Changing Obesity Management

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Obesity = Epidemic Proportions (35.7%)
   (Overweight & Obesity 71.1%)  

The costs have escalated into the BILLIONS of dollars

Leading Cause of Preventable Death
   (200,000 deaths annually)

(Centers for Disease Control and Prevention, 2013; Hoffman, 2012; Saad, 2011; United States Department of Health & Human Services: Surgeon General.gov [USDHHS], n.d)
2/3 of Americans having tried to lose weight at least once in their lifetime.

Weight-loss industry’s sales reaching $2.73 billions

Obesity not driven by a lack of motivation or effort

(Kirchoff, 2013; Marketdata Enterprises, 2011; Pedram et al., 2013; Saad, 2011; Sandilands, n.d.)
Behavioral and Neurochemical Correlations

- **Drug Dependence**

- **Compulsive Overeating**
  - Binge Eating Disorder
  - “Food Addiction”

Neural Correlations

PET scans show

- Neural Adaptations
  - Changes in dopamine and opioid receptor binding (DA D2)
  - Enkephalin mRNA expression
  - Dopamine & acetylcholine release
  - Changes in response to food cues

MRI scans show

- evidence of structural and functional changes associated with high BMI

(Cheren, et al., 2009; Volkow et al., 2011; Wang et al., 2009)
Definition of Addiction

- Preoccupation, obsession and/or pursuit of a substance

- Use persists despite adverse consequences.

- The inability to consistently abstain

(American Society of Addiction Medicine [ASAM], 2011; Sussman & Sussman 2011)
PURPOSE of PILOT STUDY
PICOT QUESTION

▶ P - In in normal weight, overweight and obese individuals
▶ I - Using the Yale Food Addiction Scale (YFAS)
▶ O - what is the incidence and prevalence of eating pathologies,
  ▶ Craving
  ▶ binge eating
  ▶ “food addiction” symptoms
  ▶ diagnosis of “food addiction.”
DSM-IV TR and the YFAS

- Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR)
  - 7 diagnostic criteria for substance dependence
  - Clinically significant impairment

- The Yale Food Addiction Scale
  - 27 Questions
    - 1-16 Likert Scale
    - 17-25 Dichotomous

- Food Addiction” Diagnosis
  - Three or more symptoms are present with
  - Clinically significant impairment
DSM-IV-TR Substance Dependence Criteria.

(1) Substance taken in larger amount and for longer period than intended

(2) Persistent desire or repeated unsuccessful attempt to quit

(3) Much time/activity to obtain, use, recover

(4) Important social, occupational, or recreational activities given up or reduced

(5) Use continues despite knowledge of adverse consequences (e.g., failure to fulfill role obligation, use when physically hazardous

(6) Tolerance (marked increase in amount; marked decrease in effect)

(7) Characteristic withdrawal symptoms; substance taken to relieve withdrawal

(Gearhardt et al., 2009)
### YFAS Sample Questions

**IN THE PAST 12 MONTHS:**

1) I find that when I start eating certain foods, I end up eating much more than I had planned.

<table>
<thead>
<tr>
<th>Never</th>
<th>Once a month or less</th>
<th>Two to four times a month</th>
<th>Two to three times a week</th>
<th>Four or more times per week or daily</th>
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</table>

2) Not eating certain types of food or cutting down on certain types of food is something I worry about.

<table>
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<tr>
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<th>Two to four times a month</th>
<th>Two to three times a week</th>
<th>Four or more times per week or daily</th>
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</table>

3) My food consumption has caused significant psychological problems such as depression, anxiety, self-loathing, or guilt.

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<tr>
<th>YES</th>
<th>NO</th>
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4) I kept consuming the same types of food or the same amount of food even though I was having emotional or physical problems.

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<th>YES</th>
<th>NO</th>
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Methods

DESCRIPTIVE CORRELATIONAL STUDY

DATA COLLECTION

Sample

► A convenience sample
► Over the age of 18
► Presenting for weight loss care
► Central Texas
Methods

DATA COLLECTION QUESTIONNAIRE

- Yale Food Addiction Scale
  - Demographic Data
  - Biophysiological Data

- Data collected from Dec. 27th 2013 until Feb 1st 2014.

- 118 participants
Methods

DATA ANALYSIS

- SPSS 20 Statistical Graduate Pack
  - Frequencies

- Microsoft Excel
  - Correlations
DEMOGRAPHICS

AGE
BMI
WEIGHT

LOW  HIGH  MEDIAN
GENDER COMPARISON

- Female: 85.6%
- Male: 12.7%
ETHNICITY COMPARISON

ETHNICITY

- WHITE NON-HISPANIC
- HISPANIC
- AFRICAN AMERICAN
- ASIAN
- OTHER
Is there a certain time of day when you most often get cravings?

What time of Day do you most often get cravings?

- 1500-1800 = 30.5%
- 1900 - 2200 = 21.2%
PROBLEM FOODS

- **CHIPS**, 56.8%
- **PIZZA**, 51.7%
- **WHITE BREAD**, 50.0%
- **CHOCOLATE**, 44.1%
- **SODA**, 40.7%
- **PASTA**, 38.1%
- **FRENCH FRIES**, 37.3%
BMI to 7 Diagnostic Criteria

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<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
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BMI 25-29.9

BMI ≥ 40
BMI to Symptom Count & Diagnosis of “Food Addiction”
Conclusions

- “Food Addiction” may explain why people continue to use despite negative consequences

- DA D2 receptor deficiency is implicated as one of the causes of obesity

- Supports - Increasing Symptom Count with increasing BMI
Implication for Practice

- Strong evidence of ‘food addiction’ in etiology of obesity.

- 1st step in any addiction is to acknowledge the problem - identify the problem

- Changes in “triggers” - advertising of unhealthy snacks. Snack food vending machines.

- Medical Treatment for DA receptor deficiency
Implications for Practice

- Individual Practice Change

- National Practice Change
  - obesity prevention
  - improvement of treatment
  - prevention of associated cardiovascular risk factors/illnesses associated with obesity
<table>
<thead>
<tr>
<th>DNP Essentials</th>
<th>Chapter 1 Into &amp; Overview</th>
<th>Chapter 2 Literature Review</th>
<th>Chapter 3 Methods</th>
<th>Chapter 4 Results</th>
<th>Chapter 5 Discussion &amp; Conclusions</th>
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<tbody>
<tr>
<td>I Scientific Underpinnings for Practice</td>
<td>1-19</td>
<td>20-40</td>
<td>41-50</td>
<td>51-56</td>
<td>57-64</td>
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<td>II Organizational &amp; Systems Leadership for QI &amp; Systems Thinking</td>
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<td>VI Inter-Professional Collaboration for Improving Patient and Population Health Outcomes</td>
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Questions?

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References


