Psychologists in Obesity Management

Plan for workshop:
1. Service overview & role of psychology
2. Weight loss and quality of life
3. Disordered Eating
4. Bariatric surgery
5. Case study
6. Future innovations
7. Questions
Psychologists in Obesity Management: NHS GGC Model

Dr Susan Boyle
Consultant Clinical Psychologist
Glasgow & Clyde Weight Management Service
Overview

Why ?
- Scale of problem
- Evidence/Guidelines

How ?
- GCWMS Service
- GCWMS Levels and interventions

What ?
- Referral data
- Outcomes Overview

Psychological Interventions?
- Why should we be interested?
- Levels of input
Glasgow Drivers

- Prevalence
- Healthcare costs
- Surgical waiting lists
‘Globesity’ WHO
Past and projected future overweight rates in selected OECD countries
Britain now the ‘Fat man of Europe' with one in four people obese
25 September 2010
Foresight Report
A strategic 40 year forward look at how society could respond sustainably to Obesity

• Most adults in UK are already overweight—passive obesity
• In 2050 more than 60% men and 50% women could be clinically obese—without action cost £49.9 billion/year
• Not just Personal but Demands Societal approach
• Greater Change than anything before and at multilevel—personal, family, societal, national.
• Preventing Obesity a societal challenge similar to climate change
The shape of things to come
2. Healthcare Cost Scotland

The total cost to NHS Scotland of obesity in 2007/8 was in excess of £175 million (approximately 2% of the budget allocated to NHS Boards).

- 2% treating obesity
- 98% treating associated co-morbidities e.g. type 2 diabetes
3. Unmanageable Surgical Waiting Lists
NHS Greater Glasgow’s Response

- Steering Group (2001 – ongoing working group)
- Collaboration between Acute, Community and Local Authority
- Glasgow & Clyde Weight Management Service
GCWMS Aim

‘To establish a weight management pathway of care, from prevention through to the management of morbid obesity, which is evidence based and equitable across NHS GG Board’

• offer consistent treatment approaches
• optimise current resources
• provide a clear referral route
• ensure the appropriate use of drugs and surgical interventions
The Evidence

NICE clinical guideline 43: 2006

Review of Bariatric Surgical Services in Scotland 2005

SIGN: 08 1996
SIGN: 115 Management of Obesity 2010

Glasgow & Clyde Weight Management Service
GCWMS
Whole System Approach

Comprehensive service aimed at prevention of overweight to the pharmacological and surgical intervention in severe and complex obesity

Underpinned by GCWMS evidence base
LEVEL 1
BMI ≥ 18.5

LEVEL 2
BMI ≥ 25

LEVEL 3
BMI ≥ 35 or ≥ 30 with co-morbidities

Prevention using population based strategies

Local Authority

GCWMS

Surgery
GCWMS Pathway
Lifestyle Program

Phase 1
16 weeks

Phase 2
12 weeks

Phase 3
12 months

<5Kg
- Med
- LCD
- Surgery

>5Kg
- FWL
- Maint
Bariatric Surgery

- Failure to lose 5Kg
- Bariatric Surgery option
- ‘Considering Surgery’ Information Session
- Surgical Assessment: Psychological & Dietetic
- Referred to Bariatric Surgeon

DESCRIPTIVE STATISTICS

Between 01/02/2009 and 31/1/2010

Max BMI: 108
Min BMI: 30
Average BMI: 41
Min Age: 17
Average Age: 47
Females: 75%
Males: 25%
Type 2 Diabetes: 20%
Number Of Referrals: 6140
Average Monthly referrals: 511
Historical Data

2004-6 (opt -in- end of phase 1)

• 1: 7 success similar to counterweight
• 50% who started programme completed
• 36% completers were successful

Latest Data
Consistent
GCWMS Results

- Men do 30% better than women
- Attendance is key factor to success
- Higher BMI attend more - More success in higher BMI’s
- 18 – 30 years do least well
- Same results regardless of socioeconomic background
Aims of Integrated Psychology Service

- **Improve treatment outcomes** *(adherence to diet & activity changes required for weight management)*

- **To alleviate psychological distress interfering with obesity treatment** *(e.g. disordered eating; low self esteem; body image distress)*

- **Improve delivery of healthcare** *(reduce inappropriate uptake of treatment e.g. re-route clients to appropriate services; consider ‘readiness to change’)*

- **Lead, train & support other health professionals** *(in the use of psychological approaches)*
Obesity and Psychological Well-being

Psychological effects
Population studies comparing obese with non-obese groups – no differences. More important to consider the risk factors for psychological distress within the obese population themselves*

Primary question is not;

“Is obesity related to psychopathology?”

Should be;

“Which obese individuals are at most risk of psychological disturbance?”

