

Weight loss is coupled with improvements to affective state in obese participants engaged in behavior change therapy based on incremental, self-selected “Small Changes”

PAXMAN, Jenny <<http://orcid.org/0000-0003-3596-489X>>, HALL, Anna <<http://orcid.org/0000-0002-1491-7309>>, HARDEN, Charlotte, O'KEEFFE, Jean and SIMPER, Trevor <<http://orcid.org/0000-0002-4359-705X>>

Available from Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/5724/>

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

Published version

PAXMAN, Jenny, HALL, Anna, HARDEN, Charlotte, O'KEEFFE, Jean and SIMPER, Trevor (2011). Weight loss is coupled with improvements to affective state in obese participants engaged in behavior change therapy based on incremental, self-selected “Small Changes”. *Nutrition Research*, 31 (5), 327-337.

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

Table 1 - Participant characteristics

	N	Baseline Age (y)	Baseline BMI (kg/m²)	Baseline Weight (kg)
Males	18	43.78 ± 10.07	37.36 ± 5.85	120.52 ± 16.94
Completers	6	43.83 ± 4.02	35.30 ± 3.51	114.52 ± 8.71
Completers (missing data)	7	40.29 ± 6.53	34.41 ± 4.63	111.41 ± 11.60
Non-completers	5	48.60 ± 17.21	43.96 ± 4.65	140.46 ± 15.04
Females	53	46.26 ± 12.31	37.26 ± 4.82	99.46 ± 15.89
Completers	34	47.47 ± 12.00	37.44 ± 4.41	101.11 ± 15.42
Completers (missing data)	11	46.82 ± 13.05	37.72 ± 6.27	95.93 ± 17.76
Non-completers	8	40.38 ± 12.51	36.36 ± 4.87	98.24 ± 17.35
All Participants	71	45.63 ± 11.76	37.29 ± 5.05	104.80 ± 18.50
Completers	40	46.93 ± 11.21	37.12 ± 4.32	103.12 ± 15.31
Completers (missing data)	18	44.28 ± 11.22	36.43 ± 5.78	101.95 ± 17.13
Non-completers	13	43.54 ± 14.40	39.01 ± 6.05	113.89 ± 26.62

Data are presented as means ± SD.

Table 2 - Physical measures

Measure	N*	Baseline	6 Wks	12 Wks	F	P
Weight (Kg)	56	102.95 ± 15.47	101.38 ± 15.81	100.09 ± 16.01	46.231	.000 ^a
BMI (Kg/m ²)	56	36.944 ± 4.78	36.370 ± 4.91	35.897 ± 4.95	47.464	.000 ^a
Lean Weight (Kg)	56	55.72 ± 14.40	56.43 ± 11.52	56.21 ± 12.05	0.420	.549 ^a
Body Fat (%)	56	44.61 ± 7.80	44.18 ± 8.07	43.76 ± 8.56	4.088	.019
Waist Circumference (cm)	56	113.48 ± 11.37	108.14 ± 18.90	108.51 ± 11.97	6.929	.008 ^a
Systolic Blood Pressure (mmHg)	55	132.08 ± 18.73	129.99 ± 15.30	129.52 ± 15.16	1.212	.301
Diastolic Blood Pressure (mmHg)	55	88.97 ± 11.31	88.52 ± 10.72	87.06 ± 10.65	1.157	.318

Data are presented as means ± SD. Data were analysed by one-way repeated measures ANOVA.

