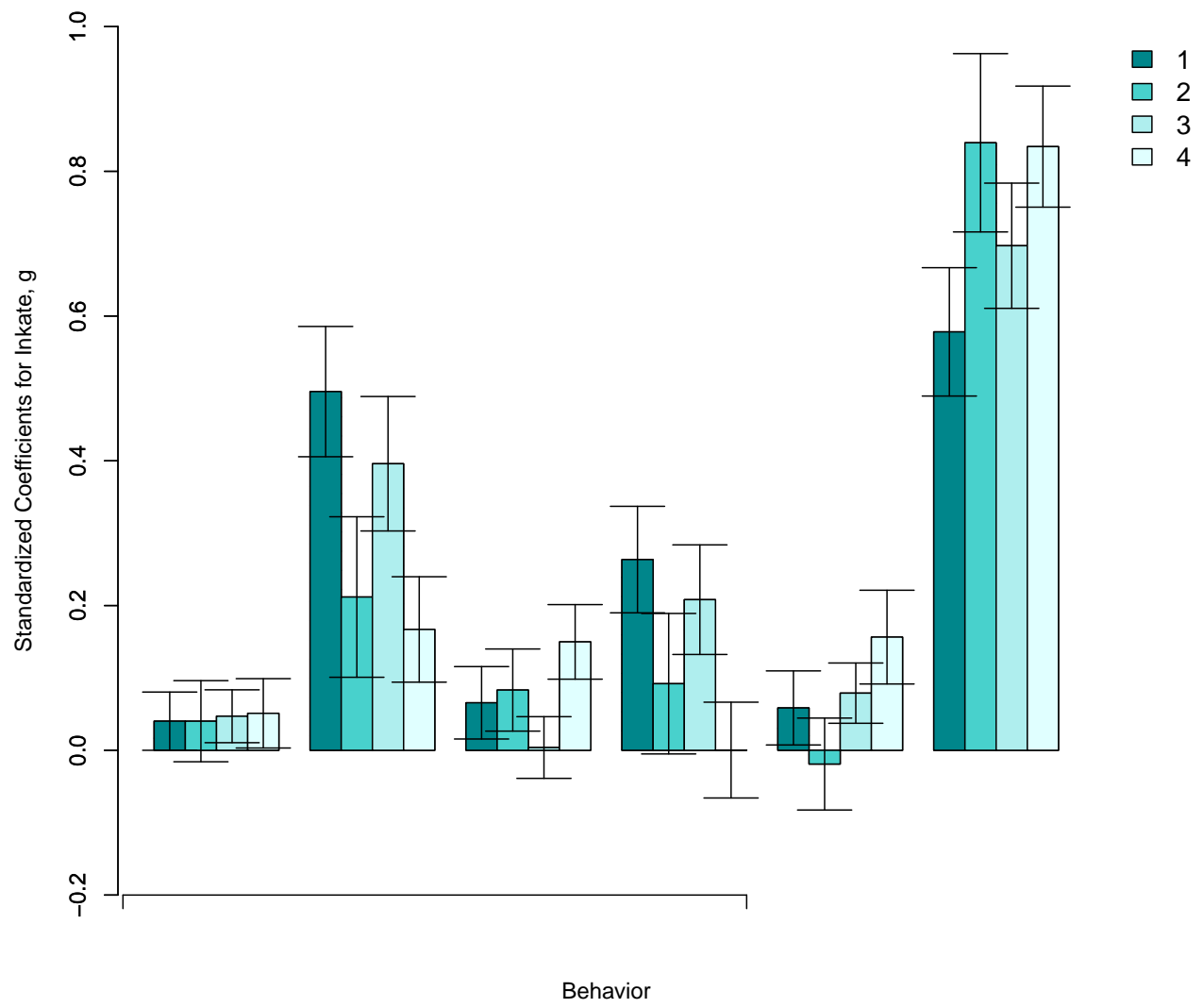
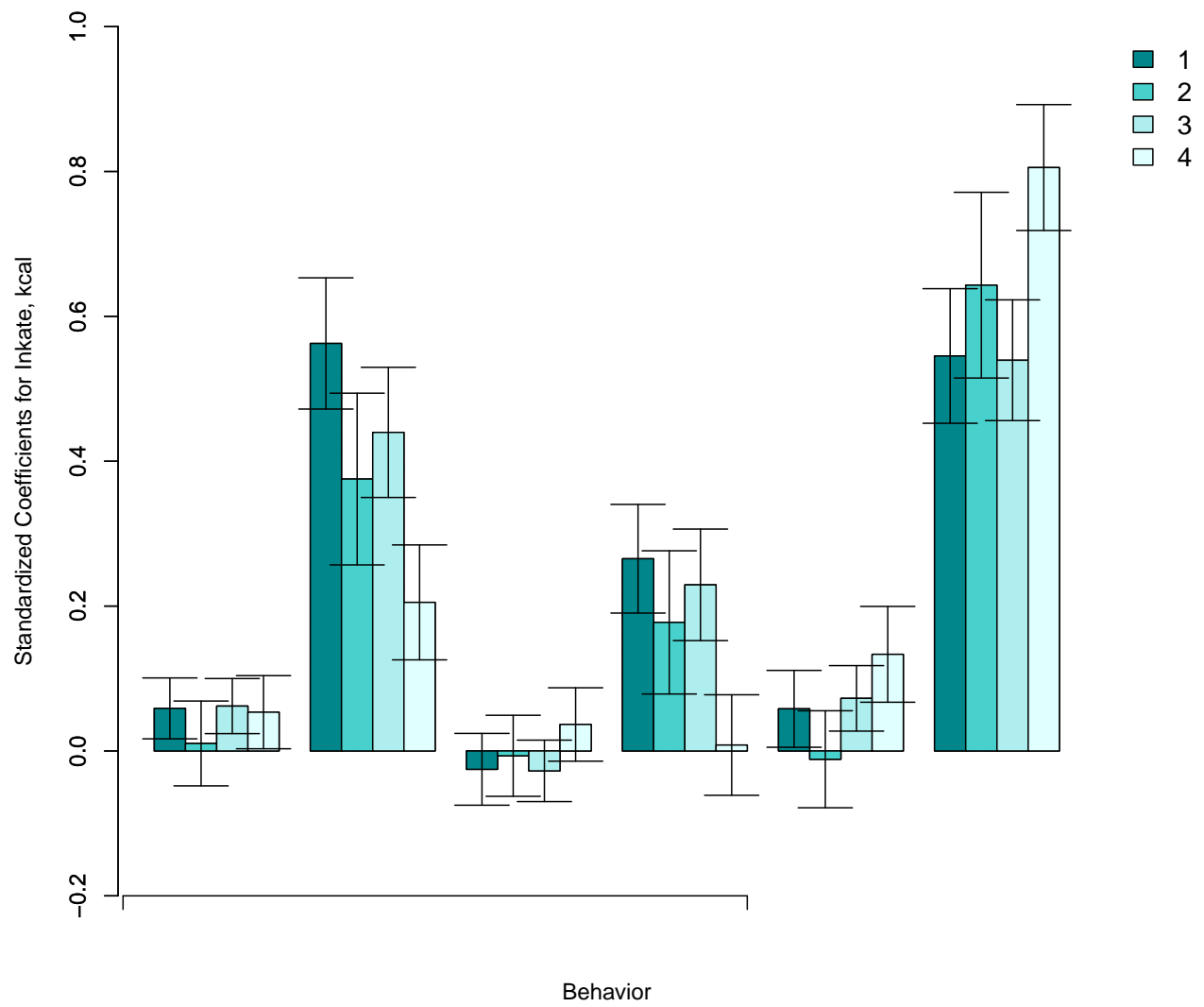


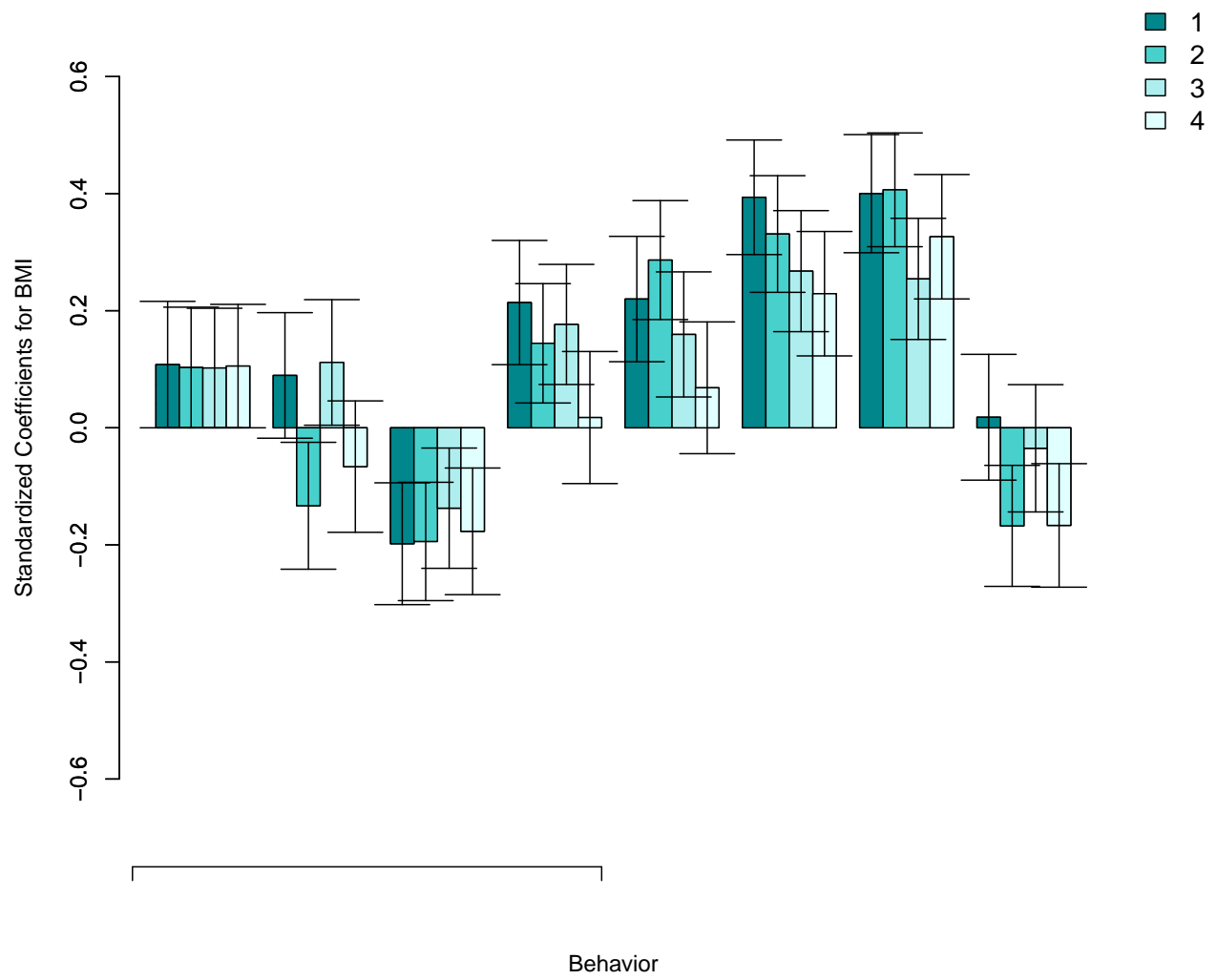
# Overall Microstructure Summary for Portion Size Meals

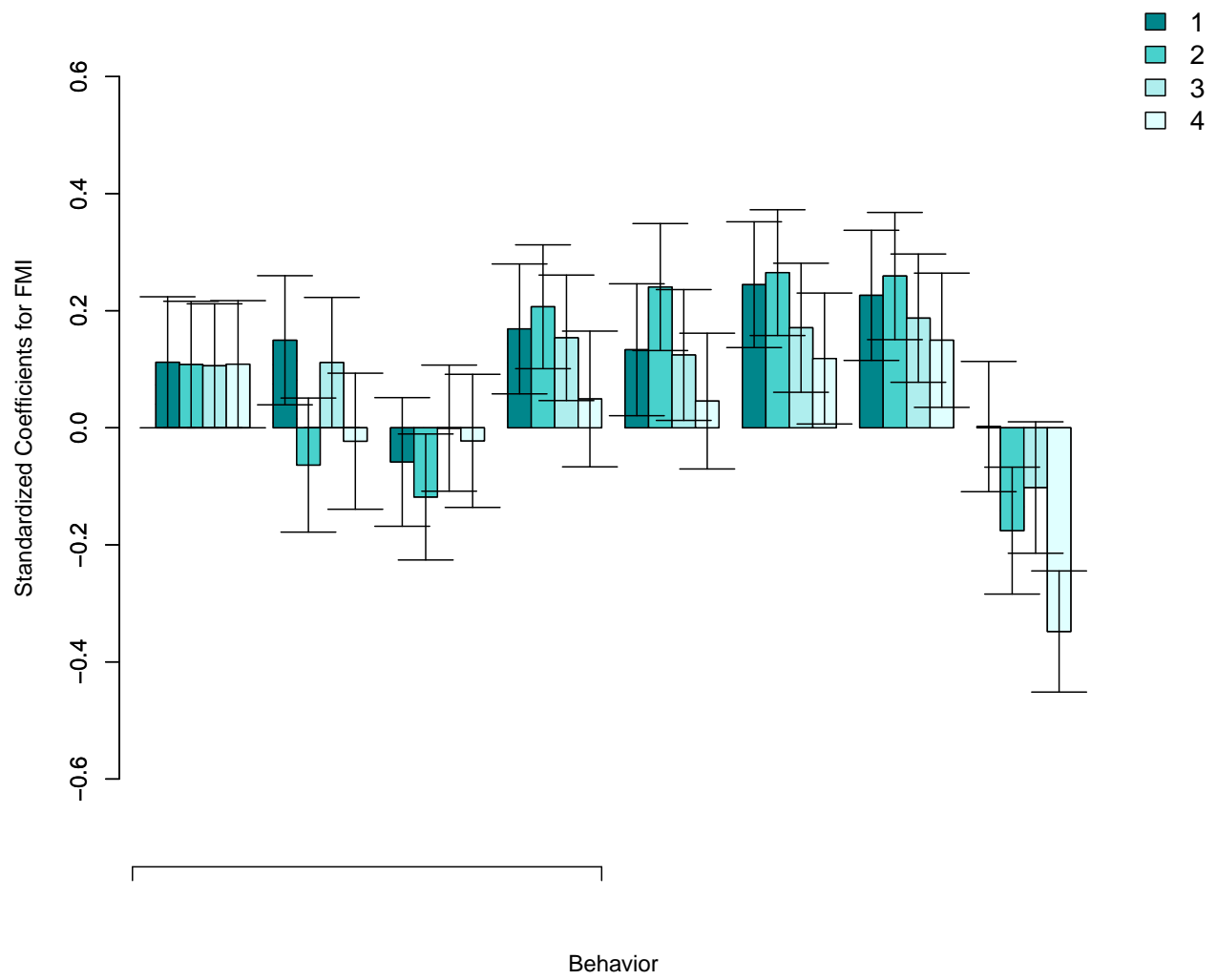
## Contents

<b>1</b>	<b>Demographics</b>	<b>6</b>
<b>2</b>	<b>Meal Intake</b>	<b>6</b>
<b>3</b>	<b>Microstructure</b>	<b>7</b>
3.1	Behaviors Across Meals . . . . .	7
3.2	Coding Reliability . . . . .	9
3.3	Portion Correlation Matrices . . . . .	10
3.4	Repeated Measures Correlation . . . . .	15
3.5	Univariate Tests of Portion Size . . . . .	17
<b>4</b>	<b>Replication of ‘Obesogenic’ Style of Eating</b>	<b>22</b>
4.1	Association with Intake . . . . .	22
4.2	Associaiton with BMI Percentile . . . . .	32
4.3	Associaiton with Fat Mass Index . . . . .	44









