Weight loss, mood and quality of life outcomes in weight management

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Introduction

1. Scotland has one of the highest levels of obesity in Europe. More than half of the population is overweight (65.2%) and over a quarter (26% men, 27.5% women) are classified as obese (Scottish Health Survey, 2008).

2. Obesity is related to significant physical (coronary heart disease, diabetes, cancer, kidney failure, arthritis, back pain) and psychological difficulties (depression, low self-esteem).

3. Research has suggested a strong association between obesity and decreased health-related quality of life (HRQOL), particularly physical domains of functioning (Fontaine & Barofsky, 2001; Kolotkin, Meters & Williams, 2001). However, a structured review of randomized controlled trials of weight loss reported that health-related quality of life was not consistently improved (Maciejewski, Patrick & Williamson, 2005). Further, the meta-analysis showed no treatment effect of weight loss on depressive symptoms.

4. Subsequent research has argued that weight loss is not necessarily required to maintain improvements in HRQOL (Bissmier et al., 2006) and improved HRQOL may instead be due to initiating diet and exercise changes (Bowden et al., 2008).

5. It is important that research clarifies the importance of weight loss in comparison to other mediators of improvement in physical and psychological HRQOL.

Aims

1. To investigate weight, mood and HRQOL outcomes in participants completing a CBT-based weight management programme.

2. To investigate factors that predict HRQOL improvement.

3. To investigate whether there are differences in HRQOL outcomes between participants who lose 5+ kgs compared to those who do not.

Method

Participants: Participants were randomly recruited from the Glasgow and Clyde Weight Management Service (GCWMS). The GCWMS is an NHS funded service, which incorporates a multi-disciplinary CBT-based approach to weight management, following the recommendations of SIGN (1996). Participants were referred to the service by their GP and had a BMI>30 with comorbidities, or a BMI>35 without comorbidities. They all completed a 16 week group programme incorporating dietetic, physiotherapy and psychological components.

Materials: Questionnaires were administered pre and post intervention.


2. Hospital anxiety and depression scale (HADS – Zigmond & Snaith, 1983).

3. Impact of weight on quality of life (IWQOL – Kolotkin el al, 2001)

Procedure: Questionnaires were administered to participants at the initial assessment appointment and re-administered in the final session of the group intervention.

Data analysis: All analyses were performed using SPSS version 14.

1. Paired sample t-tests were conducted to investigate differences in weight, mood and HRQOL pre and post intervention.

2. Multiple regression analyses were conducted to investigate what factors predict HRQOL improvement.

3. A chi-squared analysis was conducted to investigate whether there was an association between weight loss and clinically significant HRQOL improvement. Multiple regression analyses examined the predictors of HRQOL improvement.

Results

1. Weight, mood and HRQOL outcomes

By session nine of the CBT-based weight management intervention, participants had lost weight, and improved in mood and quality of life.

2. What factors predict HRQOL outcomes

Improvement in overall HRQOL was predicted by improvement in depression.

In all but one of the regression models, feeling happier predicted improvement in HRQOL.

3. Differences in HRQOL outcomes between participants who lost 5+ kgs compared to those who did not lose 5+ kgs

Clinically significant improvement in overall HRQOL was more likely in participants who had lost 5+kgs than those who did not lose 5+kgs $\Delta R^2=0.26, F (3, 84)=9.6, p<.001$, Cramer’s V = .24

Did not lose 5+kgs: HRQOL improvement was predicted by being younger, feeling happier and losing more weight. AR$\Delta=26, F (3, 84)=9.6, p<.001$

Lost 5+kgs: The model was not significant.

Conclusion

The GCWMS CBT-based weight management groups help individuals lose weight, improve in mood and HRQOL. The findings suggest that feeling happier (less depressed) is more important than weight loss in improving HRQOL, especially amongst individuals who only lose small amounts of weight (0.1-4.9 kgs).

The results confirm that weight management interventions help individuals not only lose weight, but improve in quality of life. However, previous studies of HRQOL improvement have found weight loss to be the main predictor, especially in physical function, which was not confirmed in this study. Similarly, few studies have found depression to be the main significant predictor of improvement in quality of life amongst obese individuals engaged in weight loss programmes.

Given that modest weight loss leads to improvement in HRQOL, investigation of other contributing factors is required, such as the therapeutic ‘group’ effect, individual psychological therapy provided in addition to the group programme, social support and the initiation of exercise regimens by participants.

References


Scottish Index of Multiple Deprivation 2006. Available at http://www.scotland.gov.uk/Topics/Statistics/SIMD