*number of participants completing all stages

^a with Huynh-Feldt correction

Table 3 - Psychological measures

Measure	N*	Baseline	6 Wks	12 Wks	F	P
General Wellbeing	49	58.92 ± 21.22	71.45 ± 17.90	78.04 ± 14.60	26.873	.000 ^a
TFEQ-18R						
Cognitive Restraint	50	26.67 ± 21.82	52.00 ± 28.70	61.00 ± 27.27	34.961	.000
Uncontrolled Eating	50	48.89 ± 33.67	26.22 ± 27.75	19.56 ± 21.83	23.951	.000 ^a
Emotional Eating	50	75.33 ± 37.38	60.00 ± 41.51	42.67 ± 44.69	18.611	.000
POMS						
Total Mood Disturbance	48	31.19 ± 34.03	8.25 ± 27.41	2.67 ± 24.96	24.272	.000
Tension-anxiety	50	8.70 ± 7.52	5.70 ± 5.84	4.44 ± 4.79	10.471	.000
Depression-dejection	50	13.28 ± 13.12	7.14 ± 9.76	4.48 ± 7.37	14.240	.000 ^a
Anger-hostility	49	7.53 ± 7.80	3.53 ± 4.29	3.90 ± 6.20	10.890	.000
Vigour-activity	50	11.94 ± 7.23	15.90 ± 7.32	17.96 ± 5.95	17.158	.000 ^a
Fatigue-inertia	49	5.27 ± 6.64	3.41 ± 5.55	3.84 ± 3.97	2.458	.107 ^a
Confusion-bewilderment	50	8.18 ± 5.88	5.40 ± 4.73	3.86 ± 3.65	18.663	.000

Data are presented as means ± SD. Data were analysed by one-way repeated measures ANOVA.

*number of participants completing all stages

^a with Huynh-Feldt correction

Note: where n=49 or n=48 as opposed to n=50, questionnaires were incomplete and these participants have been excluded from the corresponding part of the analysis.

Table 4 - Dietary intake measures

Measure	N*	Baseline	6 Wks	12 Wks	F	P
Energy (kcal)	46	2191.24 ± 577.30	1782.52 ± 435.53	1695.87 ± 628.07	12.551	.000 ^a
(kJ)	46	9.17 ± 2.42	7.46 ± 1.82	7.10 ± 2.63		
Protein (% total energy)	46	17.00 ± 3.52	18.28 ± 4.25	19.07 ± 3.72	5.314	.007
Carbohydrate (% total energy)	46	44.96 ± 7.61	46.38 ± 6.76	48.25 ± 7.95	3.727	.028
Starch (% total energy)	46	26.12 ± 5.63	26.13 ± 5.47	26.90 ± 6.89	0.422	.657
Sugars (% total energy)	46	18.94 ± 6.43	20.34 ± 6.07	21.45 ± 7.24	3.382	.044 ^a
Fat (% total energy)	46	34.52 ± 7.15	32.25 ± 6.61	30.02 ± 6.52	8.940	.000 ^a
SFA (% total energy)	46	11.79 ± 3.84	10.78 ± 3.26	10.29 ± 2.90	3.331	.040
MUFA (% total energy)	46	10.68 ± 2.80	10.50 ± 2.25	10.06 ± 2.68	0.916	.394 ^a
PUFA (% total energy)	46	5.92 ± 2.10	6.06 ± 2.21	5.60 ± 1.89	0.802	.452
Alcohol (% total energy)	46	3.42 ± 4.23	3.08 ± 4.07	2.53 ± 3.75	1.209	.303
Englyst Fibre (g)	46	17.00 ± 5.86	17.27 ± 6.46	17.30 ± 8.37	0.039	.934 ^a

Data are presented as means ± SD. Data were analysed by one-way repeated measures ANOVA.

*number of participants completing all stages

^a with Huynh-Feldt correction

Table 5 - Prevalence of underreporting^a at each dietary assessment period

Measurement Period	N*	Underreporters	Non-underreporters	X ²	df	P
		N (%)	N (%)			
Baseline	46	19 (41)	27 (59)	8.788	2	.012
6 Weeks	46	30 (65)	16 (35)			
12 Weeks	46	32 (70)	14 (30)			

Data were analysed by Pearson Chi-square.

*number of participants completing all stages

^a Underreporting is defined here as EI:BMR <1.1 based on Schofield equation (revised, DH, 1991).

Table 6 - Blood measures

Measure	N*	Baseline	6 Wks	12 Wks	F	P
Total Cholesterol (mmol/L)	55	4.67 ± .85	4.62 ± .77	4.64 ± .77	.267	.736 ^a
Triglycerides (mmol/L)	42	1.76 ± .97	1.75 ± .73	1.71 ± .67	.176	.798 ^a
HDL Cholesterol (mmol/L)	53	1.23 ± .36	1.28 ± .45	1.13 ± .32	3.452	.040 ^a
Glucose (mmol/L)	56	5.19 ± .58	5.20 ± .90	5.13 ± .57	.281	.738 ^a

Data are presented as means ± SD. Data were analysed by one-way repeated measures ANOVA.

*number of participants completing all stages

^a with Huynh-Feldt correction