# 1 Demographics

Table 1: Demographics

Characteristic	Overall	Sex		p-value
	N = 91	Male, N = 46	Female, N = 45	
Sex				
Male	46 (51%)			
Female	45 (49%)			
Age, yr	7.8 (0.6)	7.7 (0.7)	7.9 (0.6)	0.3
BMI %tile	47.8 (24.6)	48.3 (23.8)	47.3 (25.7)	>0.9
VAT, cm3	170.7 (57.4)	212.0 (36.3)	128.5 (42.1)	<0.001
Fat Mass Index	4.5 (0.9)	4.2 (0.8)	4.7 (1.0)	0.004
Ethnicity				>0.9
Hispanic/Lantinx	0 (0%)	0 (0%)	0 (0%)	
Not Hispanic/Lantinx	91 (100%)	46 (100%)	45 (100%)	
Race				0.2
0	88 (97%)	43 (93%)	45 (100%)	
2	3 (3.3%)	3 (6.5%)	0 (0%)	
3	0 (0%)	0 (0%)	0 (0%)	
Income				0.2
< \$51,000	11 (12%)	6 (13%)	5 (12%)	
>\$100,000	33 (38%)	13 (29%)	20 (47%)	
\$51,000 - \$100,000	44 (50%)	26 (58%)	18 (42%)	
Unknown	3	1	2	
Mother's Education				0.4
> Bachelor Degree	28 (31%)	13 (29%)	15 (33%)	
AA/Technical Degree	9 (10%)	7 (16%)	2 (4.4%)	
Bachelor Degree	44 (49%)	21 (47%)	23 (51%)	
High School/GED	9 (10%)	4 (8.9%)	5 (11%)	
Unknown	1	1	0	
Father's Education				>0.9
> Bachelor Degree	32 (37%)	17 (40%)	15 (34%)	
AA/Technical Degree	14 (16%)	6 (14%)	8 (18%)	
Bachelor Degree	29 (33%)	15 (35%)	14 (32%)	
High School/GED	11 (13%)	5 (12%)	6 (14%)	
Other/NA	1 (1.1%)	0 (0%)	1 (2.3%)	
Unknown	4	3	1	

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

<sup>2</sup> Mean (SD); n (%)

<sup>3</sup> Wilcoxon rank sum test; Wilcoxon rank sum exact test; Fisher's exact test; Pearson's Chi-squared test

# 2 Meal Intake

Table 2: Meal Intake

Characteristic	1, N = 89	2, N = 88	3, N = 87	4, N = 83
Pre-Meal Fullness	36.7 (34.3)	35.7 (31.9)	38.6 (35.5)	32.9 (34.0)
Unknown	0	1	0	0
Avg. Liking	3.9 (0.6)	3.8 (0.6)	3.8 (0.6)	3.9 (0.6)
Unknown	0	1	0	0
Intake, g	410.4 (161.3)	440.8 (165.6)	464.3 (188.5)	458.2 (181.0)
Unknown	0	1	1	1
Intake, kcal	487.2 (191.9)	525.4 (206.9)	562.5 (256.8)	586.8 (247.4)
Unknown	0	1	1	1
95% consumed				
0	87 (98%)	87 (100%)	86 (100%)	82 (100%)
1	2 (2.2%)	0 (0%)	0 (0%)	0 (0%)
Unknown	0	1	1	1

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

Table 3: Boys: Meal Intake

Characteristic	1, N = 45	2, N = 46	3, N = 43	4, N = 39
Pre-Meal Fullness	36.7 (32.8)	38.5 (32.5)	40.1 (37.9)	35.9 (34.6)
Avg. Liking	3.8 (0.6)	3.8 (0.6)	3.9 (0.5)	3.8 (0.6)
Intake, g	423.3 (139.9)	464.8 (162.2)	465.2 (177.5)	461.9 (164.0)
Unknown	0	0	0	1
Intake, kcal	513.8 (169.1)	534.8 (191.5)	572.9 (260.0)	599.0 (226.8)
Unknown	0	0	0	1
95% consumed				
0	43 (96%)	46 (100%)	43 (100%)	38 (100%)
1	2 (4.4%)	0 (0%)	0 (0%)	0 (0%)
Unknown	0	0	0	1

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

Table 4: Girls: Meal Intake

Characteristic	1, N = 44	2, N = 42	3, N = 44	4, N = 44
Pre-Meal Fullness	36.7 (36.2)	32.6 (31.4)	37.0 (33.3)	30.1 (33.6)
Unknown	0	1	0	0
Avg. Liking	3.9 (0.6)	3.9 (0.6)	3.8 (0.7)	3.9 (0.6)
Unknown	0	1	0	0
Intake, g	397.3 (181.4)	413.9 (167.3)	463.4 (201.1)	455.0 (196.4)
Unknown	0	1	1	0
Intake, kcal	459.9 (211.2)	514.9 (224.8)	552.1 (256.2)	576.2 (266.0)
Unknown	0	1	1	0
95% consumed				
0	44 (100%)	41 (100%)	43 (100%)	44 (100%)
Unknown	0	1	1	0

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

### 3 Microstructure

#### 3.1 Behaviors Across Meals

Table 5: Microstructure Behaviors by Portion Size Meal

Characteristic	1, N = 89	2, N = 88	3, N = 87	4, N = 83
bites	72.584 (37.917)	75.682 (37.838)	82.322 (45.073)	79.349 (44.043)
sips	6.562 (6.517)	7.864 (8.324)	6.908 (6.596)	5.578 (5.988)
active eating, min	15.340 (7.254)	15.941 (6.993)	17.123 (7.629)	17.153 (7.954)
1st bite latency, min	0.403 (0.287)	0.379 (0.224)	0.368 (0.238)	0.401 (0.268)
meal duration, min	18.009 (8.805)	18.493 (8.385)	19.395 (8.422)	19.156 (8.788)
bites/min	4.291 (1.759)	4.343 (1.769)	4.459 (1.973)	4.369 (1.854)
bite/min (active)	4.896 (1.755)	4.926 (1.834)	4.970 (2.004)	4.787 (1.846)
sips/min	0.369 (0.318)	0.433 (0.460)	0.367 (0.377)	0.314 (0.343)
sips/min (active)	0.440 (0.428)	0.497 (0.522)	0.417 (0.424)	0.349 (0.374)
g/bite	6.385 (2.385)	6.648 (2.824)	6.406 (2.126)	6.975 (5.246)
Unknown	0	1	1	1
kcal/bite	7.710 (3.262)	7.805 (3.148)	7.751 (3.137)	8.884 (6.501)
Unknown	0	1	1	1
g/min	25.882 (11.252)	26.495 (10.502)	26.387 (10.857)	27.195 (12.451)
Unknown	0	1	1	1
kcal/min	31.418 (14.781)	32.117 (14.735)	32.300 (16.046)	34.952 (16.388)
Unknown	0	1	1	1
g/min (active)	29.704 (11.944)	30.229 (11.449)	29.552 (11.313)	30.495 (14.998)
Unknown	0	1	1	1
kcal/min (active)	35.934 (16.096)	36.518 (15.665)	35.899 (16.602)	39.120 (19.524)
Unknown	0	1	1	1
active eat/meal duration, min	0.867 (0.123)	0.879 (0.110)	0.891 (0.116)	0.902 (0.110)

<sup>1</sup> Mean (SD)

Table 6: Boys: Microstructure Behaviors by Portion Size Meal

Characteristic	1, N = 45	2, N = 46	3, N = 43	4, N = 39
bites	71.556 (30.773)	69.543 (30.716)	74.535 (33.830)	72.385 (27.113)
sips	6.222 (5.842)	8.261 (8.185)	7.744 (7.728)	5.769 (6.796)
active eating, min	16.857 (6.964)	16.743 (7.121)	17.654 (7.499)	18.053 (8.021)
1st bite latency, min	0.356 (0.187)	0.385 (0.236)	0.413 (0.284)	0.409 (0.268)
meal duration, min	19.564 (8.379)	19.339 (8.341)	20.190 (8.529)	20.075 (8.525)
bites/min	3.938 (1.509)	3.897 (1.543)	3.940 (1.418)	3.902 (1.330)
bite/min (active)	4.417 (1.435)	4.424 (1.567)	4.392 (1.382)	4.297 (1.391)
sips/min	0.330 (0.296)	0.423 (0.385)	0.396 (0.457)	0.296 (0.354)
sips/min (active)	0.383 (0.354)	0.484 (0.427)	0.461 (0.515)	0.337 (0.389)
g/bite	6.482 (2.118)	7.430 (2.766)	6.837 (2.202)	6.792 (2.498)
Unknown	0	0	0	1
kcal/bite	7.955 (2.946)	8.472 (2.943)	8.272 (3.391)	8.859 (3.682)
Unknown	0	0	0	1
g/min	24.131 (8.903)	27.155 (11.158)	26.017 (10.982)	25.253 (9.881)
Unknown	0	0	0	1
kcal/min	30.244 (13.454)	32.151 (15.532)	32.460 (17.555)	33.769 (15.456)
Unknown	0	0	0	1
g/min (active)	27.362 (9.244)	31.097 (12.416)	29.254 (11.543)	28.201 (10.735)
Unknown	0	0	0	1
kcal/min (active)	34.076 (14.157)	36.630 (16.574)	36.003 (18.564)	37.586 (17.319)
Unknown	0	0	0	1
active eat/meal duration, min	0.878 (0.116)	0.880 (0.104)	0.887 (0.114)	0.908 (0.121)

<sup>1</sup> Mean (SD)



Table 7: Girls: Microstructure Behaviors by Portion Size Meal

Characteristic	1, N = 44	2, N = 42	3, N = 44	4, N = 44
bites	73.636 (44.397)	82.405 (43.749)	89.932 (53.155)	85.523 (54.465)
sips	6.909 (7.194)	7.429 (8.552)	6.091 (5.224)	5.409 (5.244)
active eating, min	13.788 (7.293)	15.062 (6.826)	16.604 (7.804)	16.356 (7.900)
1st bite latency, min	0.451 (0.357)	0.374 (0.213)	0.323 (0.175)	0.394 (0.271)
meal duration, min	16.419 (9.039)	17.566 (8.435)	18.618 (8.340)	18.341 (9.033)
bites/min	4.653 (1.933)	4.832 (1.886)	4.967 (2.299)	4.783 (2.149)
bite/min (active)	5.386 (1.925)	5.476 (1.961)	5.535 (2.346)	5.221 (2.093)
sips/min	0.409 (0.339)	0.443 (0.536)	0.337 (0.280)	0.330 (0.337)
sips/min (active)	0.499 (0.489)	0.511 (0.614)	0.375 (0.310)	0.360 (0.365)
g/bite	6.285 (2.651)	5.770 (2.656)	5.975 (1.979)	7.133 (6.813)
Unknown	0	1	1	0
kcal/bite	7.459 (3.573)	7.055 (3.237)	7.230 (2.803)	8.906 (8.243)
Unknown	0	1	1	0
g/min	27.672 (13.095)	25.755 (9.797)	26.757 (10.848)	28.873 (14.206)
Unknown	0	1	1	0
kcal/min	32.619 (16.094)	32.079 (13.978)	32.140 (14.589)	35.974 (17.264)
Unknown	0	1	1	0
g/min (active)	32.100 (13.890)	29.254 (10.323)	29.851 (11.208)	32.476 (17.773)
Unknown	0	1	1	0
kcal/min (active)	37.833 (17.827)	36.393 (14.781)	35.795 (14.599)	40.445 (21.355)
Unknown	0	1	1	0
active eat/meal duration, min	0.856 (0.130)	0.879 (0.117)	0.896 (0.120)	0.897 (0.100)

<sup>1</sup> Mean (SD)