*Friedman, M A & Brownell, 2002
Obesity & Psychopathology

Obesity & Depression

1. Gender differences- ‘lower levels’ obese men at no greater risk of depression than normal weight men, but obese women more likely to be depressed than normal weight women*

2. Extremely obese individuals (BMI >40) are at greatest risk of depression and anxiety for both men & women**

3. Obese women with poor body image may be at particularly high risk for depression*** Dixon, Dixon & O’Brien, 2003

*Carpenter et al, 2000
**Onyike et al, 2003
Obesity & Binge Eating Disorder

1. BED higher in treatment-seeking obese individuals:
30% of obese individuals seeking treatment meet criteria for BED (de Zwaan et al, 2003)

2. Risk factors for BED*:
- Weight Cycling
- Demographics: female; severely overweight; life-time history

*Friedman, M A & Brownell, 2002
Certain groups of obese individuals are at increased risk of psychological distress.
Clinical Psychology in Obesity Services: Levels of Input

1. Clinical Role

- Direct psychological assessment and range of therapeutic interventions (tiered model)
  - Individual (complex clinical presentations)
  - Groups (development of group programme for weight loss & disordered eating)
  - Multi-component Interventions – psychology component

- Multi-disciplinary / Integrated working
  - Consultation
  - Supervision
  - Joint clinical work

- Clinical Leadership
Current Direct Access to Clinical Psychology

- Questionnaires: Hospital Anxiety & Depression Scale >14 (was 12?)
- Weight Loss Readiness Test- sign. disordered eating
- Binge eating with any report of purging
- Clinical judgement

Psychology Waiting Lists:
1. **Routine** – optional
2. **Priority**- necessary
Psychological Service Provision in GCWMS

- Psychological Component of Standard Groups
- Brief Assessment Clinics
- Psycho-educational Talks & Discussion
- Psychological Assessment
- Disordered Eating Group
- 1:1

← Priority Referrals directly to this level
← Routine Referrals directly to this level
Psychological approaches to weight loss in adulthood

- Self Monitoring
- Problem Solving / goal setting
- Cognitive Restructuring
- Relapse prevention / maintenance
- Improving body image
- Stress Management
- Stimulus Control
Levels of Input

2. Training

- Dieticians / Physiotherapists
- GP’s & practice nurses
- Local Authority Staff
- Pharmacists

- Psychological theory / Evidence-based approaches in weight management/
  Motivational enhancement / Screening for psych problems / Health Behaviour
  Change theories and approaches / Working with groups – efficiency &
  effectiveness

- Clinical Governance / Clinical Leadership
Levels of Input

3. Research and Service Evaluation

- Lead role within the service for both conducting and supporting others in innovative and service-related research leading to implementation of change

  e.g. Evaluation of GGC Model - prepared for publication
  Quality of Life Study (presented at international obesity conference July 2010)
  Surgery audits & qualitative study
  Disordered Eating Group Evaluation – ongoing dissemination plan
Levels of Input

4. Strategic Service Development - Board and National level

- Advise on psychological care of patients in strategy/policy/resource development within clinical/medical settings at Board and National level
  e.g. GGC Obesity Steering Group; SIGN Development Group; national expert group SCOTs (Severe and Complex Obesity Treatment); Given evidence to Scottish Executive in national planning for bariatric surgery

- Work with Board in developing protocols for comprehensive weight management service, wider than psychology service
  e.g. appropriate use of obesity medications and route to surgery; identifying training needs in delivering psychological approaches; developing treatment pathways

- Advising/Sharing best practice with other Scottish NHS Boards
Levels of Input

5. Represent / Advise professional body in area of weight management

  e.g. Invited member of BPS working group developing a position paper on obesity;
  Contribute to cross party obesity group in Scottish Parliament; Represent DCP
  Resource for psychology colleagues working in this new clinical area – bariatric surgery special interest group; invited speaker at professional events/conferences
GCWMS in 2011

- Clear evidence-based weight management pathway incorporating psychological interventions at all levels

- Psychologists involved from prevention to surgical intervention – planning, clinically; training; evaluating

- Surgery support delivered by a multidisciplinary team, including psychology

- Service continually developing – Psychologists have a research focus

- NOF Award & NHS Diamond Award *(Evening Times)*
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Weight Loss, Mood and Quality of Life Outcomes in Weight Management

Dr Fiona Wright
Quality of Life and Obesity

- Research evidence suggests a strong association between obesity and decreased health-related quality of life (HRQOL), particularly in the physical domains of functioning (Fontaine & Barofsky, 2001; Kolotkin, Meter & Williams, 2001).

- However, a structured review of RCT’s reported that HRQOL was not consistently improved with weight loss (Maciejewski, Patrick & Williamson (2005).

- Subsequent research has argued that:
  - Weight loss is not required to maintain HRQOL improvements (Blissmer et al., 2006)
  - Improvements in HRQOL may instead be due to initiating diet and exercise changes (Bowden et al., 2008).
  - Impaired HRQOL predicts weight loss, weight loss maintenance and early drop-out from weight loss programs.
Aims of the study

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

• To investigate factors that predicted HRQOL improvement.

• To investigate whether there were differences in HRQOL outcomes between participants who lose 5+ kgs compared to those who do not lose 5kgs (programme goals)
Participants

- Recruited from the GCWMS service

- All had a BMI > 30 with comorbidities, or a BMI > 35 with/without comorbidities.

