

LIVING WITH DIABETES: AN EDUCATION AND WEIGHT MANAGEMENT PROGRAMME

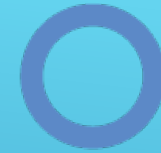
Mr. Joseph Grech

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BACKGROUND



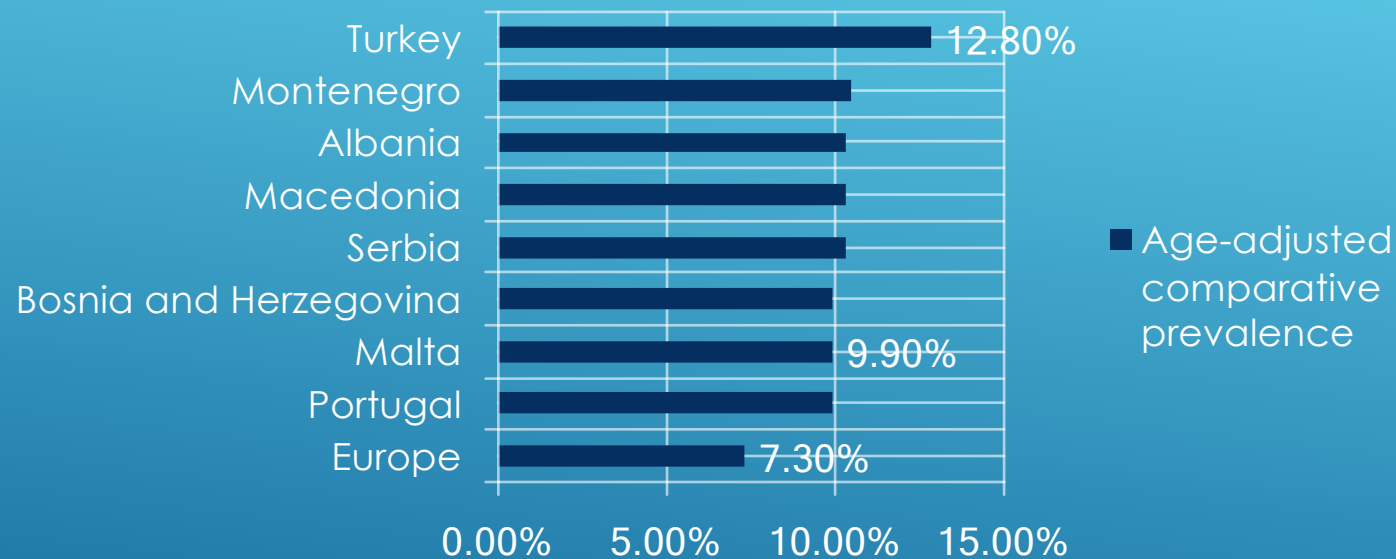
- ▶ Diabetes is associated with elevated blood sugar levels.
- ▶ Uncontrolled Diabetes progressively leads to serious damage to the vital organs including the heart, blood vessels, eyes, kidneys and nerves.
- ▶ Type 2 diabetes is the most common type.



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AGE-ADJUSTED COMPARATIVE PREVALENCE OF TYPE 2 DIABETES



Age-adjusted (20-79 years) comparative prevalence was estimated to be 9.9%, placing Malta 4th amongst 56 European countries (International Diabetes Federation, 2015).



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LOCAL PICTURE

Individuals with type 2 diabetes are primarily overweight or obese (Cuschieri et al., 2016), which contributes further to disease progression and cardiovascular diseases.



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INTERNATIONAL EVIDENCE

- ▶ In a recent meta-analysis (interventions over 12 months) it has been found that a weight loss of $\geq 5\%$ appears to be necessary for significant clinical effects on HbA1c, lipid levels and blood pressure (Franz et al., 2015).
- ▶ Physical activity significantly improves glycaemic control and reduces visceral adipose tissue and triglycerides, even without weight loss (Thomas et al., 2006).
- ▶ Weight management for overweight and obese individuals with type 2 diabetes was included as an action point in the National Strategy for Diabetes.



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AIM

- ▶ To provide adult patients with type 2 diabetes attending Mater Dei Hospital with the opportunity to undergo an educational and weight management programme.
- ▶ The Diabetes Education sessions at Mater Dei Hospital were re-structured to focus onto weight management.



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METHOD

- ▶ The revised programme called 'Living with Diabetes: education and weight management' consists of 8 weekly group sessions with a follow up session at week 12. It is delivered by a multidisciplinary team.
- ▶ This new structure was based on an abridged version of the Group Lifestyle Balance programme (Diabetes Prevention Support Centre, 2015) which was found to be effective in achieving significant weight loss and increased levels of exercise amongst type 2 Diabetics over 12 months (Greenwood et al., 2014).