Table 8: Sex differences: t-tests

beh	ps1_t	ps1_df	ps1_p	ps2_t	ps2_df	ps2_p	ps3_t	ps3_df	ps3_p	ps4_t	ps4_df
nbites	-0.256	76.410	0.798	-1.582	72.779	0.118	-1.616	73.163	0.110	-1.415	64.684
nsips	-0.494	82.719	0.623	0.465	84.445	0.643	1.166	73.563	0.247	0.268	71.179
active_eating	2.030	86.591	0.045	1.130	85.788	0.262	0.640	84.977	0.524	0.969	79.499
bite_latency	-1.572	64.617	0.121	0.229	85.986	0.819	1.762	69.609	0.082	0.259	80.002
meal_duration	1.701	86.167	0.093	0.990	85.092	0.325	0.869	84.824	0.387	0.900	80.666
bite_rate	-1.941	81.294	0.056	-2.533	79.407	0.013	-2.514	71.845	0.014	-2.272	72.817
bite_rate_active	-2.688	79.500	0.009	-2.762	78.444	0.007	-2.777	69.952	0.007	-2.392	75.344
sip_rate	-1.166	84.887	0.247	-0.199	73.832	0.843	0.724	69.395	0.471	-0.450	78.733
sip_rate_active	-1.287	78.274	0.202	-0.243	72.331	0.809	0.944	68.680	0.349	-0.277	78.298
bite_size_g	0.387	82.148	0.700	2.853	84.513	0.005	1.908	83.063	0.060	-0.309	55.857
bite_size_kcal	0.714	83.230	0.477	2.127	81.383	0.036	1.553	81.123	0.124	-0.034	61.353
eat_rate_g	-1.488	75.568	0.141	0.623	84.984	0.535	-0.314	83.987	0.754	-1.353	76.699
eat_rate_kcal	-0.755	83.666	0.453	0.023	84.990	0.982	0.092	81.279	0.927	-0.610	79.886
eat_rate_active_g	-1.890	74.630	0.063	0.756	84.613	0.452	-0.243	83.927	0.808	-1.338	72.057
eat_rate_active_kcal	-1.099	81.933	0.275	0.071	85.000	0.944	0.058	79.577	0.954	-0.669	79.708
prop_active	0.874	85.434	0.384	0.039	82.305	0.969	-0.329	84.951	0.743	0.443	74.045

### 3.2 Coding Reliability

Table 9: Coding Reliability - ICC

Behavior	Overall	Portion 1	Portion 2	Portion 3	Portion 4
bites	1	1	1	1	1
sips	1	0.999	1	1	1
active eating	0.964	0.965	0.997	0.991	0.912
bite latency	0.944	0.994	0.865	0.958	0.925
meal duration	1	1	1	1	0.999

### 3.3 Portion Correlation Matrices

Table 10: Portion Size 1: Correlation Matrix

	nbites	nsips	total_active_eating	bite_latency	meal_duration	bite_rate	bite_rate_active	sip_rate	sip_rate_active	bite_size_g	bite_size_kcal	eat_rate_g	eat_rate_kcal	eat_rate_active_g	eat_rate_active_kcal	prop_active
nbites																
nsips	0.32															
total_active_eating	0.7	0.39														
bite_latency	-0.02	0.16	-0.06													
meal_duration	0.59	0.5	0.91	0.04												
bite_rate	0.52	-0.12	-0.14	-0.15	-0.31											
bite_rate_active	0.5	-0.01	-0.2	0.01	-0.25	0.94										
sip_rate	0.01	0.73	-0.07	0.01	-0.03	0.07	0.13									
sip_rate_active	0	0.8	-0.06	0.19	0.07	-0.02	0.12	0.94								
bite_size_g	-0.59	0.01	-0.38	0.12	-0.33	-0.37	-0.38	0.26	0.22							
bite_size_kcal	-0.59	-0.25	-0.44	0.09	-0.43	-0.29	-0.32	0.02	-0.02	0.8						
eat_rate_g	-0.09	-0.1	-0.45	-0.08	-0.57	0.56	0.5	0.32	0.19	0.5	0.39					
eat_rate_kcal	-0.11	-0.26	-0.49	-0.12	-0.61	0.55	0.5	0.14	0.03	0.37	0.56	0.86				
eat_rate_active_g	-0.18	-0.02	-0.53	0.07	-0.52	0.43	0.48	0.36	0.31	0.57	0.43	0.94	0.81			
eat_rate_active_kcal	-0.19	-0.22	-0.55	0	-0.58	0.44	0.48	0.16	0.1	0.43	0.61	0.81	0.96	0.85		
prop_active	0.25	-0.24	0.13	-0.33	-0.26	0.51	0.21	-0.03	-0.25	-0.08	0.01	0.4	0.39	0.08	0.13	

Table 11: Portion Size 2: Correlation Matrix

	nbites	nsips	total_active_eating	bite_latency	meal_duration	bite_rate	bite_rate_active	sip_rate	sip_rate_active	bite_size_g	bite_size_kcal	eat_rate_g	eat_rate_kcal	eat_rate_active_g	eat_rate_active_kcal	prop_active
nbites																
nsips	0.16															
total_active_eating	0.64	0.34														
bite_latency	-0.2	0.09	0.05													
meal_duration	0.61	0.34	0.92	0.02												
bite_rate	0.5	-0.18	-0.22	-0.22	-0.32											
bite_rate_active	0.55	-0.16	-0.22	-0.21	-0.21	0.94										
sip_rate	-0.07	0.86	-0.01	0.08	-0.04	-0.09	-0.1									
sip_rate_active	-0.06	0.87	-0.02	0.08	0.01	-0.12	-0.09	0.99								
bite_size_g	-0.61	0.14	-0.32	0.16	-0.28	-0.48	-0.49	0.29	0.29							
bite_size_kcal	-0.58	-0.1	-0.41	0.19	-0.39	-0.32	-0.34	0.11	0.1	0.78						
eat_rate_g	-0.18	-0.03	-0.54	-0.02	-0.6	0.46	0.38	0.24	0.19	0.48	0.49					
eat_rate_kcal	-0.09	-0.21	-0.53	-0.01	-0.59	0.57	0.5	0.06	0.02	0.23	0.53	0.86				
eat_rate_active_g	-0.19	-0.01	-0.55	-0.01	-0.48	0.33	0.36	0.22	0.22	0.56	0.54	0.92	0.78			
eat_rate_active_kcal	-0.09	-0.2	-0.55	0	-0.51	0.48	0.5	0.04	0.04	0.28	0.59	0.82	0.95	0.84		
prop_active	0.01	-0.07	0.02	0	-0.35	0.37	0.06	0.05	-0.07	-0.09	-0.04	0.3	0.29	-0.06	0.02	

Table 12: Portion Size 3: Correlation Matrix

	nbites	nsips	total_active_eating	bite_latency	meal_duration	bite_rate	bite_rate_active	sip_rate	sip_rate_active	bite_size_g	bite_size_kcal	eat_rate_g	eat_rate_kcal	eat_rate_active_g	eat_rate_active_kcal	prop_active
nbites																
nsips	0.14															
total_active_eating	0.65	0.39														
bite_latency	-0.02	-0.16	0.04													
meal_duration	0.55	0.42	0.93	0.07												
bite_rate	0.62	-0.19	-0.11	-0.07	-0.25											
bite_rate_active	0.59	-0.22	-0.18	-0.02	-0.24	0.96										
sip_rate	-0.11	0.82	-0.06	-0.17	-0.06	-0.07	-0.1									
sip_rate_active	-0.15	0.84	-0.07	-0.18	-0.02	-0.13	-0.13	0.98								
bite_size_g	-0.6	0.17	-0.35	-0.02	-0.31	-0.42	-0.44	0.38	0.41							
bite_size_kcal	-0.49	-0.18	-0.31	0.03	-0.34	-0.28	-0.34	0.01	-0.01	0.66						
eat_rate_g	-0.02	-0.01	-0.42	-0.09	-0.54	0.55	0.49	0.32	0.25	0.46	0.35					
eat_rate_kcal	0	-0.22	-0.36	-0.06	-0.49	0.52	0.44	0.05	-0.02	0.28	0.61	0.82				
eat_rate_active_g	-0.1	0	-0.5	-0.05	-0.52	0.46	0.49	0.32	0.3	0.52	0.32	0.96	0.74			
eat_rate_active_kcal	-0.05	-0.24	-0.42	-0.01	-0.48	0.47	0.45	0.03	-0.02	0.3	0.62	0.79	0.97	0.77		
prop_active	0.26	-0.05	0.19	-0.14	-0.17	0.39	0.13	0.04	-0.11	-0.09	0.12	0.33	0.38	0.05	0.17	

Table 13: Portion Size 4: Correlation Matrix

	nbites	nsips	total_active_eating	bite_latency	meal_duration	bite_rate	bite_rate_active	sip_rate	sip_rate_active	bite_size_g	bite_size_kcal	eat_rate_g	eat_rate_kcal	eat_rate_active_g	eat_rate_active_kcal	prop_active
nbites																
nsips	0.32															
total_active_eating	0.7	0.39														
bite_latency	-0.02	0.16	-0.06													
meal_duration	0.59	0.5	0.91	0.04												
bite_rate	0.52	-0.12	-0.14	-0.15	-0.31											
bite_rate_active	0.5	-0.01	-0.2	0.01	-0.25	0.94										
sip_rate	0.01	0.73	-0.07	0.01	-0.03	0.07	0.13									
sip_rate_active	0	0.8	-0.06	0.19	0.07	-0.02	0.12	0.94								
bite_size_g	-0.59	0.01	-0.38	0.12	-0.33	-0.37	-0.38	0.26	0.22							
bite_size_kcal	-0.59	-0.25	-0.44	0.09	-0.43	-0.29	-0.32	0.02	-0.02	0.8						
eat_rate_g	-0.09	-0.1	-0.45	-0.08	-0.57	0.56	0.5	0.32	0.19	0.5	0.39					
eat_rate_kcal	-0.11	-0.26	-0.49	-0.12	-0.61	0.55	0.5	0.14	0.03	0.37	0.56	0.86				
eat_rate_active_g	-0.18	-0.02	-0.53	0.07	-0.52	0.43	0.48	0.36	0.31	0.57	0.43	0.94	0.81			
eat_rate_active_kcal	-0.19	-0.22	-0.55	0	-0.58	0.44	0.48	0.16	0.1	0.43	0.61	0.81	0.96	0.85		
prop_active	0.25	-0.24	0.13	-0.33	-0.26	0.51	0.21	-0.03	-0.25	-0.08	0.01	0.4	0.39	0.08	0.13	

### 3.4 Repeated Measures Correlation

Table 14: Repeated Measures: Correlation Matrix

	nbites_cl	nsips_cl	total_active_eating_cl	bite_latency_cl	meal_duration_cl	bite_rate_cl	bite_rate_active_cl	sip_rate_cl	sip_rate_active_cl	bite_size_g_cl	bite_size_kcal_cl	eat_rate_g_cl	eat_rate_kcal_cl	eat_rate_active_g_cl	eat_rate_active_kcal_cl	prop_active_cl
nbites_cl																
nsips_cl	0.085															
total_active_eating_cl	0.664	0.173														
bite_latency_cl	-0.117	0.044	-0.042													
meal_duration_cl	0.538	0.213	0.811	-0.006												
bite_rate_cl	0.501	-0.102	-0.076	-0.167	-0.338											
bite_rate_active_cl	0.412	-0.054	-0.294	-0.068	-0.279	0.851										
sip_rate_cl	-0.098	0.825	-0.084	0.006	-0.131	-0.004	-0.011									
sip_rate_active_cl	-0.132	0.843	-0.144	0.067	-0.056	-0.101	0.01	0.947								
bite_size_g_cl	-0.396	-0.06	-0.238	0.058	-0.228	-0.336	-0.338	0.003	0.013							
bite_size_kcal_cl	-0.352	-0.203	-0.232	0.069	-0.243	-0.27	-0.282	-0.142	-0.13	0.923						
eat_rate_g_cl	-0.237	-0.089	-0.307	-0.091	-0.626	0.365	0.231	0.15	0.057	0.512	0.479					
eat_rate_kcal_cl	-0.144	-0.245	-0.343	-0.069	-0.554	0.433	0.309	-0.059	-0.126	0.355	0.52	0.829				
eat_rate_active_g_cl	-0.353	-0.086	-0.554	0.018	-0.53	0.114	0.216	0.086	0.103	0.717	0.665	0.855	0.689			
eat_rate_active_kcal_cl	-0.258	-0.244	-0.496	0.029	-0.506	0.225	0.302	-0.1	-0.086	0.55	0.697	0.738	0.893	0.838		
prop_active_cl	0.255	-0.035	0.356	-0.143	-0.219	0.485	-0.002	0.083	-0.133	-0.141	-0.105	0.34	0.33	-0.135	-0.065	



### 3.4.1 ICC across portion sizes

Table 15: Coding Reliability - ICC

behavior	ICC	n
nbites	0.697255520928367	78
nsips	0.533593756631635	78
active_eating	0.676128690684917	78
bite_latency	0.160252063491222	78
meal_duration	0.699030916016489	78
bite_rate	0.728956446687483	78
bite_rate_active	0.759583925686454	78
sip_rate	0.524035182600282	78
sip_rate_active	0.52163502920993	78
bite_size_g	0.315971246424332	75
bite_size_kcal	0.393390379170314	75
eat_rate_g	0.657351758334973	75
eat_rate_kcal	0.674100115598524	75
eat_rate_active_g	0.594576059259726	75
eat_rate_active_kcal	0.632566739188135	75
prop_active	0.25754693775425	78

## 3.5 Univariate Tests of Portion Size

Table 16: Portion Size and Behaviors - FDR adjusted pvalues

	ps_beh_padj
Bites	0.037
Sips	0.167
Latency to 1st Bite	0.934
Meal Duration	0.076
Active Eat Time	0.006
Bite Rate	0.483
Bite Rate Active	0.679
Sip Rate	0.130
Sip Rate Active	0.055
Bite Size, g	0.348
Bite Size, kcal	0.348
Eat Rate, g	0.348
Eat Rate, kcal	0.037
Eat Rate Active, g	0.715
Eat Rate Active, kcal	0.129
Prop Active	0.055

Table 17: Number of Bites by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.228	0.152	155.058	-1.501	0.135
scale(avg_vas)	0.116	0.056	331.889	2.087	0.038
scale(freddy_pre_meal)	-0.074	0.047	332.130	-1.576	0.116
sexFemale	0.251	0.189	86.197	1.328	0.188
scale(age_yr)	-0.137	0.090	86.443	-1.524	0.131
scale(fmi)	-0.037	0.095	85.147	-0.384	0.702
ps_order	0.000	0.027	252.662	-0.015	0.988
ps_prop	0.224	0.081	253.422	2.772	0.006

Table 18: Number of Sips by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.167	0.159	203.127	1.050	0.295
scale(avg_vas)	0.069	0.063	289.365	1.099	0.273
scale(freddy_pre_meal)	0.032	0.055	335.909	0.573	0.567
sexFemale	-0.074	0.182	87.444	-0.405	0.687
scale(age_yr)	-0.109	0.087	87.729	-1.254	0.213
scale(fmi)	0.043	0.091	85.827	0.473	0.637
ps_order	-0.020	0.033	255.122	-0.594	0.553
ps_prop	-0.170	0.101	256.240	-1.682	0.094

