Mindfulness Action-Based Cognitive Behavioural Therapy for Concurrent Binge Eating Disorder and Substance Use Disorders

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Binge Eating Disorder (BED)

- Persistent and reoccurring episodes of uncontrollable consumption of a large amount of food without regular use of maladaptive compensatory weight-control behaviours.

4th ed.; DSM-IV; American Psychiatric Association, 1994
Binge Eating Disorder (BED)

- Prevalence rate of 3 – 5% in community samples\(^1\)
- More common in women than men (3.5% vs. 2.0%)\(^1\)
- Commonly associated with overweight and obesity
  - 65% of patients with BED\(^2\)
- Significant psychiatric comorbidity\(^2\)

- Thus, BED can be harmful with regard to both physical and mental health and is a prevalent clinically significant public health problem

1. Hudson et al., 2006
2. Striegel-Moore et al., 2001
Comorbid Substance Use Disorders (SUDs)

• High co-occurrence between BED and SUDs
  - Lifetime prevalence rate of 13.6% for SUDs in patients with BED
  - History of substance abuse predicts poorer responses to treatment of EDs

• Important to assess SUDs in individuals with BED and vice versa

1. Bushnell et al., 1994
2. White & Grilo, 2006
3. Wilson, Loeb, & Walsh, 1999
4. Krug et al., 2008
Current Treatments for BED

• Treatment approaches developed for patients with BED only
• Treatment plans similar to those for bulimia nervosa (BN)
  – Cognitive-behavioural therapy (CBT)\textsuperscript{1,2,3}
  – Interpersonal psychotherapy (IPT)\textsuperscript{4}
  – Pharmacotherapy

• Half do not respond to these treatments
• Need to improve treatment efficacy

\textsuperscript{1} Agras, 1997; \textsuperscript{2} Agras et al., 2000
\textsuperscript{3} Castonguay, Eldredge, & Agras, 1995;
\textsuperscript{4} Wilfey & Cohen, 1997
Mindfulness/Acceptance-Based Approaches

- May promote effective coping with negative emotions
- Encourages individuals to observe, accept, and experience emotions non-judgementally without attempting to change them in the present moment:
  - May ↓ impulsive, maladaptive reactivity to distress
- Promote a de-centered view of emotions:
  - ↓ urge to act hastily on adverse negative emotions
- Better recognition of internal states allows for opportunity to decide on more adaptive courses of action

1. Baer, Fischer, & Huss, 2005
2. Linehan, 1993
Mindfulness/Acceptance-Based Approaches

- In patients with BED, mindfulness may:
  - ↑ ability to recognize and respond to hunger and satiety cues
  - ↑ willingness to experience negative affect that previously triggered binge eating
  - ↓ believability of negative distorted thoughts
  - ↑ ability to choose adaptive behaviours in stressful circumstances

- Similarly in patients with SUDs
  - ↑ awareness of linkages between emotional distress and substance use
  - Desensitize individuals to aversive aspects of negative emotional states, and ↓ urge to escape them by using drugs
  - ↑ ability to engage in alternative adaptive coping behaviours
Hypotheses

- MACBT leads to:
  - 1. increased ability to refrain from binge eating and disordered eating attitudes
  - 2. decreased drug and alcohol addiction severity
  - 3. decreases in depressed mood
Sample

- CAMH Eating Disorders and Addiction Clinic
- 38 Subjects (30 female, 8 male)
- Mean age 42 years, SD = 10.96 (18+)
- Majority single and employed full time
- Primary problematic substance --> alcohol (75%)
  - Secondary problematic substance --> cannabis (36%)
Measures

- *Structured Clinical Interview for DSM-IV disorders (SCID-IV)*

- *Addiction Severity Index (ASI)*

- *Eating Disorder Examination Questionnaire (EDE-Q)*

- *Beck Depression Inventory (BDI)*
Treatment: MACBT

- 16 weekly 2 h closed-group sessions
- Skills taught in group sessions cumulative

- Program consisted of:
  - Mindful eating
  - Mindfulness
  - Focus on strengths
  - Balanced physical activity
Balanced Physical Activity

- Psychoeducation regarding health risks associated with obesity, over eating, substance use, and the corresponding benefits associated with increased physical activity.

- Patients expected to be physically active: starting at 5 minutes daily on week one, and adding an additional 5 minutes each week (up to 60).

- Patients encouraged to integrate physical activity mindfully into their everyday routine so as to create a habitually active lifestyle.
  - I.e. take stairs rather than elevators
Results

- 9 non-completers
  - (no significant differences with completers)

- Objective binge eating episodes (OBE; M = 21)

- Controlling for baseline depression, significant reduction in OBE over time, Wald $\chi^2 (1) = 5.82$, $p = .02$
Disordered Eating - EDE-Q

- Significant Reductions over Time:
  - Eating concern $F(1, 19) = 10.42, p < .001$
  - Shape concern $F(1, 19) = 9.45, p = .01$
  - Weight concern, $F(1, 19) = 5.25, p = .03$
  - Global score, $F(1, 19) = 14.11, p < .001$
  - Restraint (trend) $F(1, 19) = 3.67, p = .07$
Substance Use - ASI

- Significant reductions in:
- Alcohol Addiction Severity: $F(1, 28) = 4.16, \ p = .05$
- Drug Addiction Severity: $F(1, 27) = 5.43, \ p = .03$
Depression - BDI

- Significant reductions:
- Cognitive Affective subscale, $F(1, 27) = 19.04, p < .001$
- Somatic Performance Scale, $F(1, 27) = 5.13, p = .03$
- Total score, $F(1, 27) = 14.12, p < .001$. 
Effect Sizes

- Large effect sizes (.80 or greater) for:
  - Objective binge eating episodes
  - EDE-Q global and subscale scores
  - ASI alcohol subscale
  - BDI total and subscale scores

- A medium-large effect size was present on the ASI drug subscale.
Discussion

• MACBT may be a promising treatment for concurrent BED and SUDs
  – First treatment of its kind
  – Targets emotional regulation
  – May avoid substitution of one coping method for another

• Reductions in disordered eating attitudes
  – Changing role of cognitions?

• Reductions in substance use severity
Discussion

• Implications for health care
  – Reductions in OBE can have health implications
  – Integrated versus sequential treatment
    • Sequential tx can be costly
  – In light of *heightened* distress, disability, and health care utilization for individuals with concurrent disorders, addressing this population is important
Limitations & Conclusions

• 1) No control group or random assignment
• 2) Self-reported
• 3) Small sample size
• 4) Gender imbalance

***Larger scale randomized controlled trial is warranted***