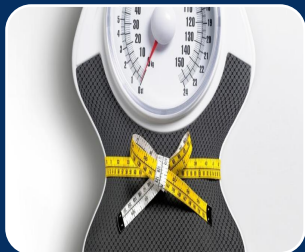


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METHOD



The programme was initiated in May 2015 at Mater Dei hospital and is ongoing.



Anthropometrics (height, waist circumference, and weight) and self-reported moderate intensity physical activity levels were noted at the beginning, at the middle and at the end of the programme.



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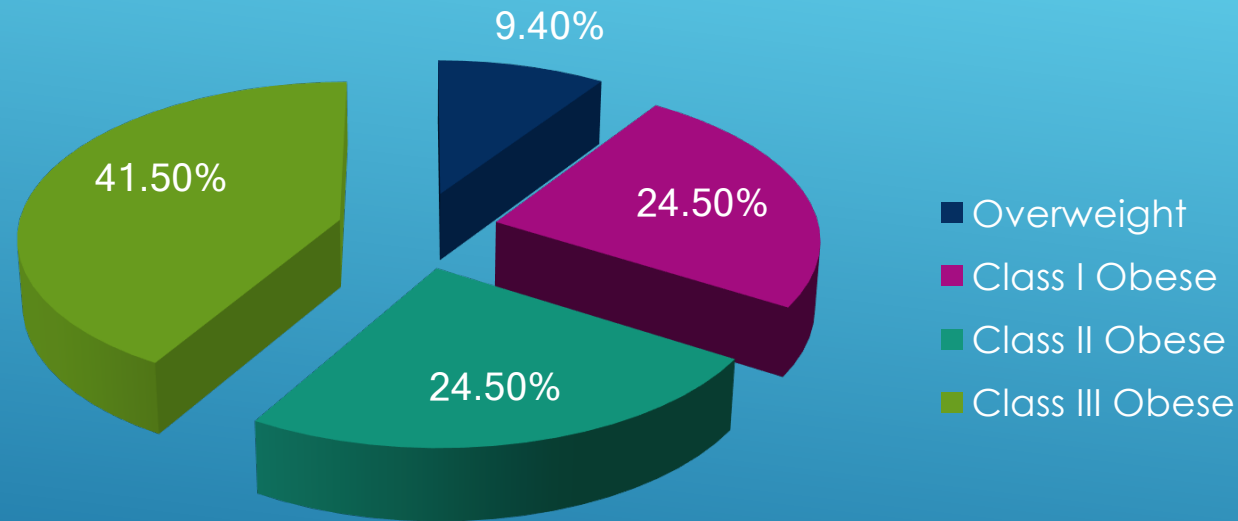
RESULTS

- ▶ In 2017 the programme's results were reviewed.
- ▶ As from May 2015 a total of 8 classes were delivered.
- ▶ 54 (32 females and 22 males) out of 101 participants successfully completed the 12 week programme.
- ▶ Ages ranged from 33 years to 76 years; mean age 58 years.



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BODY MASS INDEX AT BASELINE



The female mean, $41.1\text{kg}/\text{m}^2$, was significantly higher than the male mean ($36.8\text{kg}/\text{m}^2$) [$t(51) = 2.38, p = 0.02$].



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RESULTS

- ▶ The average waist circumference at baseline was 119cms.
- ▶ Average self-reported levels of physical activity were 118minutes/week. Male mean – 163minutes/week was significantly higher than female mean – 83 minutes/week [$t(36) = 2.19, p = 0.03$].



RESULTS

- ▶ Mean weight loss was **2.2kgs** (2.1% weight loss of baseline weight), while there was an average reduction of **3.4cms** in waist circumference.
- ▶ Over 12 weeks the average physical activity levels were **196minutes/week**. The increase from baseline was of 78 minutes (66% increase). Females' mean increase was 125 minutes, significantly higher than male mean (25 minutes) [$t(41) = 3.02, p = 0.004$].



RESULTS

- ▶ A reasonable negative correlation was noted between age and the increase in physical activity levels, $r(39) -0.42, p = 0.007$.
- ▶ On further analysis a reasonable positive relationship between BMI (at baseline) and weight loss was noted, $r_s(51) 0.50, p = 0.0001$.



RESULTS

This intervention was shorter than those identified in the literature, but resulted in:

- A mean weight loss of 2.1%
- An increase in physical activity levels by an average of 66%



RECOMMENDATIONS

It was recommended that the intervention should be extended to include patients in primary health care centres and those being clinically managed in Gozo General Hospital.

Monitoring of glycaemic control (HbA1c levels) before and after intervention was also suggested.



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CONCLUSION

Including weight management, as part of the standard educational diabetic management has assisted overweight and obese individuals with type 2 diabetes to lose weight and become more physically active.



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*Thank
you!*



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Ms. Mariella Meachen

Diabetes Education Unit
Renal Unit

Ms. Phyllis Camilleri
Ms. Frances Attard



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