Table 19: Active Eating Time (min) by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.048	0.152	157.261	0.316	0.752
scale(avg_vas)	0.119	0.056	329.452	2.115	0.035
scale(freddy_pre_meal)	-0.050	0.048	333.478	-1.040	0.299
sexFemale	-0.181	0.188	85.220	-0.963	0.338
scale(age_yr)	-0.177	0.089	85.469	-1.986	0.050
scale(fmi)	-0.104	0.095	84.134	-1.095	0.277
ps_order	-0.035	0.027	251.783	-1.277	0.203
ps_prop	0.296	0.082	252.580	3.609	0.000

Table 20: Meal Duration (min) by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.117	0.153	152.710	0.763	0.447
scale(avg_vas)	0.074	0.056	332.997	1.317	0.189
scale(freddy_pre_meal)	-0.014	0.047	331.234	-0.299	0.765
sexFemale	-0.192	0.192	85.853	-1.000	0.320
scale(age_yr)	-0.204	0.091	86.095	-2.236	0.028
scale(fmi)	-0.037	0.097	84.829	-0.382	0.703
ps_order	-0.039	0.027	252.265	-1.455	0.147
ps_prop	0.178	0.081	253.009	2.200	0.029

Table 21: Latency to First Bite (min) by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.023	0.164	326.341	0.138	0.890
scale(avg_vas)	-0.076	0.062	168.133	-1.237	0.218
scale(freddy_pre_meal)	0.054	0.059	233.179	0.913	0.362
sexFemale	-0.038	0.139	89.715	-0.273	0.785
scale(age_yr)	-0.026	0.066	89.676	-0.395	0.693
scale(fmi)	0.068	0.069	86.326	0.988	0.326
ps_order	0.000	0.045	261.575	0.009	0.993
ps_prop	-0.011	0.136	263.314	-0.083	0.934

Table 22: Bites/min by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.334	0.153	149.009	-2.189	0.030
scale(avg_vas)	0.099	0.055	335.557	1.805	0.072
scale(freddy_pre_meal)	-0.073	0.046	328.780	-1.583	0.114
sexFemale	0.391	0.193	86.855	2.028	0.046
scale(age_yr)	0.088	0.092	87.090	0.958	0.341
scale(fmi)	0.007	0.097	85.887	0.077	0.939
ps_order	0.041	0.026	253.114	1.605	0.110
ps_prop	0.067	0.078	253.807	0.857	0.392

Table 23: Bites/min (active) by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.296	0.152	142.575	-1.950	0.053
scale(avg_vas)	0.059	0.053	337.564	1.109	0.268
scale(freddy_pre_meal)	-0.043	0.045	324.787	-0.965	0.335
sexFemale	0.450	0.195	86.880	2.315	0.023
scale(age_yr)	0.056	0.093	87.102	0.608	0.545
scale(fmi)	0.042	0.098	85.997	0.431	0.668
ps_order	0.033	0.025	252.948	1.353	0.177
ps_prop	-0.040	0.075	253.579	-0.534	0.594

Table 24: Sips/min by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.051	0.160	201.552	0.319	0.750
scale(avg_vas)	0.013	0.064	289.569	0.200	0.842
scale(freddy_pre_meal)	0.007	0.056	336.028	0.131	0.896
sexFemale	0.048	0.184	86.704	0.259	0.796
scale(age_yr)	0.041	0.087	86.987	0.473	0.637
scale(fmi)	0.019	0.092	85.103	0.203	0.839
ps_order	0.005	0.034	254.387	0.157	0.876
ps_prop	-0.189	0.102	255.507	-1.854	0.065

Table 25: Sips/min (active) by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.046	0.160	202.051	0.288	0.774
scale(avg_vas)	-0.003	0.063	289.141	-0.047	0.962
scale(freddy_pre_meal)	0.048	0.056	335.934	0.855	0.393
sexFemale	0.046	0.183	86.754	0.251	0.803
scale(age_yr)	0.020	0.087	87.037	0.234	0.816
scale(fmi)	0.038	0.092	85.148	0.415	0.679
ps_order	0.018	0.033	254.447	0.532	0.595
ps_prop	-0.243	0.101	255.570	-2.397	0.017

Table 26: g/Bite by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.153	0.161	275.283	0.952	0.342
scale(avg_vas)	-0.084	0.064	213.173	-1.315	0.190
scale(freddy_pre_meal)	0.084	0.059	291.091	1.421	0.156
sexFemale	-0.239	0.159	85.837	-1.504	0.136
scale(age_yr)	0.088	0.076	86.069	1.167	0.247
scale(fmi)	0.119	0.080	83.005	1.488	0.140
ps_order	-0.040	0.040	254.168	-1.013	0.312
ps_prop	0.136	0.121	255.295	1.127	0.261

Table 27: kcal/Bite by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	0.153	0.161	275.283	0.952	0.342
scale(avg_vas)	-0.084	0.064	213.173	-1.315	0.190
scale(freddy_pre_meal)	0.084	0.059	291.091	1.421	0.156
sexFemale	-0.239	0.159	85.837	-1.504	0.136
scale(age_yr)	0.088	0.076	86.069	1.167	0.247
scale(fmi)	0.119	0.080	83.005	1.488	0.140
ps_order	-0.040	0.040	254.168	-1.013	0.312
ps_prop	0.136	0.121	255.295	1.127	0.261

Table 28: g/min by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.094	0.153	172.445	-0.617	0.538
scale(avg_vas)	0.016	0.058	318.553	0.269	0.788
scale(freddy_pre_meal)	-0.053	0.050	334.848	-1.064	0.288
sexFemale	-0.048	0.184	86.971	-0.259	0.797
scale(age_yr)	0.241	0.088	87.249	2.743	0.007
scale(fmi)	0.197	0.093	85.563	2.127	0.036
ps_order	0.028	0.029	252.086	0.965	0.336
ps_prop	0.107	0.087	252.736	1.227	0.221

Table 29: kcal/min by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.168	0.153	165.977	-1.099	0.273
scale(avg_vas)	0.029	0.057	324.637	0.513	0.609
scale(freddy_pre_meal)	-0.106	0.049	333.152	-2.170	0.031
sexFemale	-0.115	0.187	87.594	-0.616	0.539
scale(age_yr)	0.155	0.089	87.864	1.740	0.085
scale(fmi)	0.203	0.094	86.281	2.153	0.034
ps_order	0.048	0.028	252.477	1.702	0.090
ps_prop	0.231	0.085	253.079	2.724	0.007

Table 30: g/min (active) by Portion Size Meal

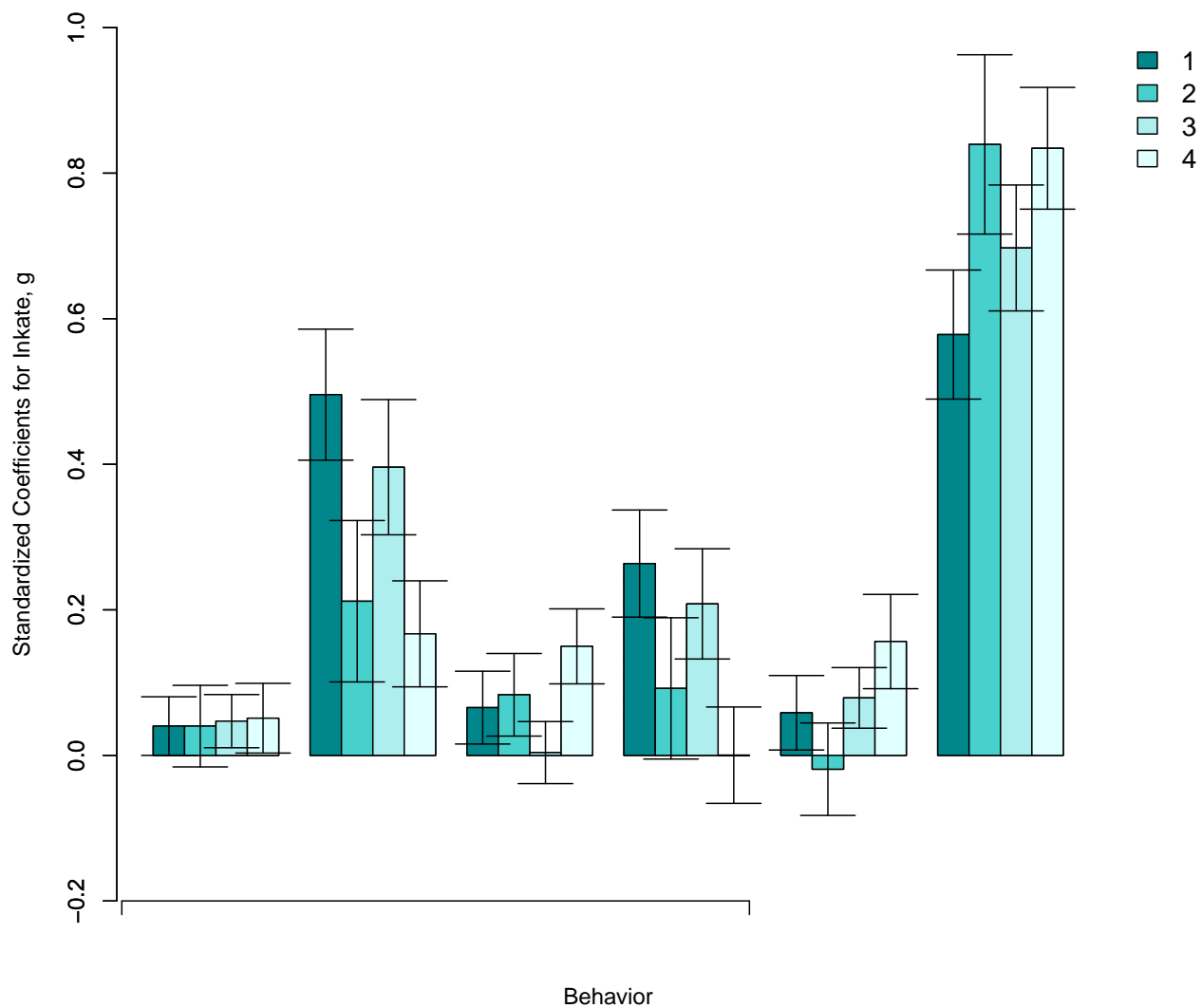
	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.029	0.154	192.421	-0.192	0.848
scale(avg_vas)	-0.057	0.060	299.376	-0.944	0.346
scale(freddy_pre_meal)	-0.011	0.053	335.680	-0.204	0.838
sexFemale	-0.028	0.179	86.978	-0.159	0.874
scale(age_yr)	0.203	0.085	87.272	2.378	0.020
scale(fmi)	0.226	0.090	85.299	2.505	0.014
ps_order	0.009	0.031	252.670	0.275	0.784
ps_prop	0.040	0.095	253.435	0.426	0.670

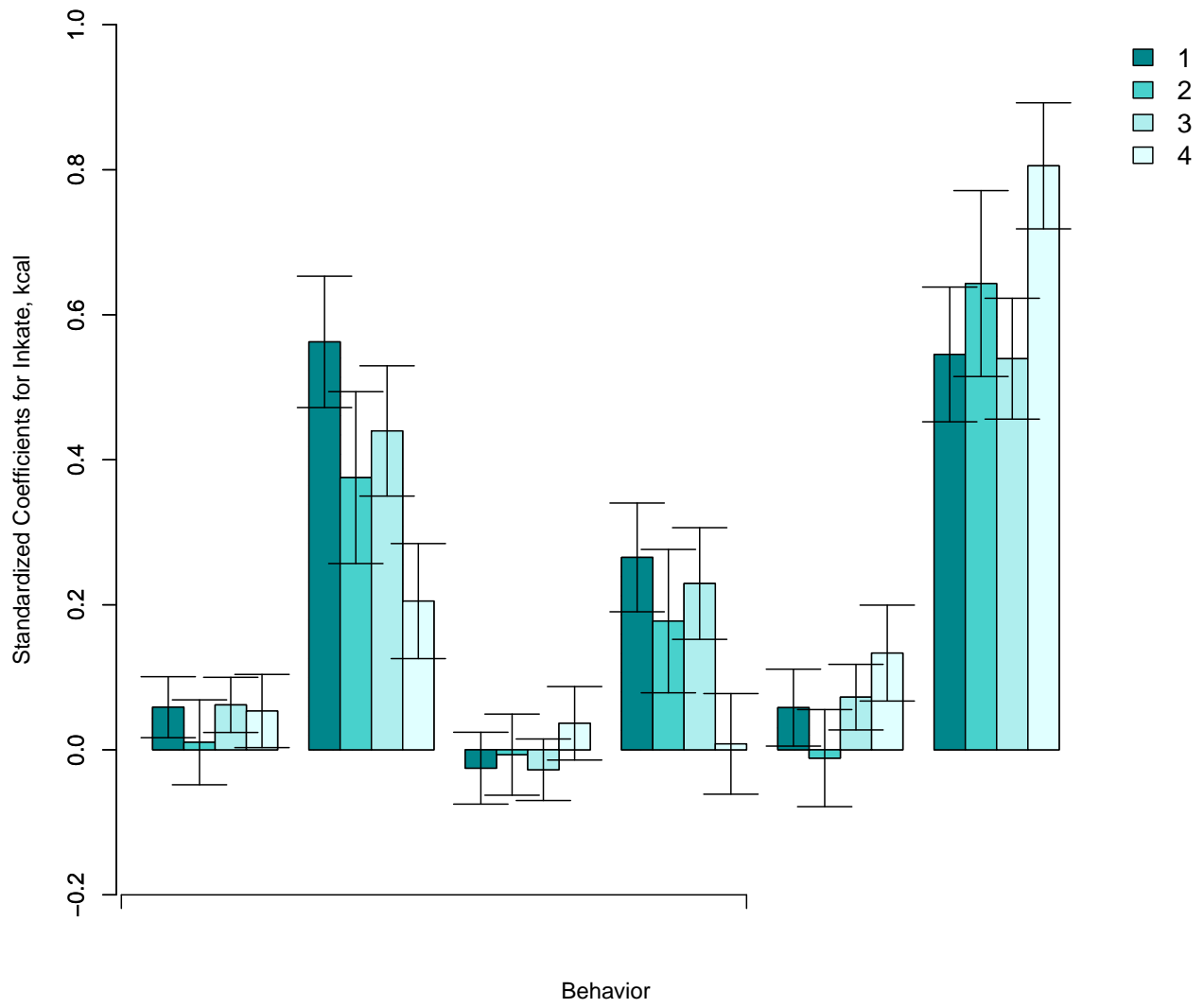
Table 31: kcal/min (active) by Portion Size Meal

