29.119	-0.195	0.846
$mom\_edHigh\ School/GED$	-62.506	58.050	-1.077	0.286
income> $$100,000$	-13.400	55.054	-0.243	0.809
income\$51,000 - \$100,000	-7.308	50.559	-0.145	0.886
sexFemale	29.449	24.737	1.190	0.239
$age\_yr$	-42.827	21.003	-2.039	0.046
bmi_z	11.138	17.287	0.644	0.522

#### **5.2.1.1** Overall

## 5.2.2 Stop Signal Delay

Table 52: Stop-Signal Task SSD - Body Fat Percentage

	Estimate	Std. Error	t value	$\Pr(> t )$
(Intercept)	152.943	138.555	1.104	0.274
mom_edAA/Technical Degree	-113.566	41.809	-2.716	0.009
mom_edBachelor Degree	-22.213	23.420	-0.948	0.347
$mom\_edHigh\ School/GED$	22.984	46.689	0.492	0.624
income> $$100,000$	25.702	44.280	0.580	0.564
income $$51,000 - $100,000$	20.274	40.665	0.499	0.620
sexFemale	29.043	19.896	1.460	0.150
$age\_yr$	15.735	16.892	0.931	0.355
bmi_z	-20.037	13.904	-1.441	0.155

#### 5.2.2.1 Overall

## 5.3 N-back

## 5.3.1 Ballanced Accuracy

Table 53: N<br/>back Balanced Accuracy - Body Fat Percentage x Load

	Estimate	Std. Error	df	t value	$\Pr(> t )$
(Intercept)	93.131	7.667	75.267	12.147	0.000
mom_edAA/Technical Degree	-3.376	2.116	74.000	-1.595	0.115
$mom\_edBachelor Degree$	0.332	1.302	74.000	0.255	0.799
$mom\_edHigh\ School/GED$	0.101	2.457	74.000	0.041	0.967
income> $$100,000$	2.436	2.291	74.000	1.063	0.291
income\$51,000 - \$100,000	2.270	2.061	74.000	1.101	0.274
sexFemale	-1.037	1.139	74.000	-0.911	0.365
$age\_yr$	0.338	0.955	74.000	0.353	0.725
block1-Back	-0.893	1.222	162.000	-0.731	0.466
block2-Back	-19.128	1.222	162.000	-15.655	0.000
$\mathrm{bmi}_{-}\mathrm{z}$	-0.557	1.225	227.105	-0.454	0.650
block1-Back:bmi_z	1.010	1.636	162.000	0.617	0.538
$block2-Back:bmi\_z$	0.032	1.636	162.000	0.019	0.985

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	3.519	0.656	75.069	5.362	0.000
mom_edAA/Technical Degree	-0.232	0.181	74.000	-1.281	0.204
$mom\_edBachelor Degree$	0.016	0.112	74.000	0.140	0.889
$mom\_edHigh\ School/GED$	0.016	0.210	74.000	0.077	0.939
income> $$100,000$	0.162	0.196	74.000	0.824	0.412
income\$51,000 - \$100,000	0.160	0.177	74.000	0.909	0.367
sexFemale	-0.012	0.098	74.000	-0.123	0.902
$age\_yr$	0.001	0.082	74.000	0.012	0.991
block1-Back	-0.094	0.096	162.000	-0.974	0.332
block2-Back	-1.441	0.096	162.000	-14.980	0.000
$\mathrm{bmi}_{-}\mathrm{z}$	-0.100	0.100	218.042	-0.998	0.319
block1-Back:bmi_z	0.099	0.129	162.000	0.767	0.444
$block2$ -Back: $bmi_z$	0.090	0.129	162.000	0.699	0.486