- Completed the 16 week group weight management programme incorporating dietetic, physiotherapy and psychological components.
### Descriptive statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>N = (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>Mean (S.D)</td>
<td>49.7 (SD 12.6)</td>
</tr>
<tr>
<td>Range</td>
<td>20 – 88 years old</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>47 (23.6%)</td>
</tr>
<tr>
<td>Female</td>
<td>152 (76.4%)</td>
</tr>
<tr>
<td><strong>SIMD5 Category</strong></td>
<td></td>
</tr>
<tr>
<td>1 (Least Deprived)</td>
<td>6 (3.0%)</td>
</tr>
<tr>
<td>2</td>
<td>22 (11.1%)</td>
</tr>
<tr>
<td>3</td>
<td>20 (10.1%)</td>
</tr>
<tr>
<td>4</td>
<td>41 (20.6%)</td>
</tr>
<tr>
<td>5 (Most Deprived)</td>
<td>110 (55.3%)</td>
</tr>
<tr>
<td><strong>Weight Change</strong></td>
<td></td>
</tr>
<tr>
<td>Lost 5+kgs</td>
<td>91 (45.7%)</td>
</tr>
<tr>
<td>Lost 0.1 – 4.9kgs</td>
<td>92 (46.2%)</td>
</tr>
<tr>
<td>Gained 0 - 5.3kgs</td>
<td>16 (8%)</td>
</tr>
</tbody>
</table>
Methods, Procedure & Analysis

Questionnaires, pre/post intervention.

- Impact of weight on quality of life (Kolotkin et al, 2001)
- HADS (Zigmond & Snaith, 1983)
- Weights, gender, age, and index of social deprivation (Scottish Index of Multiple Deprivation; SIMD).

Analyses

1. Paired sample t-tests investigated differences in weight, mood and HRQOL, pre and post intervention.

2. Binary logistic regression analysis investigated what factors predicted clinically meaningful changes in HRQOL by completion of the intervention.
# Weight, mood and HRQOL pre/post intervention

Mean weight loss 5.1 kg

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention</th>
<th>Post-Intervention</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>199</td>
<td>199</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>114.5 (23.4)</td>
<td>109.4 (23.1)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>199</td>
<td>199</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>8.8 (5.0)</td>
<td>8.1 (4.6)</td>
<td>&lt;.05</td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>199</td>
<td>199</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>8.3 (4.4)</td>
<td>6.0 (4.2)</td>
<td>&lt;.001</td>
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<tr>
<td><strong>HRQOL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>176</td>
<td>184</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>46.2 (22.7)</td>
<td>54.4 (23.1)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Physical Function</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>197</td>
<td>198</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>41.8 (25.6)</td>
<td>51.5 (25.3)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Self Esteem</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>197</td>
<td>196</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>38.1 (29.4)</td>
<td>46.2 (28.9)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Sexual Life</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>143</td>
<td>149</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>45.9 (33.4)</td>
<td>54.9 (33.6)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Public Distress</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>193</td>
<td>189</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>61.5 (31.3)</td>
<td>64.0 (29.4)</td>
<td>&lt;.05</td>
</tr>
<tr>
<td><strong>Work</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>168</td>
<td>175</td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>57.9 (30.5)</td>
<td>64.8 (28.9)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
The GCWMS CBT-based weight management groups help individuals:

- **Lose weight**: over 90% lost some degree of weight and 46% achieved the programme target of 5+ kgs weight loss.
- **Significantly improve in emotional well-being** (both anxiety and depression).
- **Significantly improve in all domains of HRQOL** (physical function, self-esteem, work, sexual life and public distress).

These positive changes fit with our clinical impressions.
Logistic regression: predictors of meaningful change in total HRQOL post intervention

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>B (SE)</th>
<th>Lower</th>
<th>OR</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-1.44 (.38)***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in weight</td>
<td>-.17 (.06)**</td>
<td>.75</td>
<td>.85</td>
<td>.95</td>
</tr>
<tr>
<td>Change in depression</td>
<td>-.25 (.09)**</td>
<td>.65</td>
<td>.78</td>
<td>.93</td>
</tr>
<tr>
<td>Interaction (weight change by depression change)</td>
<td>-.02 (.02)</td>
<td>.95</td>
<td>.98</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Model 1: $R^2 = .15$ (Cox & Snell), .20 (Nagelkerke). Model $\chi^2(9) = 26.68, p = .002$
Model 2: $R^2 = .11$ (Cox & Snell), .14 (Nagelkerke). Model $\chi^2(3) = 18.72, p < .001$

*p<.05, **p<.01, ***p<.001
In the total sample, clinically meaningful changes (improvement) in overall HRQOL is due to weight loss and improvement in mood (change in depression).

Other factors such as age, gender, SIMD and anxiety do not significantly contribute to changes in HRQOL.

The next question: Were there any differences in results between those who lost more weight and those who lost less?
Logistic regression: predictors of meaningful change in total HRQOL post intervention

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>B (SE)</th>
<th>Lower</th>
<th>OR</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost 5+ kgs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-.64 (1.29)</td>
<td>.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.13 (.52)</td>
<td>.32</td>
<td>.88</td>
<td>2.44</td>
</tr>
<tr>
<td>Age</td>
<td>.02 (.02)</td>
<td>.97</td>
<td>1.02</td>
<td>1.06</td>
</tr>
<tr>
<td>SIMD 1 vs 5</td>
<td>20.99 (23138.47)</td>
<td>.00</td>
<td>.00</td>
<td>1.92</td>
</tr>
<tr>
<td>SIMD 2 vs 5</td>
<td>-.94 (.81)</td>
<td>.08</td>
<td>.39</td>
<td>8.61</td>
</tr>
<tr>
<td>SIMD 3 vs 5</td>
<td>.22 (.99)</td>
<td>.18</td>
<td>1.24</td>
<td>10.42</td>
</tr>
<tr>
<td>SIMD4 vs 5</td>
<td>1.11 (.63)</td>
<td>.88</td>
<td>3.03</td>
<td>1.11</td>
</tr>
<tr>
<td>Change in anxiety</td>
<td>-.07 (.09)</td>
<td>.78</td>
<td>.93</td>
<td>1.24</td>
</tr>
<tr>
<td>Change in depression</td>
<td>.01 (.10)</td>
<td>.83</td>
<td>1.01</td>
<td></td>
</tr>
</tbody>
</table>