	Estimate	Std. Error	df	t value	Pr(> t )
(Intercept)	-0.119	0.154	181.272	-0.774	0.440
scale(avg_vas)	-0.039	0.059	311.800	-0.653	0.514
scale(freddy_pre_meal)	-0.074	0.051	335.819	-1.440	0.151
sexFemale	-0.084	0.183	87.828	-0.459	0.647
scale(age_yr)	0.122	0.087	88.116	1.401	0.165
scale(fmi)	0.225	0.092	86.305	2.442	0.017
ps_order	0.031	0.030	253.141	1.030	0.304
ps_prop	0.174	0.091	253.833	1.917	0.056

## 4 Replication of ‘Obesogenic’ Style of Eating

### 4.1 Association with Intake





#### 4.1.1 Portion Size 1

Table 32: Portion Size 1 - Standardized Coefficients for Association Between Eating Behaviors and Intake (g)  
(adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.082	0.058	1.431	0.157
scale(ps1_freddy_pre_meal)	-0.006	0.041	-0.144	0.886
sexFemale	-0.167	0.087	-1.920	0.059
scale(age_yr)	-0.011	0.041	-0.267	0.790
scale(fmi)	0.056	0.042	1.336	0.186
scale(ps1_avg_vas)	0.040	0.040	1.001	0.320
scale(ps1_nbites)	0.496	0.090	5.507	0.000
scale(ps1_nsips)	0.066	0.050	1.312	0.193
scale(ps1_bite_size_g)	0.264	0.074	3.581	0.001
scale(ps1_prop_active)	0.059	0.051	1.144	0.256
scale(ps1_meal_duration)	0.578	0.089	6.520	0.000
scale(ps1_eat_rate_g)	0.547	0.079	6.963	0.000

Table 33: Portion Size 1 - Relative Weighting Analysis, grams

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps1_freddy_pre_meal	0.006	0.694	-
sex_num	0.012	1.360	-
age_yr	0.003	0.326	+
fmi	0.015	1.699	+
ps1_avg_vas	0.017	1.934	+
ps1_nbites	0.264	29.746	+
ps1_nsips	0.092	10.385	+
ps1_bite_size_g	0.073	8.262	+
ps1_prop_active	0.040	4.567	+
ps1_meal_duration	0.212	23.929	+
ps1_eat_rate_g	0.152	17.098	+



Table 34: Portion Size 1 - Standardized Coefficients for Association Between Eating Behaviors and Intake (kcal) (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.085	0.061	1.399	0.166
scale(ps1_freddy_pre_meal)	0.014	0.043	0.321	0.749
sexFemale	-0.173	0.092	-1.882	0.064
scale(age_yr)	-0.040	0.042	-0.970	0.335
scale(fmi)	0.015	0.044	0.329	0.743
scale(ps1_avg_vas)	0.059	0.042	1.398	0.166
scale(ps1_nbites)	0.563	0.091	6.212	0.000
scale(ps1_nsips)	-0.025	0.050	-0.511	0.611
scale(ps1_bite_size_kcal)	0.265	0.075	3.538	0.001
scale(ps1_prop_active)	0.058	0.053	1.097	0.276
scale(ps1_meal_duration)	0.545	0.093	5.870	0.000
scale(ps1_eat_rate_kcal)	0.600	0.083	7.206	0.000

Table 35: Portion Size 1 - Relative Weighting Analysis, kcal

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps1_freddy_pre_meal	0.006	0.683	-
sex_num	0.018	2.026	-
age_yr	0.009	1.076	-
fmi	0.007	0.776	+
ps1_avg_vas	0.020	2.261	+
ps1_nbites	0.296	33.794	+
ps1_nsips	0.027	3.077	+
ps1_bite_size_kcal	0.081	9.196	+
ps1_prop_active	0.053	6.072	+
ps1_meal_duration	0.177	20.267	+
ps1_eat_rate_kcal	0.182	20.772	+

#### 4.1.2 Portion Size 2

Table 36: Portion Size 2 - Standardized Coefficients for Association Between Eating Behaviors and Intake (g)  
(adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.037	0.075	0.492	0.624
scale(ps2_freddy_pre_meal)	-0.010	0.057	-0.184	0.854
sexFemale	-0.107	0.121	-0.882	0.381
scale(age_yr)	0.012	0.055	0.214	0.831
scale(fmi)	0.040	0.056	0.717	0.476
scale(ps2_avg_vas)	0.040	0.056	0.718	0.475
scale(ps2_nbites)	0.212	0.111	1.910	0.060
scale(ps2_nsips)	0.083	0.057	1.467	0.146
scale(ps2_bite_size_g)	0.092	0.097	0.948	0.346
scale(ps2_prop_active)	-0.019	0.064	-0.299	0.766
scale(ps2_meal_duration)	0.839	0.123	6.815	0.000
scale(ps2_eat_rate_g)	0.744	0.102	7.282	0.000

Table 37: Portion Size 2 - Relative Weighting Analysis, grams

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps2_freddy_pre_meal	0.029	3.544	-
sex_num	0.021	2.599	-
age_yr	0.009	1.055	-
fmi	0.008	1.036	+
ps2_avg_vas	0.013	1.634	+
ps2_nbites	0.180	22.008	+
ps2_nsips	0.070	8.546	+
ps2_bite_size_g	0.057	6.956	+
ps2_prop_active	0.018	2.265	-
ps2_meal_duration	0.240	29.443	+
ps2_eat_rate_g	0.171	20.913	+

Table 38: Portion Size 2 - Standardized Coefficients for Association Between Eating Behaviors and Intake (kcal) (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.037	0.078	0.468	0.641
scale(ps2_freddy_pre_meal)	-0.024	0.059	-0.397	0.693
sexFemale	-0.105	0.124	-0.845	0.401
scale(age_yr)	0.005	0.056	0.084	0.933
scale(fmi)	0.103	0.059	1.752	0.084
scale(ps2_avg_vas)	0.010	0.059	0.177	0.860
scale(ps2_nbites)	0.375	0.119	3.167	0.002
scale(ps2_nsips)	-0.007	0.056	-0.119	0.905
scale(ps2_bite_size_kcal)	0.178	0.099	1.796	0.077
scale(ps2_prop_active)	-0.011	0.067	-0.171	0.865
scale(ps2_meal_duration)	0.643	0.128	5.016	0.000
scale(ps2_eat_rate_kcal)	0.686	0.113	6.050	0.000

Table 39: Portion Size 2 - Relative Weighting Analysis, kcal

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps2_freddy_pre_meal	0.040	4.977	-
sex_num	0.010	1.250	-
age_yr	0.007	0.900	-
fmi	0.025	3.118	+
ps2_avg_vas	0.008	1.014	+
ps2_nbites	0.233	29.226	+
ps2_nsips	0.009	1.139	+
ps2_bite_size_kcal	0.073	9.177	+
ps2_prop_active	0.013	1.667	-
ps2_meal_duration	0.177	22.144	+
ps2_eat_rate_kcal	0.202	25.387	+

#### 4.1.3 Portion Size 3

Table 40: Portion Size 3 - Standardized Coefficients for Association Between Eating Behaviors and Intake (g)  
(adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.015	0.054	0.271	0.787
scale(ps3_freddy_pre_meal)	-0.028	0.039	-0.700	0.486
sexFemale	-0.020	0.079	-0.248	0.805
scale(age_yr)	-0.020	0.038	-0.521	0.604
scale(fmi)	0.104	0.038	2.739	0.008
scale(ps3_avg_vas)	0.047	0.037	1.288	0.202
scale(ps3_nbites)	0.396	0.093	4.263	0.000
scale(ps3_nsips)	0.004	0.043	0.090	0.929
scale(ps3_bite_size_g)	0.208	0.076	2.749	0.008
scale(ps3_prop_active)	0.079	0.042	1.897	0.062
scale(ps3_meal_duration)	0.697	0.087	8.058	0.000
scale(ps3_eat_rate_g)	0.570	0.081	7.086	0.000

Table 41: Portion Size 3 - Relative Weighting Analysis, grams

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps3_freddy_pre_meal	0.035	3.889	-
sex_num	0.004	0.442	-
age_yr	0.007	0.777	-
fmi	0.030	3.272	+
ps3_avg_vas	0.010	1.125	+
ps3_nbites	0.257	28.419	+
ps3_nsips	0.059	6.535	+
ps3_bite_size_g	0.065	7.193	+
ps3_prop_active	0.033	3.627	+
ps3_meal_duration	0.251	27.669	+
ps3_eat_rate_g	0.154	17.052	+

Table 42: Portion Size 3 - Standardized Coefficients for Association Between Eating Behaviors and Intake (kcal) (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.063	0.057	1.106	0.272
scale(ps3_freddy_pre_meal)	0.005	0.042	0.126	0.900
sexFemale	-0.112	0.084	-1.334	0.186
scale(age_yr)	-0.029	0.039	-0.739	0.462
scale(fmi)	0.138	0.040	3.426	0.001
scale(ps3_avg_vas)	0.062	0.038	1.629	0.107
scale(ps3_nbites)	0.440	0.090	4.895	0.000
scale(ps3_nsips)	-0.027	0.042	-0.648	0.519
scale(ps3_bite_size_kcal)	0.229	0.077	2.978	0.004
scale(ps3_prop_active)	0.073	0.045	1.606	0.112
scale(ps3_meal_duration)	0.539	0.083	6.472	0.000
scale(ps3_eat_rate_kcal)	0.558	0.086	6.470	0.000

Table 43: Portion Size 3 - Relative Weighting Analysis, kcal

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps3_freddy_pre_meal	0.040	4.491	-
sex_num	0.007	0.822	-
fmi	0.041	4.574	+
age_yr	0.010	1.080	-
ps3_avg_vas	0.010	1.070	+
ps3_nbites	0.250	27.890	+
ps3_nsips	0.012	1.361	+
ps3_bite_size_kcal	0.097	10.778	+
ps3_prop_active	0.049	5.510	+
ps3_meal_duration	0.190	21.164	+
ps3_eat_rate_kcal	0.191	21.260	+

#### 4.1.4 Portion Size 4

Table 44: Portion Size 4 - Standardized Coefficients for Association Between Eating Behaviors and Intake (g)  
(adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.088	0.071	1.239	0.219
scale(ps4_freddy_pre_meal)	-0.033	0.048	-0.686	0.495
sexFemale	-0.181	0.102	-1.775	0.080
scale(age_yr)	0.012	0.050	0.250	0.804
scale(fmi)	0.082	0.052	1.569	0.121
scale(ps4_avg_vas)	0.051	0.048	1.066	0.290
scale(ps4_nbites)	0.167	0.073	2.293	0.025
scale(ps4_nsips)	0.150	0.052	2.908	0.005
scale(ps4_bite_size_g)	0.000	0.066	0.005	0.996
scale(ps4_prop_active)	0.156	0.065	2.415	0.018
scale(ps4_meal_duration)	0.834	0.084	9.972	0.000
scale(ps4_eat_rate_g)	0.798	0.078	10.263	0.000

Table 45: Portion Size 4 - Relative Weighting Analysis, grams

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps4_freddy_pre_meal	0.011	1.313	-
sex_num	0.008	0.916	-
age_yr	0.007	0.772	+
fmi	0.009	1.079	+
ps4_avg_vas	0.012	1.391	+
ps4_nbites	0.166	19.396	+
ps4_nsips	0.123	14.314	+
ps4_bite_size_g	0.025	2.887	+
ps4_prop_active	0.031	3.675	+
ps4_meal_duration	0.255	29.801	+
ps4_eat_rate_g	0.210	24.455	+

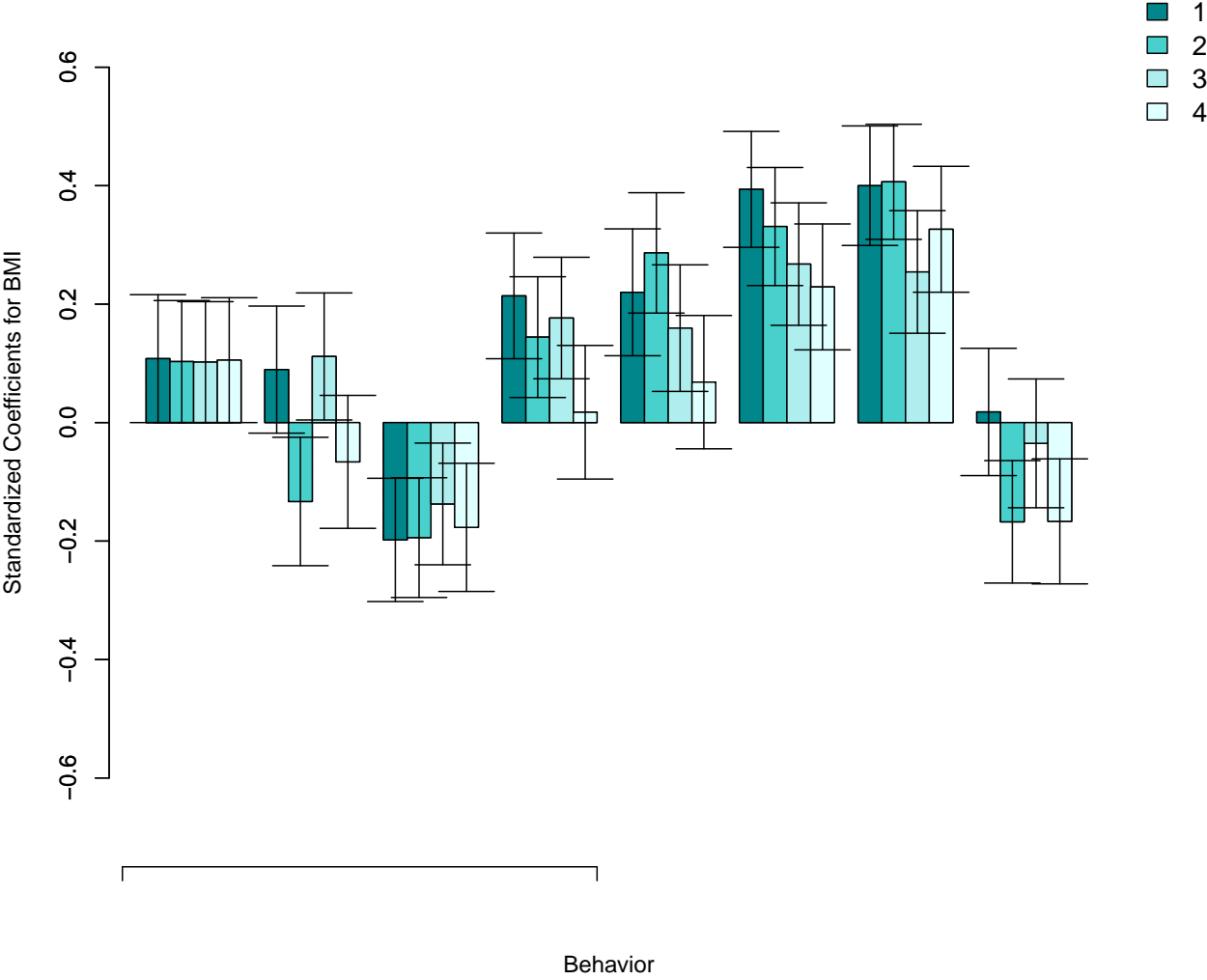
Table 46: Portion Size 4 - Standardized Coefficients for Association Between Eating Behaviors and Intake (kcal) (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.049	0.075	0.656	0.514
scale(ps4_freddy_pre_meal)	-0.023	0.050	-0.461	0.646
sexFemale	-0.115	0.109	-1.054	0.296
scale(age_yr)	-0.051	0.052	-0.973	0.334
scale(fmi)	0.069	0.055	1.242	0.218
scale(ps4_avg_vas)	0.054	0.050	1.060	0.293
scale(ps4_nbites)	0.205	0.079	2.586	0.012
scale(ps4_nsips)	0.037	0.051	0.722	0.473
scale(ps4_bite_size_kcal)	0.008	0.069	0.118	0.906
scale(ps4_prop_active)	0.133	0.066	2.017	0.048
scale(ps4_meal_duration)	0.805	0.087	9.267	0.000
scale(ps4_eat_rate_kcal)	0.876	0.079	11.098	0.000

