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Effectiveness of two Live Well Suffolk weight management interventions in reducing weight in overweight and obese adults

D. J. Pipe[1], H. Osborn[2] and F. Ibrahim[1]

[1]*University Campus, Waterfront Building, Neptune Quay, Ipswich, Suffolk. IP4 1QJ and* [2]*Live Well Suffolk, Adelphi House, 8 Turret Lane, Ipswich, Suffolk IP4 1DL*

Overweight and obesity due to poor diet and physical inactivity contribute significantly to the burden of cardiovascular disease, diabetes, cognitive impairment and premature mortality(1) with associated health and social care costs. Obesity prevalence varies by age, gender and socio-economic status(2) and adults tend to gain weight with age, particularly if they are physically inactive(3). Local authorities have commissioned lifestyle weight management interventions for priority groups and the evaluation of intervention outcomes is necessary to monitor cost-effectiveness(4). Anonymised data was used from Live Well Suffolk records and ethical approval was not required. Eligibility for both interventions was restricted to black and minority ethnic groups, full time carers, those with a mental health condition or from deprived postcode areas and the weight management (WM) programme was limited to those with BMI > 28 kg/m^2 plus a medical condition or BMI > 30 kg/m^2. The aim of this study was to compare the effectiveness of two interventions which were implemented at Live Well Suffolk: 1) Weight management (WM), 2) Physical activity and healthy eating (PA & HE).

Characteristic	WM (n = 100)	SD	PA & HE (n = 140)	SD	P value
Age – years mean	52·84	14·38	50·86	15·14	* 0·306
BMI – kg/m2 mean	**37·73**	**6·99**	**27·52**	**5·99**	**** < 0·001**
Ethnicity – no					
White : black : other	88 : 3 : 9		119 : 6 : 15		* 0·783
Gender – no					
Female : male	76 : 24		118 : 22		* 0·075

* p > 0·05 indicating no significant difference between the 2 groups. **BMI was significantly greater in the WM group.

The mean weight change was – 2·24 kg (−2·19 %) in the WM group which was significantly greater (p < 0·05) than - 0·9 kg (−1·17 %) in the PA and HE group.

Age group (yrs)	Weight management					PA and healthy eating				
	Weight change			% weight change		Weight change			% weight change	
	n	Mean	SD	Mean	SD	n	Mean	SD	Mean	SD
18–39	20	−0·69*	2·41	−0·44	2·21	33	−1·15	2·22	−1·42	2·86
40–59	39	−2·85	3·61	−2·65	3·24	58	−1·12	2·31	−1·51	3·28
60 +	41	−2·42	2·52	−2·61	2·77	49	−0·48	1·68	−0·61	2·49

Derived by unmatched ANOVA for between age group comparison, followed by LSD post hoc test; *weight change in the WM intervention in the youngest age group was significantly lower (p < 0·05) than in the older age groups but not in the PA & HE intervention where there was no significant difference.

No significant difference was found in either mean weight change or mean % weight change by gender within each intervention. In conclusion, mean absolute and % weight loss were significantly greater in the WM intervention and overall, 50/193 overweight and obese participants achieved at least 3 % weight reduction.

1. Murray C J L, Richards M A, Newton J N *et al.* (2013) *The Lancet* **381**, 997–1020.
2. Moody A (2013) *Health Survey for England 2012*.
3. Golubic R, Ekelund U, Luben R *et al.* (2013) *International Journal of Obesity* **37**, 404–409.
4. Logue J, Allardice G, Gillies M *et al.* (2014) *BMJ Open*.