Lost 0.1-4.9kgs:

<table>
<thead>
<tr>
<th>B (SE)</th>
<th>Lower</th>
<th>OR</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.19 (.08)*</td>
<td>.71</td>
<td>.83</td>
<td>.96</td>
</tr>
</tbody>
</table>

Lost 5+kg: $R^2 = .13$ (Cox & Snell), .17 (Nagelkerke). Model $\chi^2(8) = 10.67, p=.221$

Lost 0.1-4.9kgs: $R^2 = .085$ (Cox & Snell), .119 (Nagelkerke). Model $\chi^2(1) = 6.89, p=.009$

*p>.05, **p<.01, ***p<.001
Clinically significant changes in HRQOL by weight loss group

<table>
<thead>
<tr>
<th>Weight loss groups</th>
<th>HRQOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost 5+kgs</td>
<td>Improved: 40, Unchanged: 20, Deteriorated: 10</td>
</tr>
<tr>
<td>Lost 0.1 - 4.9kg</td>
<td>Improved: 30, Unchanged: 40, Deteriorated: 10</td>
</tr>
</tbody>
</table>

NHS Greater Glasgow and Clyde
Clinically significant improvement in overall HRQOL is more likely in participants who had lost at least 5+ kgs.

When 5+ kgs weight loss is achieved, HRQOL improvements are due to weight loss.

In patients who lose less weight, meaningful changes in HRQOL are seen and underpinned by improvements in depressive symptoms.
Conclusions

- The GCWMS CBT-based weight management groups help individuals lose weight, significantly improve in emotional well-being (anxiety and depression) and in all domains of HRQOL.

- Both weight loss and changes in depression predicted meaningful improvement in HRQOL.
  - Improvement in HRQOL was due to weight loss, when participants had lost 5kgs or more in weight.
  - When participants were less successful with weight loss, positive changes in depression accounted for changes in HRQOL.
Conclusions

- However, previous studies of HRQOL improvement have found weight loss to be the main predictor, especially in physical function. These results are partially confirmed in this study. (i.e. when >5kgs weight loss is achieved)

- 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: - therapeutic ‘group’ effect
  - individual psychological therapy?
  - Family/social support?
  - Initiation of exercise regimens?
Plan for workshop:

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A New Treatment Approach to Binge Eating Disorder and Obesity: A Clinical Review

Dr Marie L Prince
Contents

- BED Criteria
- Prevalence
- Clinical experience
- Weight loss & BED
- Mood & BED
- Psychological Intervention
- DEG Model
- Results
- Summary
Binge Eating Disorder DSM-IV

• Recurrent episodes of binge eating

• Binge eating episode:

  ➢ Eating in a discrete period of time an amount of food that is definitely larger than most people would eat in a similar period of time in similar circumstances

  ➢ A sense of lack of control over eating during the episode
**Binge Eating Disorder DSM-IV**

- The binge eating episodes are associated with at least three of the following:
  - Eating more rapidly than normal
  - Eating until feeling uncomfortably full
  - Eating large amounts of food when not physically hungry
  - Eating alone because of being embarrassed by how much one is eating
  - Feeling disgusted with oneself, depressed, or guilty after overeating.

- Marked distress regarding binge eating

- The binge eating occurs, on average at least 2 days a week for six months.

- The binge eating is not associated with regular use of inappropriate compensatory behaviours and does not occur exclusively during the course of anorexia nervosa or bulimia nervosa.
Binge Eating Disorder

- Frequent weight fluctuations
- Childhood weight gain
- Higher levels of psychological co-morbidity compared to those without BED
- Female
- $\text{BMI} > 40 \text{ Kg/m}^2$

Yanovski, 1993, Friedman & Brownell, 2002
Prevalence of BED

- General population: 3%  
(Hudson et al 2007)

- Obese population: 10%

- Treatment seeking obese population: 30%  
(Blaine & Rodman, 2007)

- Half of outpatient diagnoses  
(Fairburn et al, 2009)
Clinical Experience

- Other individuals present with sub-clinical disordered eating requiring psychological intervention:
  - compulsive eating
  - using food as an emotional coping strategy
  - dysfunctional eating patterns
Weight Loss Interventions & BED

• Matched study meta-analysis, obese patients with BED lost 2% of body weight compared with 11% in non-BED participants

  (Blaine and Rodman, 2007)

• Presence of disordered eating may reduce motivation and adherence to treatment

  (Hainer et al., 2005)
BED Interventions & Weight Loss?

- Systematic review of 7 RCTs comparing individual and group interventions in patients with BED, found CBT was effective in reducing binge eating and improving abstinence, but does not lead to weight loss.

  (Brownley, 2007, Wilson, 2010)

- The effectiveness of CBT in reducing binge frequency but without influencing weight loss was also confirmed in an RCT with two years follow up.

  (Devlin et al., 2005)
**BED and Mood**

- Increased levels of depression are seen in adults with severe obesity (BMI >40kg/m²) and obese adults with BED.
  (Onyike et al, 2003)

- Increased rates of anxiety and lower levels of self esteem are also observed in obese adults with BED compared to non bingeing obese adults.
  (Jirik-Bibb and Geliebter, 2003)

- In addition to the above BED is also associated with guilt and shame.
  (APA, 2000)
Predictors of Outcome

- Baseline high level of negative affect lead to less weight loss.