Table 47: Portion Size 4 - Relative Weighting Analysis, kcal

Variables	Raw.RelWeight	Rescaled.RelWeight	Sign
ps4_freddy_pre_meal	0.011	1.256	-
sex_num	0.009	1.034	-
age_yr	0.013	1.552	-
fmi	0.013	1.539	+
ps4_avg_vas	0.014	1.722	+
ps4_nbites	0.193	22.968	+
ps4_nsips	0.018	2.111	+
ps4_bite_size_kcal	0.035	4.169	+
ps4_prop_active	0.030	3.603	+
ps4_meal_duration	0.230	27.283	+
ps4_eat_rate_kcal	0.276	32.762	+

4.2 Associaiton with BMI Percentile



4.2.1 Portion Size 1

Table 48: Portion Size 1 - FDR adjusted pvalues

	ps1_bmi_adj
Bites	0.659
Sips	0.542
Meal Duration	0.097
Bite Size, g	0.094
Bite Size, kcal	0.094
Eat Rate, g	0.001
Eat Rate, kcal	0.001
Prop Active	0.867



Table 49: Portion Size 1 - Standardized Coefficients for Association Between Bites and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.020	0.151	-0.134	0.894
scale(ps1_freddy_pre_meal)	-0.117	0.110	-1.070	0.288
sexFemale	0.037	0.215	0.173	0.863
scale(age_yr)	-0.088	0.109	-0.808	0.421
scale(ps1_avg_vas)	0.152	0.109	1.395	0.167
scale(bmi_percentile)	-0.061	0.108	-0.561	0.576

Table 50: Portion Size 1 - Standardized Coefficients for Association Between Sips and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.064	0.150	-0.430	0.668
scale(ps1_freddy_pre_meal)	0.119	0.109	1.094	0.277
sexFemale	0.124	0.214	0.582	0.562
scale(age_yr)	-0.175	0.109	-1.608	0.112
scale(ps1_avg_vas)	0.066	0.108	0.615	0.540
scale(bmi_percentile)	0.089	0.107	0.834	0.407

Table 51: Portion Size 1 - Standardized Coefficients for Association Between Bite Size (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.058	0.148	0.388	0.699
scale(ps1_freddy_pre_meal)	-0.004	0.108	-0.041	0.968
sexFemale	-0.108	0.212	-0.510	0.611
scale(age_yr)	0.197	0.107	1.834	0.070
scale(ps1_avg_vas)	0.006	0.107	0.054	0.957
scale(bmi_percentile)	0.214	0.106	2.016	0.047

Table 52: Portion Size 1 - Standardized Coefficients for Association Between Bite Size (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.075	0.149	0.505	0.615
scale(ps1_freddy_pre_meal)	-0.048	0.109	-0.440	0.661
sexFemale	-0.149	0.213	-0.700	0.486
scale(age_yr)	0.059	0.108	0.546	0.587
scale(ps1_avg_vas)	-0.021	0.108	-0.193	0.848
scale(bmi_percentile)	0.220	0.107	2.054	0.043

Table 53: Portion Size 1 - Standardized Coefficients for Association Between Proportion Active Eating and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.115	0.150	0.764	0.447
scale(ps1_freddy_pre_meal)	-0.167	0.109	-1.529	0.130
sexFemale	-0.228	0.214	-1.063	0.291
scale(age_yr)	0.107	0.109	0.983	0.329
scale(ps1_avg_vas)	0.127	0.108	1.175	0.243
scale(bmi_percentile)	0.018	0.107	0.167	0.867

Table 54: Portion Size 1 - Standardized Coefficients for Association Between Meal Duration and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.180	0.145	1.236	0.220
scale(ps1_freddy_pre_meal)	-0.120	0.106	-1.138	0.258
sexFemale	-0.369	0.207	-1.781	0.079
scale(age_yr)	-0.138	0.105	-1.313	0.193
scale(ps1_avg_vas)	0.140	0.105	1.337	0.185
scale(bmi_percentile)	-0.198	0.104	-1.903	0.060

Table 55: Portion Size 1 - Standardized Coefficients for Association Between Eating Rate (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.136	0.137	-0.998	0.321
scale(ps1_freddy_pre_meal)	0.044	0.099	0.447	0.656
sexFemale	0.286	0.195	1.468	0.146
scale(age_yr)	0.229	0.099	2.306	0.024
scale(ps1_avg_vas)	0.029	0.099	0.295	0.769
scale(bmi_percentile)	0.394	0.098	4.024	0.000

Table 56: Portion Size 1 - Standardized Coefficients for Association Between Eating Rate (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.078	0.141	-0.551	0.583
scale(ps1_freddy_pre_meal)	0.042	0.103	0.414	0.680
sexFemale	0.162	0.201	0.806	0.423
scale(age_yr)	0.080	0.102	0.781	0.437
scale(ps1_avg_vas)	0.003	0.102	0.034	0.973
scale(bmi_percentile)	0.400	0.101	3.964	0.000

Table 57: Portion Size 1 - FDR Adjusted p-values for the effect of BMI Percentile on Microstructure

	ps1_bmi_adj
Bites	0.659
Sips	0.542
Meal Duration	0.097
Bite Size, g	0.094
Bite Size, kcal	0.094
Eat Rate, g	0.001
Eat Rate, kcal	0.001
Prop Active	0.867

#### 4.2.2 Portion Size 2

Table 58: Portion Size 2 - FDR adjusted pvalues

	ps2_bmi_adj
Bites	0.538
Sips	0.254
Meal Duration	0.116
Bite Size, g	0.214
Bite Size, kcal	0.016
Eat Rate, g	0.005
Eat Rate, kcal	0.001
Prop Active	0.174

Table 59: Portion Size 2 - Standardized Coefficitens for Association Between Bites and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.141	0.142	-0.993	0.324
scale(ps2_freddy_pre_meal)	-0.251	0.104	-2.401	0.019
sexFemale	0.318	0.209	1.523	0.132
scale(age_yr)	-0.194	0.104	-1.863	0.066
scale(ps2_avg_vas)	0.136	0.104	1.298	0.198
scale(bmi_percentile)	-0.064	0.103	-0.619	0.538

Table 60: Portion Size 2 - Standardized Coeffitens for Association Between Sips and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.033	0.149	0.223	0.824
scale(ps2_freddy_pre_meal)	-0.017	0.110	-0.153	0.878
sexFemale	-0.065	0.219	-0.297	0.767
scale(age_yr)	-0.226	0.110	-2.055	0.043
scale(ps2_avg_vas)	0.026	0.110	0.233	0.816
scale(bmi_percentile)	-0.133	0.108	-1.229	0.223

Table 61: Portion Size 2 - Standardized Coeffitens for Association Between Bite Size (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.288	0.140	2.052	0.043
scale(ps2_freddy_pre_meal)	0.149	0.103	1.443	0.153
sexFemale	-0.613	0.206	-2.969	0.004
scale(age_yr)	0.197	0.103	1.912	0.059
scale(ps2_avg_vas)	0.064	0.103	0.616	0.540
scale(bmi_percentile)	0.144	0.102	1.415	0.161

Table 62: Portion Size 2 - Standardized Coeffitens for Association Between Bite Size (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.230	0.140	1.644	0.104
scale(ps2_freddy_pre_meal)	0.041	0.103	0.395	0.694
sexFemale	-0.497	0.206	-2.415	0.018
scale(age_yr)	0.216	0.103	2.094	0.039
scale(ps2_avg_vas)	0.050	0.103	0.483	0.630
scale(bmi_percentile)	0.287	0.102	2.819	0.006

Table 63: Portion Size 2 - Standardized Coeffitens for Association Between Proportion Active Eating and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.070	0.142	0.492	0.624
scale(ps2_freddy_pre_meal)	-0.177	0.105	-1.690	0.095
sexFemale	-0.147	0.209	-0.703	0.484
scale(age_yr)	0.059	0.105	0.562	0.576
scale(ps2_avg_vas)	0.331	0.105	3.155	0.002
scale(bmi_percentile)	-0.168	0.103	-1.621	0.109

Table 64: Portion Size 2 - Standardized Coefficients for Association Between Meal Duration and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.102	0.139	0.730	0.467
scale(ps2_freddy_pre_meal)	-0.238	0.102	-2.326	0.023
sexFemale	-0.188	0.205	-0.921	0.360
scale(age_yr)	-0.302	0.102	-2.951	0.004
scale(ps2_avg_vas)	0.042	0.102	0.414	0.680
scale(bmi_percentile)	-0.194	0.101	-1.921	0.058

Table 65: Portion Size 2 - Standardized Coefficients for Association Between Eating Rate (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.105	0.137	0.762	0.448
scale(ps2_freddy_pre_meal)	-0.036	0.101	-0.355	0.724
sexFemale	-0.230	0.202	-1.141	0.257
scale(age_yr)	0.304	0.101	3.015	0.003
scale(ps2_avg_vas)	0.126	0.101	1.250	0.215
scale(bmi_percentile)	0.331	0.100	3.322	0.001

Table 66: Portion Size 2 - Standardized Coefficients for Association Between Eating Rate (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.041	0.134	0.306	0.760
scale(ps2_freddy_pre_meal)	-0.077	0.098	-0.786	0.434
sexFemale	-0.100	0.197	-0.508	0.613
scale(age_yr)	0.280	0.098	2.841	0.006
scale(ps2_avg_vas)	0.103	0.098	1.042	0.301
scale(bmi_percentile)	0.407	0.097	4.183	0.000

Table 67: Portion Size 2 - FDR Adjusted p-values for the effect of BMI Percentile on Microstructure

	ps2_bmi_adj
Bites	0.538
Sips	0.254
Meal Duration	0.116
Bite Size, g	0.214
Bite Size, kcal	0.016
Eat Rate, g	0.005
Eat Rate, kcal	0.001
Prop Active	0.174

#### 4.2.3 Portion Size 3

Table 68: Portion Size 3 - FDR adjusted pvalues

	ps3_bmi_adj
Bites	0.919
Sips	0.401
Meal Duration	0.296
Bite Size, g	0.238
Bite Size, kcal	0.279
Eat Rate, g	0.065
Eat Rate, kcal	0.065
Prop Active	0.855

Table 69: Portion Size 3 - Standardized Coefficitens for Association Between Bites and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.182	0.146	-1.245	0.217
scale(ps3_freddy_pre_meal)	-0.307	0.104	-2.964	0.004
sexFemale	0.348	0.206	1.689	0.095
scale(age_yr)	-0.141	0.105	-1.346	0.182
scale(ps3_avg_vas)	-0.005	0.103	-0.049	0.961
scale(bmi_percentile)	0.010	0.102	0.102	0.919

Table 70: Portion Size 3 - Standardized Coeffitens for Association Between Sips and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.109	0.154	0.706	0.482
scale(ps3_freddy_pre_meal)	-0.084	0.109	-0.772	0.442
sexFemale	-0.225	0.217	-1.040	0.301
scale(age_yr)	-0.111	0.110	-1.008	0.316
scale(ps3_avg_vas)	0.057	0.108	0.525	0.601
scale(bmi_percentile)	0.112	0.107	1.041	0.301

Table 71: Portion Size 3 - Standardized Coeffitens for Association Between Bite Size (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.204	0.147	1.387	0.169
scale(ps3_freddy_pre_meal)	0.237	0.104	2.279	0.025
sexFemale	-0.402	0.208	-1.929	0.057
scale(age_yr)	0.111	0.105	1.053	0.296
scale(ps3_avg_vas)	0.104	0.104	1.001	0.320
scale(bmi_percentile)	0.177	0.103	1.721	0.089

Table 72: Portion Size 3 - Standardized Coeffitens for Association Between Bite Size (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.170	0.153	1.109	0.271
scale(ps3_freddy_pre_meal)	0.068	0.108	0.627	0.533
sexFemale	-0.337	0.217	-1.551	0.125
scale(age_yr)	0.073	0.110	0.662	0.510
scale(ps3_avg_vas)	0.075	0.108	0.691	0.491
scale(bmi_percentile)	0.159	0.107	1.493	0.139

