

A PROSPECTIVE STUDY OF SHORT-TERM OUTCOMES OF A RESIDENTIAL PROGRAMME FOR THE MORBIDLY OBESE IN MALTA

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SUMMARY

Obesity is a worldwide problem, and Malta is no exception. In Malta, a Foundation was established to address weight problems amongst the population, and this initiative included the opening in 2014 of an 8-week residential programme for morbidly obese patients. This multidisciplinary programme is managed and coordinated by a team consisting of doctors, psychiatrists, nurses, physiotherapist, psychologists, dietitian, nutritionists and occupational therapists. This team guides residents towards adopting a healthier lifestyle, rather than focusing solely on food intake. In this study, the first 163 residents admitted to the programme, (65 males and 98 females), were assessed at the point of admission and discharge against several physical parameters. The effectiveness of the programme in the short term was validated since at the point of discharge these patients had a statistically significant reduction in weight, BMI, cholesterol levels, glucose levels and HBA1C. They were also more mobile, and this difference was also statistically significant

Key words: Obesity - Malta

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Introduction

Obesity is a worldwide problem, and it is now being considered as a pandemic (Swinburn et al, 2001). Obesity, especially morbid obesity, has grave physical (Bianchini et al, 2002, Huang et al, 1998, Sowers, 2003), and psychosocial (Bocchieri et al, 2002, Kolotkin et al, 2003) consequences.

Malta has one of the highest problems of obesity in the world, especially in children and youths (Decelis et al, 2015). To address both this problem, and issues related to eating disorders nationally, a Foundation ('Fondazzjoni Dar Kennghal Sahhtek), was established in Malta. In 2014, the Foundation opened a centre with residential, semi residential and outpatient facilities (Grech, 2013, Aquilina et al, 2015). This study is related to the residential programme for morbidly obese clients.

There are various models for programmes for weight loss (Tsai et al, 2005, Weinstein, 2006). The treatment programme at 'Kenn Ghal Sahtek' is based on a multidisciplinary approach. The multidisciplinary team consists of doctors, psychiatrists, nurses, physiotherapist, psychologists, dietitian, nutritionists and occupational therapists. This team guides residents towards adopting a healthier lifestyle, rather than focusing solely on food intake. Residents are guided on how to shop, cook, plan their budget and adopt an active lifestyle.

The schedule of the daily activities is intensive and includes group sessions targeting motivation, self-esteem, group sessions held by psychologists, daily exercise sessions prescribed by physiotherapists and daily evening walks. The programme includes also individual sessions with various professionals who form

part of the multidisciplinary team at the centre. These sessions are held on a weekly basis. Practical cooking sessions with nutritionists are an integral part of the programme.

Through physical activity, emphasis is placed on increasing self-esteem and interaction within a teamwork setting. Individual programmes are devised by a physiotherapist, after assessing clients by means of validated tools prior to admission. Central aims are related to improving balance, co-ordination, muscle strength, endurance and coordination. Patients are re-assessed after 4 weeks to adjust the exercise programme accordingly.

The programme targets independence and integration within society after discharge. Upon discharge patients are prescribed an activity programme together with a nutritional plan as discussed with their nutritionist.

The duration of the programme is 8 weeks (Monday to Friday). After this period, patients are then followed on an outpatient basis each week, for a period of 2 months. After this period patients are then invited to join support group sessions held monthly.

The aim of this prospective study was to assess this residential programme's effectiveness in the short term.

Method

All individuals admitted to the residential programme for morbidly obese clients from 6th October 2014 to 24th February 2017 were included in this study.

Referrals for the programme were made by General Practitioners, and advertising for the programme, especially in its initial stages was by means of a media and social media campaign.

Table 1. Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	WEIGHT-Before - WEIGHT-After (kgs)	7.041	6.540	0.689	5.671	8.411	10.213	89	0.000
Pair 2	BMI - Before - BMI-After	2.849	2.077	0.219	2.414	3.284	13.013	89	0.000
Pair 3	No. OF STEPS WEEK 1 - No. OF STEPS WEEK 8 (*)	-29.292	20.852	2.210	-33.685	-24.900	-13.252	88	0.000
Pair 4	DISTANCE - WEEK 1 - DISTANCE - WEEK 8 (*)	-69.678	84.178	9.025	-87.619	-51.737	-7.721	86	0.000
Pair 5	Cholesterol-Before - Cholesterol-After	0.215	0.552	0.055	0.106	0.324	3.905	100	0.000
Pair 6	Glucose-B - Glucose-A	0.309	1.041	0.116	0.077	0.540	2.651	79	0.010
Pair 7	LDL-B - LDL-A	-0.393	5.480	0.543	-1.469	0.683	-0.724	101	0.471
Pair 8	GGT-B - GGT-A	4.778	27.498	2.646	-0.468	10.023	1.806	107	0.074
Pair 9	ALT-B - ALT-A	1.078	16.118	1.596	-2.087	4.244	0.676	101	0.501
Pair 10	HBA1C-B - HBA1C-A	0.277	0.740	0.094	0.089	0.465	2.950	61	0.005

(*) number of steps and distance walked in 6 minutes

Prior to and upon completion of the programme all residents had the following parameters recorded:

- Weight and Body Mass Index (BMI),
- Blood Investigations: (Glucose Levels, HBA1C, Liver Function Tests and Cholesterol Levels),
- Mobility (Distance in metres and number of steps walked in 6 minutes).

Statistical Analysis

Statistical analysis of average levels before and after the programme was analysed by means of two tailed t tests using SPSS v24.

Results

163 clients were included in the study, 65 males and 98 females. Age range was from 14 years to 69 years for males, and from 17 years to 68 years for females. Weight range for males was from 82.1 kgs to 234.6 kgs, and for females was from 81.0 kgs to 218.4 kg. BMI range was from 35.09 to 81.18 for males and from 32.47 to 86.58 for females.

At the end of the programme clients had a statistically significant reduction in weight, BMI, cholesterol levels, glucose levels and HBA1C. They were also more mobile (see Table 1).

Discussion

The short-term outcome (at point of discharge), considering physical parameters (mobility, weight and blood glucose and cholesterol levels) is a positive one. Thus, confirming that the holistic multidisciplinary approach used is for the short term, an effective one.

Further research is required to assess if this physical improvement is followed by psychological and quality of life improvement.

Like all residential programmes the main test of the outcome would be if the improvement at the point of discharge is maintained or not in the long term. This will be assessed in further research at the Centre.

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Contribution of individual authors:

Anton Grech: design of study, overall supervision and coordination of study, writing of paper;
Darleen Spiteri Zerafa: collection of data;
Kate Mchedlishvili: statistical analysis.

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