- Increased severity of disordered eating is observed in people with higher negative affect and increased psychiatric co morbidities.

- Lifetime history of depression predicted less remission from binge eating behaviours.

(Wilson et al, 2010)
Psychological Treatment: 

G S H

- First line approach

- Specialist treatment required for individuals with significant psychopathology such as significantly poor self esteem and body image issues

Wilson et al, 2010
Psychological Treatment: CBT

- CBT-E Fairburn, 2008, 2009
- Intensive treatment
- Yet to be studied in obese population
Psychological Treatment: IPT

- Wilson et al, 2010

- Most severe psychopathology
  - Self Esteem
  - Body Shape
  - Mood

- Longer term gains
Previous Service Model

- GCWMS screens for disordered eating and offers psychological assessment.
- Previously individual treatment in addition to group weight loss interventions offered.
- 2007 audit of psychology caseload: 50% cases disordered eating.
Recent Service Model

- Adding Group CBT for BED to GWCMS standard weight loss intervention.

- Address disordered eating and encourage weight loss and weight maintenance.

- Beneficial & supportive for clients

- Research in this area limited
D E G S t r u c t u r e

• Additional 2 sessions

• Increased session length

• Fortnightly

• Enhanced GCWMS program

• Delivered by a clinical psychologist

• Successful pilot study N=10
Glasgow & Clyde Weight Management Service

**Overview**

- CBT Model
- Psychoeducation re dieting
- Taking control of eating
- Self Monitoring
- Motivation
- Goal setting
- Regular eating
- Cravings
- Changing habits
- Problem Solving
- Mindful Eating
- Emotional Eating
- Body Image
- Self Esteem
- Being assertive
- Relapse prevention

Glasgow & Clyde Weight Management Service
Measures

- Questionnaire on Eating and Weight Patterns-Revised
  - Presence & Frequency of binge eating
  - Control over eating
  - Eating related distress
  - Body shape and weight concerns

- Psychometrically sound
- Categorical data

Spitzer, Yanovski & Marcus, 1994
Measures

- Hospital Anxiety and Depression Scale
  - Widely used self rating scale
  - Psychometrically sound

Zigmond & Snaith, 1983
The Hospital Anxiety and Depression Scale. 
Measures

- Impact of Weight on Quality of Life-Lite
  - Physical Function
  - Self Esteem
  - Sexual Life
  - Public Distress
  - Work

- Psychometrically sound

Kolotkin, Crosby, Kosloski & Williams, 2001
Development of a brief measure to assess quality of life in obesity.
Obes Res, 9: 102-111
DEG Outcomes
<table>
<thead>
<tr>
<th>Sample</th>
<th>N = 104</th>
<th>Mean (SD)</th>
<th>Range</th>
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<tr>
<td></td>
<td><strong>N = 199</strong></td>
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<tr>
<td>Age (years)</td>
<td></td>
<td>43.11 (10.15)</td>
<td>20-68</td>
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<tr>
<td></td>
<td></td>
<td><strong>49.7 (12.6)</strong></td>
<td><strong>20-88</strong></td>
</tr>
<tr>
<td>Male</td>
<td>11 (10.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>47 (23.6)</strong></td>
<td></td>
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</tr>
<tr>
<td>Female</td>
<td>93 (89.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>152 (76.4%)</strong></td>
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<tr>
<td>Weight (kg)</td>
<td>122.73 (22.45)</td>
<td>82.4 - 208</td>
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<tr>
<td></td>
<td><strong>114.5 (23.4)</strong></td>
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<tr>
<td>BMI (kg/m²)</td>
<td>45.24 (7.43)</td>
<td>32.4 - 63.6</td>
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</table>

Glasgow & Clyde Weight Management Service
Change in BED

McNemar: $x^2 = 17.93$, df=1, $p<0.001$, N=58
Change in Binge Frequency

Stopped
Reduced
Stable
Increased

N = 62
# Eating Related Distress

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<th>Pre-Intervention</th>
<th>Post-Intervention</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean (SD)</td>
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<tr>
<td>Distress</td>
<td>46</td>
<td>4.17 (0.82)</td>
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<tr>
<td>Control</td>
<td>47</td>
<td>4.23 (0.81)</td>
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<tr>
<td>Body Image</td>
<td>56</td>
<td>3.50 (0.76)</td>
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## HADS and Quality of Life

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<tr>
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<td>Physical Function</td>
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<tr>
<td>Self Esteem</td>
<td>91</td>
<td>31.19 (4.76)</td>
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<tr>
<td>Sexual Life</td>
<td>82</td>
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<td>Public Distress</td>
<td>91</td>
<td>18.22 (4.67)</td>
<td>66</td>
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<tr>
<td>Work</td>
<td>83</td>
<td>11.98 (4.65)</td>
<td>64</td>
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Glasgow & Clyde Weight Management Service
### Change in Weight

<table>
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<th>Kg</th>
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<tbody>
<tr>
<td>N</td>
<td>59</td>
</tr>
<tr>
<td>Mean</td>
<td>2.70</td>
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<tr>
<td>Std. Deviation</td>
<td>4.53</td>
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<tr>
<td>Range</td>
<td>22.6</td>
</tr>
<tr>
<td>Percentiles</td>
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<tr>
<td>25</td>
<td>.000</td>
</tr>
<tr>
<td>50</td>
<td>2.20</td>
</tr>
<tr>
<td>75</td>
<td>5.00</td>
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Summary

• Successful BED treatment

• Improvements in mood, self esteem, body image

• Successful weight loss

• Efficient

• Future directions
Psychologists in Obesity Management

Plan for workshop:
1. Service overview & role of psychology
2. Weight loss and quality of life
3. Disordered Eating
4. Bariatric surgery
5. Case study
6. Future innovations
7. Questions
Psychological Aspects of Surgical Intervention

Dr Susan Boyle
Consultant Clinical Psychologist
Glasgow & Clyde Weight Management Service
What is bariatric surgery?