Table 73: Portion Size 3 - Standardized Coeffitens for Association Between Proportion Active Eating and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.012	0.156	-0.074	0.941
scale(ps3_freddy_pre_meal)	-0.034	0.110	-0.310	0.757
sexFemale	0.036	0.220	0.164	0.870
scale(age_yr)	0.150	0.111	1.343	0.183
scale(ps3_avg_vas)	0.064	0.110	0.579	0.564
scale(bmi_percentile)	-0.035	0.109	-0.322	0.748

Table 74: Portion Size 3 - Standardized Coeffitens for Association Between Meal Duration and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.064	0.147	0.431	0.667
scale(ps3_freddy_pre_meal)	-0.223	0.104	-2.137	0.036
sexFemale	-0.145	0.207	-0.697	0.488
scale(age_yr)	-0.240	0.105	-2.278	0.025
scale(ps3_avg_vas)	0.094	0.104	0.902	0.370
scale(bmi_percentile)	-0.137	0.103	-1.337	0.185

Table 75: Portion Size 3 - Standardized Coeffitens for Association Between Eating Rate (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.004	0.148	0.024	0.981
scale(ps3_freddy_pre_meal)	-0.053	0.105	-0.508	0.613
sexFemale	0.005	0.210	0.026	0.980
scale(age_yr)	0.233	0.106	2.191	0.031
scale(ps3_avg_vas)	-0.029	0.104	-0.277	0.783
scale(bmi_percentile)	0.268	0.103	2.588	0.011

Table 76: Portion Size 3 - Standardized Coeffitens for Association Between Eating Rate (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.041	0.148	0.279	0.781
scale(ps3_freddy_pre_meal)	-0.163	0.105	-1.555	0.124
sexFemale	-0.076	0.210	-0.360	0.720
scale(age_yr)	0.160	0.106	1.506	0.136
scale(ps3_avg_vas)	-0.049	0.104	-0.470	0.639
scale(bmi_percentile)	0.254	0.103	2.458	0.016



Table 77: Portion Size 3 - FDR Adjusted p-values for the effect of BMI Percentile on Microstructure

	ps3_bmi_adj
Bites	0.919
Sips	0.401
Meal Duration	0.296
Bite Size, g	0.238
Bite Size, kcal	0.279
Eat Rate, g	0.065
Eat Rate, kcal	0.065
Prop Active	0.855

#### 4.2.4 Portion Size 4

Table 78: Portion Size 4 - FDR adjusted pvalues

	ps4_bmi_adj
Bites	0.636
Sips	0.636
Meal Duration	0.236
Bite Size, g	0.877
Bite Size, kcal	0.636
Eat Rate, g	0.137
Eat Rate, kcal	0.024
Prop Active	0.236

Table 79: Portion Size 4 - Standardized Coefficitens for Association Between Bites and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.147	0.155	-0.953	0.344
scale(ps4_freddy_pre_meal)	-0.118	0.107	-1.103	0.273
sexFemale	0.276	0.214	1.289	0.201
scale(age_yr)	-0.164	0.108	-1.520	0.133
scale(ps4_avg_vas)	0.276	0.107	2.589	0.012
scale(bmi_percentile)	-0.065	0.105	-0.616	0.539

Table 80: Portion Size 4 - Standardized Coeffitens for Association Between Sips and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.034	0.165	0.205	0.838
scale(ps4_freddy_pre_meal)	0.075	0.114	0.663	0.509
sexFemale	-0.064	0.228	-0.280	0.780
scale(age_yr)	0.097	0.115	0.846	0.400
scale(ps4_avg_vas)	-0.050	0.114	-0.440	0.661
scale(bmi_percentile)	-0.066	0.112	-0.591	0.556

Table 81: Portion Size 4 - Standardized Coeffitens for Association Between Bite Size (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.049	0.168	-0.293	0.770
scale(ps4_freddy_pre_meal)	0.033	0.114	0.288	0.774
sexFemale	0.095	0.230	0.412	0.682
scale(age_yr)	-0.010	0.117	-0.087	0.931
scale(ps4_avg_vas)	-0.152	0.114	-1.335	0.186
scale(bmi_percentile)	0.017	0.113	0.155	0.877

Table 82: Portion Size 4 - Standardized Coeffitens for Association Between Bite Size (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.024	0.167	-0.142	0.888
scale(ps4_freddy_pre_meal)	0.002	0.114	0.016	0.987
sexFemale	0.046	0.230	0.202	0.840
scale(age_yr)	-0.073	0.117	-0.626	0.533
scale(ps4_avg_vas)	-0.136	0.114	-1.190	0.238
scale(bmi_percentile)	0.068	0.113	0.607	0.546

Table 83: Portion Size 4 - Standardized Coeffitens for Association Between Proportion Active Eating and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.111	0.155	0.717	0.476
scale(ps4_freddy_pre_meal)	-0.251	0.107	-2.351	0.021
sexFemale	-0.210	0.214	-0.981	0.330
scale(age_yr)	0.190	0.108	1.750	0.084
scale(ps4_avg_vas)	0.126	0.107	1.183	0.241
scale(bmi_percentile)	-0.167	0.106	-1.580	0.118

Table 84: Portion Size 4 - Standardized Coeffitens for Association Between Meal Duration and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.076	0.159	0.481	0.632
scale(ps4_freddy_pre_meal)	-0.001	0.109	-0.010	0.992
sexFemale	-0.148	0.220	-0.673	0.503
scale(age_yr)	-0.236	0.111	-2.126	0.037
scale(ps4_avg_vas)	0.079	0.109	0.724	0.471
scale(bmi_percentile)	-0.177	0.108	-1.635	0.106

Table 85: Portion Size 4 - Standardized Coeffitens for Association Between Eating Rate (g) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.091	0.158	-0.579	0.564
scale(ps4_freddy_pre_meal)	-0.105	0.107	-0.974	0.333
sexFemale	0.188	0.217	0.865	0.389
scale(age_yr)	0.261	0.110	2.365	0.021
scale(ps4_avg_vas)	-0.005	0.108	-0.044	0.965
scale(bmi_percentile)	0.229	0.106	2.155	0.034

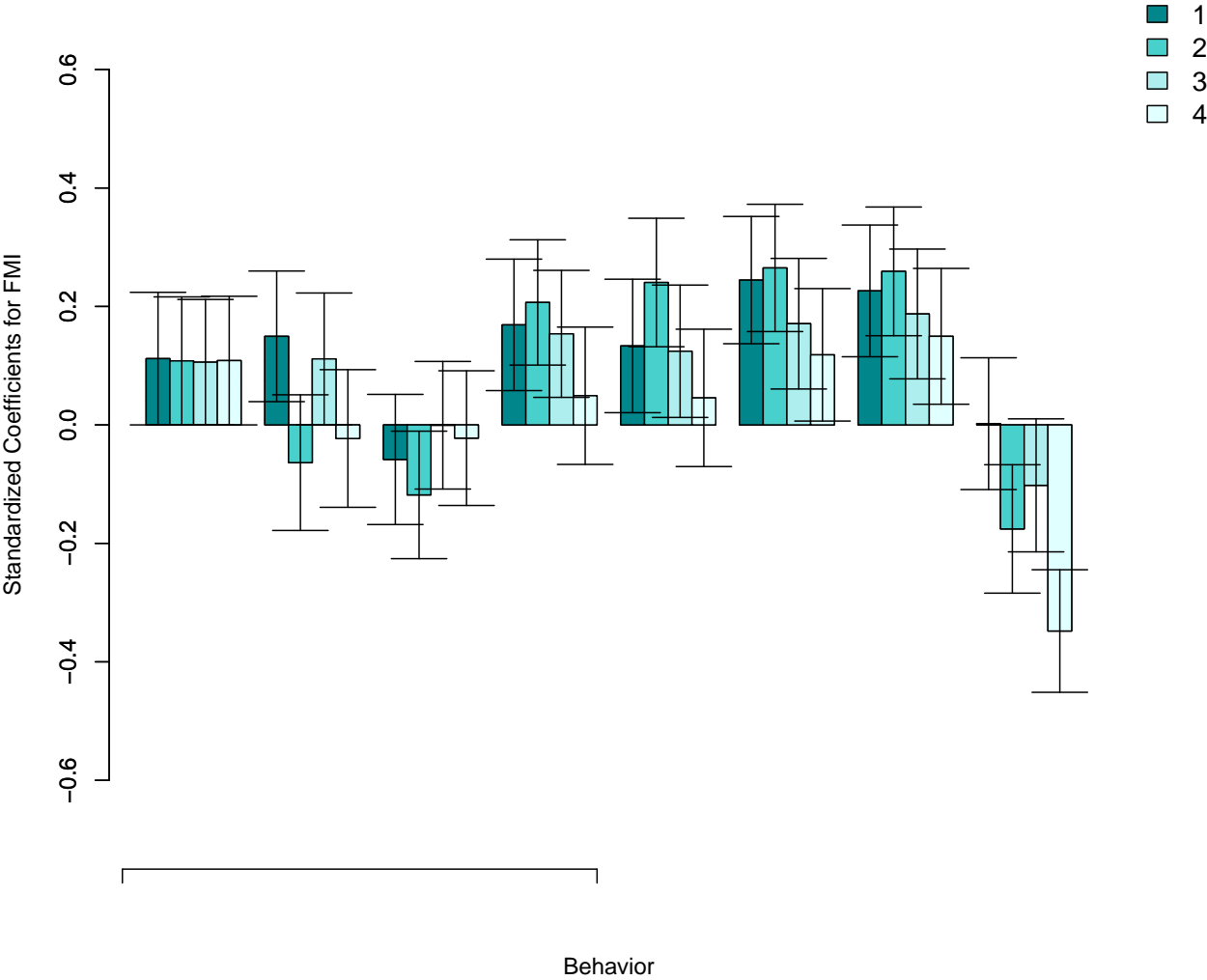
Table 86: Portion Size 4 - Standardized Coeffitens for Association Between Eating Rate (kcal) and BMI Percentile (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.024	0.158	-0.152	0.880
scale(ps4_freddy_pre_meal)	-0.104	0.107	-0.971	0.335
sexFemale	0.061	0.217	0.279	0.781
scale(age_yr)	0.153	0.110	1.388	0.169
scale(ps4_avg_vas)	0.004	0.108	0.036	0.971
scale(bmi_percentile)	0.326	0.106	3.071	0.003

Table 87: Portion Size 4 - FDR Adjusted p-values for the effect of BMI Percentile on Microstructure

	ps4_bmi_adj
Bites	0.636
Sips	0.636
Meal Duration	0.236
Bite Size, g	0.877
Bite Size, kcal	0.636
Eat Rate, g	0.137
Eat Rate, kcal	0.024
Prop Active	0.236

4.3 Associaiton with Fat Mass Index



4.3.1 Portion Size 1

Table 88: Portion Size 1 - FDR adjusted pvalues

	ps1_fmi_adj
Bites	0.834
Sips	0.357
Meal Duration	0.796
Bite Size, g	0.351
Bite Size, kcal	0.384
Eat Rate, g	0.180
Eat Rate, kcal	0.180
Prop Active	0.985

Table 89: Portion Size 1 - Standardized Coefficients for Association Between Bites and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.032	0.154	-0.208	0.836
scale(ps1_freddy_pre_meal)	-0.107	0.108	-0.983	0.329
sexFemale	0.062	0.225	0.274	0.784
scale(age_yr)	-0.087	0.109	-0.791	0.431
scale(ps1_avg_vas)	0.151	0.109	1.386	0.170
scale(fmi)	-0.039	0.112	-0.347	0.729

Table 90: Portion Size 1 - Standardized Coefficients for Association Between Sips and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.020	0.152	-0.134	0.894
scale(ps1_freddy_pre_meal)	0.101	0.107	0.946	0.347
sexFemale	0.035	0.222	0.158	0.875
scale(age_yr)	-0.171	0.108	-1.585	0.117
scale(ps1_avg_vas)	0.064	0.107	0.593	0.555
scale(fmi)	0.150	0.110	1.356	0.179

Table 91: Portion Size 1 - Standardized Coeffitens for Association Between Bite Size (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.109	0.153	0.711	0.479
scale(ps1_freddy_pre_meal)	-0.043	0.107	-0.404	0.687
sexFemale	-0.213	0.223	-0.954	0.343
scale(age_yr)	0.193	0.109	1.775	0.080
scale(ps1_avg_vas)	0.007	0.108	0.067	0.947
scale(fmi)	0.169	0.111	1.522	0.132

Table 92: Portion Size 1 - Standardized Coeffitens for Association Between Bite Size (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.117	0.155	0.750	0.455
scale(ps1_freddy_pre_meal)	-0.087	0.109	-0.798	0.427
sexFemale	-0.234	0.227	-1.032	0.305
scale(age_yr)	0.052	0.110	0.470	0.639
scale(ps1_avg_vas)	-0.017	0.110	-0.159	0.874
scale(fmi)	0.133	0.113	1.183	0.240

Table 93: Portion Size 1 - Standardized Coeffitens for Association Between Proportion Active Eating and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.115	0.153	0.752	0.454
scale(ps1_freddy_pre_meal)	-0.170	0.108	-1.577	0.119
sexFemale	-0.230	0.224	-1.026	0.308
scale(age_yr)	0.106	0.109	0.972	0.334
scale(ps1_avg_vas)	0.128	0.108	1.181	0.241
scale(fmi)	0.002	0.111	0.019	0.985

Table 94: Portion Size 1 - Standardized Coeffitens for Association Between Meal Duration and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.160	0.152	1.058	0.293
scale(ps1_freddy_pre_meal)	-0.086	0.106	-0.812	0.419
sexFemale	-0.329	0.221	-1.490	0.140
scale(age_yr)	-0.127	0.107	-1.185	0.239
scale(ps1_avg_vas)	0.135	0.107	1.258	0.212
scale(fmi)	-0.058	0.110	-0.531	0.597

Table 95: Portion Size 1 - Standardized Coefficients for Association Between Eating Rate (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.061	0.148	-0.412	0.681
scale(ps1_freddy_pre_meal)	-0.026	0.104	-0.249	0.804
sexFemale	0.132	0.216	0.611	0.543
scale(age_yr)	0.216	0.105	2.053	0.043
scale(ps1_avg_vas)	0.035	0.105	0.332	0.740
scale(fmi)	0.244	0.107	2.275	0.025