- Bariatric surgery is a branch of general surgery concerned with enabling obese patients to lose weight.

- Bariatric surgery has become an increasingly popular weight loss intervention for individuals diagnosed as “obese” (ICD-10; WHO, 1994), for whom lifestyle approaches have failed to produce significant improvements.

- It is usually employed only when other weight reduction methods have failed.

- Various different procedures are available.

- Main procedure used in Scotland is laparoscopic adjustable gastric banding.
Laparoscopic adjustable gastric banding

- Inflatable silicone device
- Placed around the top portion of the stomach
Previous research in this area

- Research evaluating the effectiveness of this surgery consistently report that surgery results in both weight loss and weight loss maintenance (Torgerson et al., 2001; Lang et al., 2002).

- Additional improvements in quality of life in terms of mood disorders, mental well-being, health perceptions, social interaction and physical activity are reported (De Zwann et al., 2002; Karlsson et al., 1998; Boan et al., 2004; Weiner et al, 1999).
Psychological status in severely obese patients seeking surgery

Those at the lower levels of obesity may have no greater rates of psychopathology than the rest of the population.

Psychological co-morbidities are prevalent and substantial in severely obese patients presenting for surgery:

- Depression
- Binge Eating Disorder
What psychological factors are predictive of outcome after bariatric surgery?

- Majority of studies have not found clear psychological predictors.

- Limited evidence suggests binge eating prior to surgery is a negative predictor of weight loss following surgery in retrospective studies.

- Consensus view- not the specific type of psychological symptom prior to surgery that is relevant but the severity of it/them and their impact on adherence to behavioural change.
What psychological factors are contraindications for bariatric surgery?

- Min/moderate psychological issues do not necessarily preclude candidacy – some may be severe enough to require prior treatment & re-assessment

- Severe psychopathology may indicate patient not stable enough to comply with demands and withstand stress of surgery

Majority of patients will have no psychological contraindication to surgery (range 64 - 81.5%)
- some require psychological treatment prior to or adjunctive to surgery (15.8 - 33%)
- few will be judged to have absolute contraindications to surgery at the time of assessment (2 -3%)
Psychological Assessment

Clinical interview & standardised measures (BDI; BAI; QEWP-Revised; IWQOL-Lite):

- Set context for evaluation

- Weight & dieting history (may be carried out by dietitian)
- Psychological functioning (current & past)
- Eating behaviour
- Level of social support / coping skills
- Motivation /expectations
- Knowledge of bariatric surgery
- Social and cognitive functioning

- Discussion of Findings
Recommendations to Surgical Team

Rarely deny a patient for psychosocial reasons alone:

1. Currently contraindicated for surgery

2. Recommending medication / psychological management prior to surgery for mild/moderate psychopathology- with or without reassessment

3. Requiring/recommending a pre-surgery group based on learning coping skills

4. Highlighting those patients with a history of significant psychopathology, poor coping or high stress so they are observed more closely during follow-up

5. Suitable candidate for surgery
Psychological Interventions pre Surgery

A reason for poor outcomes is poor patient knowledge leading to poor eating habits. These are best addressed through and pre and post op education (Stocker 2003).

Psychological approaches that have an evidence base for weight loss approaches generally still apply for those who have had surgery e.g. SIGN

Advice on these approaches can be provided before surgery so that individuals understand their eating behaviour, know how to break habits and have addressed emotional eating and develop coping skills.
Psychological interventions post Surgery

The greatest need for patient support is in the post-operative phase,

Patients require life-long medical supervision to monitor potential complications and to reinforce dietary compliance.


Post-operative problems can emerge that would impact on outcome unless addressed.
Disturbed eating patterns can develop post-operatively or have been seen to return e.g. patients eating until they are sick, and then going back for more food; feelings of deprivation and loss and resorting to pre-surgical diets; eating restrictive or ‘fad foods; grazing to help them ‘cope’ (Saunders, 2001, Saunders, 2004, Sogg and Mori, 2008).
Pre and Post Surgery Support Groups

Pre – Surgery group

- Skill-based: monthly rolling programme

Addressing those eating, activity, behavioural and emotional factors associated with successful transition to a very different lifestyle.

(Marcus & Elkins, 2004; Algazi, 2000)

Post – surgery group

- Support & skill-based: monthly rolling programme

Encouragement of adherence; problem identification; support new coping techniques in high risk situations; relapse prevention; interpersonal learning & support
MDT Model of Care

- The model of care in obesity has now become one of a chronic condition, requiring a continued input and follow-up as highlighted in other long term conditions such as diabetes (Canetti et al., 2009). Long-term follow-up is considered essential.

- Saltzman et al. (2007) In the first year after surgery the patient should be seen by one of the MDT (surgeons, physician, dieticians, and psychologists) at least every three months.
Summary of Psychological Aspects of WLS

- Psychological co-morbidities are prevalent and substantial among severely obese people considering bariatric surgery.

- Detection of psychological factors that are likely to impact on outcome are necessary for appropriate recommendations to be made to surgical team.

- Psychological assessment prior to surgery is not just about patient selection, but for good patient care.

- The psychologist’s role within this process is not only to provide assessment/evaluation but to make recommendations regarding therapeutic interventions to optimise the safety and efficacy of the WLS.
Psychologists in Obesity Management

Plan for workshop:
1. Service overview & role of psychology
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3. Disordered Eating
4. Bariatric surgery
5. Case study
6. Future innovations
7. Questions
An exploration of obese patients’ beliefs and expectations relating to bariatric surgery, using Thematic Analysis.

Dr. Ross T Shearer (Principal Researcher)
Dr. Sarah L Wilson (Research Supervisor)
Dr. Susan Boyle (Clinical Supervisor)
Previous Research

- Majority of research looking into psychological factors has used quantitative methodology.

- It would be anticipated that this type of surgery would have a huge impact on patients’ lives, especially relating to their eating behaviour. However, to date, the results of published studies have been surprisingly inconsistent.

- Small number of studies have used qualitative approaches in order to explore in greater depth the experiences of patients undergoing bariatric procedures.
  - E.g. Ogden et al. (2005)
Media Influence

- Surgery viewed as “Quick fix”
  “taking easy way out”
- Person viewed as – “Lazy”;
  “Lacking self discipline”; “Failure”
- Celebrity focus
  - E.g’s
    - Fern Britton
    - Sharon Osbourne
    - Vanessa Feltz
- Obese individuals often find themselves needing to justify their size in order to refute suggestions of moral failure.
  - Throsby (2007)
Previous Research contd.

- Health research has found that patients’ beliefs and perceptions about their illness are key determinants of recovery (e.g. Petrie et al., 2002).

Aims of Study

- This study aimed to explore obese patient’s beliefs and expectations, from before and after their bariatric surgery, specifically relating to:
  - their views regarding the procedure;
  - the role of the gastric band;
  - their own role following surgery; and,
  - the impact of the surgery, both positive and negative.
Design/Method

- Retrospective, qualitative design

- In-depth interviews (60-90 mins.), exploring participant’s beliefs and expectations from both before and after their surgery

- Informed by a topic guide.

- The interviews were audio recorded and then transcribed verbatim by the principal researcher.

- Concerns regarding the reliability of retrospective reporting?
Participants

- Eight patients (all female)

- Interviewed 12 months (+/− 2 Month) after undergoing bariatric surgery

- Pilot phase conducted (n=3)

- Participants purposively recruited from the Glasgow & Clyde Weight Management service, on a first come basis.
Analysis

- Qualitative data from the in-depth patient interviews was subject to Thematic Analysis.

- TA provides a platform for a clear and transparent definition of the theoretical position a study is taking in its approach to analyzing its data (Braun & Clarke, 2006).

- An inductive, semantic and realist approach to thematic analysis was carried out.
Study Findings

Three Super-ordinate Themes identified:

1. ‘The Need for Surgery’
2. ‘Not a Quick-fix’
3. ‘Importance of Support’
1. The Need for Surgery

- Long history of struggling to lose weight:
  “The way I’ve looked at it... when I got the band, which was maybe the wrong way to look at it, was I’ve failed. Getting the band was a sign of failure, you can’t lose weight!” [Rachel, P19, L15].

- Motivations for surgery:
  “It’s my goal to be able to be able to live for my family and play with my grandchildren, pick them up and have fun with them” [Janice, P11, L4].

- Last and only option:
  “I was dying a slow death, cause I just couldn’t help myself... I was a prisoner in the house by this time, I couldn’t do any exercise, I couldn’t do anything because I was far too heavy... I was gonna either die a slow death or die on the operating table and if I was gonna die I’d rather die on the operating table” [Margaret, P1, L30].
2. Not a Quick-fix

• Miracle cure:
  “I thought the band was gonna cure everything, I thought the band was going to be my saviour, I thought I would wake up and everything would fall into place” [Gillian, P15, L45].

• Learning process:
  “You just want to be ‘normal’ and not bingeing... my emotions still rule a lot of my eating habits” [Janice, P14, L11].

• Personal responsibility:
  “Well I see it now as about 80% me, 20% the band. Before I think it was probably the other way... I thought the band did most of it for you and you could basically just swan about and it did all the work and now I realise its not that way at all... I know it’s up to me” [Lesley, P12, L30].
3. Importance of Support

- Cannot do it alone:
  “For once in your life you felt as though somebody was actually listening to you because you’re crying out ‘please help me, I can’t do this on my own’ and for once somebody saw that and was there to ‘egg you on’... it was like you come to this hump in the road and you can’t get over that hump... but they gave you that wee push” [Margaret, P3, L35].

- Patient perspective:
  “I don’t think that people who don’t have struggles with food really will understand how much the surgery is needed... patients views need to be heard” [Janice, P15, L27].
Conclusions

- Study highlights that although LAGB surgery results in many beneficial outcomes for patients, the expectations that they hold about surgery may affect their ability to cope post-surgery and possibly influence their weight loss outcomes.