Table 96: Portion Size 1 - Standardized Coefficients for Association Between Eating Rate (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.008	0.153	-0.049	0.961
scale(ps1_freddy_pre_meal)	-0.029	0.108	-0.265	0.791
sexFemale	0.018	0.223	0.080	0.936
scale(age_yr)	0.065	0.109	0.600	0.550
scale(ps1_avg_vas)	0.010	0.108	0.094	0.925
scale(fmi)	0.226	0.111	2.035	0.045

Table 97: Portion Size 1 - FDR Adjusted p-values for the effect of Fat Mass Index on Microstructure

	ps1_fmi_adj
Bites	0.834
Sips	0.357
Meal Duration	0.796
Bite Size, g	0.351
Bite Size, kcal	0.384
Eat Rate, g	0.180
Eat Rate, kcal	0.180
Prop Active	0.985

#### 4.3.2 Portion Size 2

Table 98: Portion Size 2 - FDR adjusted pvalues

	ps2_fmi_adj
Bites	0.580
Sips	0.580
Meal Duration	0.367
Bite Size, g	0.108
Bite Size, kcal	0.078
Eat Rate, g	0.077
Eat Rate, kcal	0.077
Prop Active	0.175

Table 99: Portion Size 2 - Standardized Coeffitens for Association Between Bites and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.163	0.146	-1.117	0.267
scale(ps2_freddy_pre_meal)	-0.243	0.104	-2.341	0.022
sexFemale	0.362	0.220	1.642	0.104
scale(age_yr)	-0.194	0.104	-1.863	0.066
scale(ps2_avg_vas)	0.136	0.104	1.303	0.196
scale(fmi)	-0.068	0.108	-0.625	0.533

Table 100: Portion Size 2 - Standardized Coeffitens for Association Between Sips and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.011	0.154	0.073	0.942
scale(ps2_freddy_pre_meal)	-0.001	0.110	-0.013	0.990
sexFemale	-0.024	0.233	-0.103	0.918
scale(age_yr)	-0.218	0.111	-1.976	0.052
scale(ps2_avg_vas)	0.025	0.111	0.226	0.822
scale(fmi)	-0.064	0.115	-0.556	0.580



Table 101: Portion Size 2 - Standardized Coeffitens for Association Between Bite Size (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.353	0.142	2.481	0.015
scale(ps2_freddy_pre_meal)	0.131	0.101	1.290	0.201
sexFemale	-0.748	0.216	-3.468	0.001
scale(age_yr)	0.202	0.102	1.981	0.051
scale(ps2_avg_vas)	0.061	0.102	0.598	0.551
scale(fmi)	0.207	0.106	1.954	0.054

Table 102: Portion Size 2 - Standardized Coeffitens for Association Between Bite Size (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.309	0.146	2.113	0.038
scale(ps2_freddy_pre_meal)	0.006	0.104	0.062	0.951
sexFemale	-0.653	0.221	-2.955	0.004
scale(age_yr)	0.210	0.105	2.003	0.049
scale(ps2_avg_vas)	0.049	0.105	0.465	0.643
scale(fmi)	0.240	0.108	2.217	0.029

Table 103: Portion Size 2 - Standardized Coeffitens for Association Between Proportion Active Eating and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.014	0.146	0.093	0.926
scale(ps2_freddy_pre_meal)	-0.156	0.104	-1.504	0.136
sexFemale	-0.032	0.221	-0.147	0.883
scale(age_yr)	0.059	0.105	0.563	0.575
scale(ps2_avg_vas)	0.332	0.105	3.168	0.002
scale(fmi)	-0.176	0.108	-1.620	0.109

Table 104: Portion Size 2 - Standardized Coeffitens for Association Between Meal Duration and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.062	0.145	0.427	0.670
scale(ps2_freddy_pre_meal)	-0.215	0.103	-2.085	0.040
sexFemale	-0.112	0.219	-0.510	0.612
scale(age_yr)	-0.294	0.104	-2.831	0.006
scale(ps2_avg_vas)	0.042	0.104	0.404	0.687
scale(fmi)	-0.118	0.108	-1.098	0.275

Table 105: Portion Size 2 - Standardized Coefficients for Association Between Eating Rate (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.191	0.145	1.323	0.189
scale(ps2_freddy_pre_meal)	-0.075	0.103	-0.729	0.468
sexFemale	-0.403	0.219	-1.838	0.070
scale(age_yr)	0.296	0.104	2.857	0.005
scale(ps2_avg_vas)	0.125	0.104	1.208	0.231
scale(fmi)	0.265	0.107	2.466	0.016

Table 106: Portion Size 2 - Standardized Coefficients for Association Between Eating Rate (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.128	0.146	0.873	0.385
scale(ps2_freddy_pre_meal)	-0.125	0.104	-1.199	0.234
sexFemale	-0.268	0.222	-1.211	0.229
scale(age_yr)	0.264	0.105	2.516	0.014
scale(ps2_avg_vas)	0.103	0.105	0.982	0.329
scale(fmi)	0.259	0.109	2.386	0.019

Table 107: Portion Size 2 - FDR Adjusted p-values for the effect of Fat Mass Index on Microstructure

	ps2_fmi_adj
Bites	0.580
Sips	0.580
Meal Duration	0.367
Bite Size, g	0.108
Bite Size, kcal	0.078
Eat Rate, g	0.077
Eat Rate, kcal	0.077
Prop Active	0.175

### 4.3.3 Portion Size 3

Table 108: Portion Size 3 - FDR adjusted pvalues

	ps3_fmi_adj
Bites	0.996
Sips	0.488
Meal Duration	0.996
Bite Size, g	0.415
Bite Size, kcal	0.488
Eat Rate, g	0.415
Eat Rate, kcal	0.415
Prop Active	0.488

Table 109: Portion Size 3 - Standardized Coeffitens for Association Between Bites and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.185	0.150	-1.232	0.222
scale(ps3_freddy_pre_meal)	-0.309	0.103	-2.994	0.004
sexFemale	0.354	0.217	1.633	0.106
scale(age_yr)	-0.142	0.105	-1.362	0.177
scale(ps3_avg_vas)	-0.005	0.103	-0.044	0.965
scale(fmi)	-0.009	0.106	-0.083	0.934

Table 110: Portion Size 3 - Standardized Coeffitens for Association Between Sips and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.144	0.158	0.914	0.363
scale(ps3_freddy_pre_meal)	-0.093	0.108	-0.857	0.394
sexFemale	-0.296	0.228	-1.300	0.197
scale(age_yr)	-0.112	0.110	-1.021	0.310
scale(ps3_avg_vas)	0.052	0.108	0.477	0.635
scale(fmi)	0.111	0.111	1.001	0.320

Table 111: Portion Size 3 - Standardized Coeffitens for Association Between Bite Size (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.253	0.152	1.671	0.099
scale(ps3_freddy_pre_meal)	0.223	0.104	2.139	0.036
sexFemale	-0.501	0.221	-2.270	0.026
scale(age_yr)	0.108	0.106	1.016	0.313
scale(ps3_avg_vas)	0.096	0.104	0.925	0.358
scale(fmi)	0.154	0.107	1.434	0.156

Table 112: Portion Size 3 - Standardized Coeffitens for Association Between Bite Size (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.210	0.158	1.328	0.188
scale(ps3_freddy_pre_meal)	0.054	0.109	0.500	0.618
sexFemale	-0.416	0.230	-1.811	0.074
scale(age_yr)	0.068	0.110	0.620	0.537
scale(ps3_avg_vas)	0.069	0.109	0.633	0.529
scale(fmi)	0.124	0.112	1.113	0.269

Table 113: Portion Size 3 - Standardized Coeffitens for Association Between Proportion Active Eating and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.044	0.159	-0.276	0.783
scale(ps3_freddy_pre_meal)	-0.034	0.109	-0.309	0.758
sexFemale	0.100	0.230	0.436	0.664
scale(age_yr)	0.145	0.111	1.309	0.194
scale(ps3_avg_vas)	0.068	0.109	0.625	0.534
scale(fmi)	-0.102	0.112	-0.909	0.366

Table 114: Portion Size 3 - Standardized Coeffitens for Association Between Meal Duration and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.063	0.153	0.410	0.683
scale(ps3_freddy_pre_meal)	-0.208	0.105	-1.978	0.051
sexFemale	-0.143	0.220	-0.650	0.518
scale(age_yr)	-0.228	0.106	-2.145	0.035
scale(ps3_avg_vas)	0.093	0.105	0.889	0.377
scale(fmi)	-0.001	0.108	-0.005	0.996

Table 115: Portion Size 3 - Standardized Coefficients for Association Between Eating Rate (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.059	0.156	0.378	0.707
scale(ps3_freddy_pre_meal)	-0.078	0.107	-0.725	0.470
sexFemale	-0.104	0.227	-0.460	0.647
scale(age_yr)	0.223	0.109	2.045	0.044
scale(ps3_avg_vas)	-0.037	0.107	-0.342	0.733
scale(fmi)	0.171	0.110	1.550	0.125

Table 116: Portion Size 3 - Standardized Coefficients for Association Between Eating Rate (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.102	0.155	0.658	0.513
scale(ps3_freddy_pre_meal)	-0.186	0.106	-1.744	0.085
sexFemale	-0.196	0.225	-0.869	0.388
scale(age_yr)	0.152	0.108	1.409	0.163
scale(ps3_avg_vas)	-0.058	0.107	-0.543	0.589
scale(fmi)	0.187	0.110	1.710	0.091

Table 117: Portion Size 3 - FDR Adjusted p-values for the effect of Fat Mass Index on Microstructure

	ps3_fmi_adj
Bites	0.996
Sips	0.488
Meal Duration	0.996
Bite Size, g	0.415
Bite Size, kcal	0.488
Eat Rate, g	0.415
Eat Rate, kcal	0.415
Prop Active	0.488

#### 4.3.4 Portion Size 4

Table 118: Portion Size 4 - FDR adjusted pvalues

	ps4_fmi_adj
Bites	0.697
Sips	0.845
Meal Duration	0.845
Bite Size, g	0.845
Bite Size, kcal	0.845
Eat Rate, g	0.697
Eat Rate, kcal	0.697
Prop Active	0.010

Table 119: Portion Size 4 - Standardized Coeffitens for Association Between Bites and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.182	0.159	-1.144	0.256
scale(ps4_freddy_pre_meal)	-0.111	0.106	-1.041	0.301
sexFemale	0.343	0.226	1.520	0.133
scale(age_yr)	-0.168	0.108	-1.556	0.124
scale(ps4_avg_vas)	0.277	0.106	2.601	0.011
scale(fmi)	-0.102	0.109	-0.943	0.348

Table 120: Portion Size 4 - Standardized Coeffitens for Association Between Sips and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.027	0.170	0.162	0.872
scale(ps4_freddy_pre_meal)	0.078	0.114	0.686	0.495
sexFemale	-0.051	0.242	-0.210	0.834
scale(age_yr)	0.103	0.115	0.896	0.373
scale(ps4_avg_vas)	-0.049	0.114	-0.435	0.665
scale(fmi)	-0.023	0.116	-0.198	0.844

Table 121: Portion Size 4 - Standardized Coeffitens for Association Between Bite Size (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.033	0.172	-0.190	0.850
scale(ps4_freddy_pre_meal)	0.030	0.114	0.263	0.793
sexFemale	0.063	0.243	0.257	0.798
scale(age_yr)	-0.007	0.117	-0.062	0.951
scale(ps4_avg_vas)	-0.152	0.114	-1.336	0.186
scale(fmi)	0.049	0.116	0.425	0.672

Table 122: Portion Size 4 - Standardized Coeffitens for Association Between Bite Size (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.011	0.172	-0.065	0.948
scale(ps4_freddy_pre_meal)	-0.002	0.114	-0.015	0.988
sexFemale	0.020	0.243	0.081	0.935
scale(age_yr)	-0.078	0.117	-0.668	0.506
scale(ps4_avg_vas)	-0.135	0.114	-1.187	0.239
scale(fmi)	0.046	0.116	0.393	0.695

Table 123: Portion Size 4 - Standardized Coeffitens for Association Between Proportion Active Eating and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.007	0.151	-0.045	0.964
scale(ps4_freddy_pre_meal)	-0.229	0.101	-2.258	0.027
sexFemale	0.020	0.215	0.093	0.926
scale(age_yr)	0.172	0.103	1.681	0.097
scale(ps4_avg_vas)	0.127	0.101	1.256	0.213
scale(fmi)	-0.348	0.103	-3.363	0.001

Table 124: Portion Size 4 - Standardized Coeffitens for Association Between Meal Duration and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.073	0.166	0.441	0.661
scale(ps4_freddy_pre_meal)	0.005	0.111	0.041	0.967
sexFemale	-0.139	0.237	-0.590	0.557
scale(age_yr)	-0.216	0.113	-1.917	0.059
scale(ps4_avg_vas)	0.081	0.111	0.726	0.470
scale(fmi)	-0.022	0.114	-0.196	0.845

Table 125: Portion Size 4 - Standardized Coeffitens for Association Between Eating Rate (g) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-0.062	0.166	-0.371	0.712
scale(ps4_freddy_pre_meal)	-0.115	0.110	-1.046	0.299
sexFemale	0.122	0.235	0.521	0.604
scale(age_yr)	0.241	0.113	2.145	0.035
scale(ps4_avg_vas)	-0.004	0.110	-0.041	0.968
scale(fmi)	0.118	0.112	1.058	0.294

Table 126: Portion Size 4 - Standardized Coeffitens for Association Between Eating Rate (kcal) and Fat Mass Index (adjusted for age, sex, liking, and fullness)

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.012	0.170	0.069	0.945
scale(ps4_freddy_pre_meal)	-0.118	0.113	-1.047	0.298
sexFemale	-0.020	0.241	-0.084	0.933
scale(age_yr)	0.123	0.115	1.066	0.290
scale(ps4_avg_vas)	0.004	0.113	0.037	0.970
scale(fmi)	0.150	0.115	1.304	0.196

Table 127: Portion Size 4 - FDR Adjusted p-values for the effect of Fat Mass Index on Microstructure

	ps4_fmi_adj
Bites	0.697
Sips	0.845
Meal Duration	0.845
Bite Size, g	0.845
Bite Size, kcal	0.845
Eat Rate, g	0.697
Eat Rate, kcal	0.697
Prop Active	0.010