- The participant accounts highlight that they see the band as an ‘aid’ and that they themselves play an important role in managing their eating behaviours, contrary to what many had anticipated prior to surgery.

- Additionally, patients require support from a range of sources (i.e. professionals, family/friends and patients) in order to gain maximum benefit.
Implications for Future Research

• Desirable to prospectively follow-up clients.

• Investigate how long patients require support and whether gaining support not only enhances weight loss, but also weight loss maintenance.

• Mechanisms which make support groups effective need to be further examined.

• Develop a questionnaire that would assess patients’ expectations of BS.

• Imperative that male views are examined.
... and for Clinical Practice

- Patients’ expectations for surgery need to be addressed, not only before surgery, but also after.

- Thorough multidisciplinary preparation and follow-up support appears to be beneficial.

- Psychological support appears of particular value and should be routinely provided, especially for those meeting psychiatric diagnoses.

- The use of patient support groups appears beneficial and should be incorporated into the follow-up, alongside encouraging family involvement for these patients.
Psychologists in Obesity Management

Plan for workshop:

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Case Study

Dr Mira Mojee
Clinical Psychologist
Initial Assessment

- 43yr old woman
- Overweight since a teenager
- BMI = 47.4kgm² (153.6kg)
- HADS (anxiety – 15/depression – 12)
- Referred to Psychology *(for above)*
- Rheumatoid arthritis
- Scored 51/55 for physical function → physiotherapy assessment

Plan- Multi-disciplinary intervention
1. Psychology Intervention

Therapy Plan:
Focus on reducing disordered eating, to improve long term weight management success: 8 individual sessions of CBT

- **Build motivation** – increase self-efficacy/weight loss/uncontrolled eating (despite arthritis/low mood)

- **Gain control over disordered eating** - behavioural approach (self-monitoring/psychoeducation/regular eating)

- **Improve emotional management** - develop skills in anxiety management & problem-solving. Learning to deal with problems directly as this skill was underdeveloped.

- **Improve self esteem & mood** - activity scheduling, challenging core beliefs & negative automatic thoughts; behavioural experiments/assertiveness
2. Dietetic Intervention

Completed Phase 1, 2 & part of 3 of the standard GCWMS weight management group programme:

Dietetic:
Followed a 600kcal deficit diet,
Personal Dietary Prescription
with portion advice
3. Physiotherapy

Intervention

At time of assessment current activity:

- 8.30am rise
- Walk in shower
- Morning - watch TV
- 11.30am return to bed
- Afternoon - watch TV
- Babysit in evenings (from seated chair)
- Go to bed at 3am
## Physiotherapy Assessment

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<tr>
<th>Barriers</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Time</td>
<td>Reduce depression</td>
</tr>
<tr>
<td>Joint pain</td>
<td>Reduce joint pain</td>
</tr>
<tr>
<td>Stress</td>
<td>Feel younger!</td>
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### Physiotherapy Plan
- ↑ Opportunistic activity
- Improve sleep pattern
- Start GCWMS Activity class
**Discharge**

- Completed dietetic, psychology & physiotherapy interventions (Phase 1, 2 & 3 over 18 months)
- Decrease in disordered eating (*frequency & severity diary recordings*)
- Improvement in mood and anxiety scores – HADS (*anxiety-8 depression-8*)
- Bright clothing/hair styles/confidence
- No rests – completes entire activity class
- Travelling abroad
- Badminton 2x per week
- Referral to Live Active → Ozone class and swimming

**WEIGHT LOSS - 13.3kg!!**

Glasgow & Clyde Weight Management Service
Psychologists in Obesity Management

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Glasgow & Clyde Weight Management Service
Future Directions

Dr Mira Mojee
Clinical Psychologist

Glasgow & Clyde Weight Management Service
The Future

- GCWMS Evaluation Publication of outcomes – submitted for publication
- DEG
- QoL
- Surgery Study

- Developments with service users programme development, Spouse/family support

- Surgery selection developments/ more funding– national groups

- Clinical Developments – incorporating IPT/ Compassionate Mind/ BFT

- DVD’s; Website Development
Involving Significant Others in Weight Management for Obesity

• SIGN 2010
• “Involving family members (usually spouse/partner) in behavioural treatments for weight loss is generally more effective for weight loss than targeting the overweight individual”
Literature Review

- Spousal involvement found to facilitate long term weight loss, but, inconclusive what elements of spousal involvement most effective (Black and Lantz, 1984)

- Recruiting patient with significant others, and telling them not to criticise, tease, or punish just as effective as SSI (Pearce et al., 1981, Wing & Jeffrey, 1999)
Research Proposal

- Involve service users in programme development
- Qualitative design: Focus groups
- Design intervention based on service users’ suggestions
- Pilot and evaluate using service users
- Improve weight loss outcomes for long term weight loss and weight maintenance
Questions?
Contacts

1. Dr Susan Boyle, Consultant Clinical Psychologist
   Susan.Boyle@ggc.scot.nhs.uk

2. Dr Fiona Wright, Clinical Psychologist
   Fiona.Wright2@lanarkshire.scot.nhs.uk

3. Dr Marie Prince, Clinical Psychologist
   Marie.Prince@ggc.scot.nhs.uk

4. Dr Ross Shearer, Clinical Psychologist
   Ross.Shearer@nhs.net

5. Dr Mira Mojee, Clinical Psychologist
   Mira.Mojee@ggc.scot.nhs.uk