Risk for Overeating to Cope with Pain Among Obese Adults with Chronic Pain

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Conflict of Interest Author Disclosure

• Teresa Bigand: no conflicts
• Dr. Marian Wilson: no conflicts

Educational Objectives

By the end of the presentation, attendees should be able to:

1. Present evidence for the relationship between obesity and chronic pain
2. Describe present study findings to support overeating as potential contributor to relationship
3. Discuss nursing and healthcare implications for treatment of adults with co-occurring chronic pain and obesity
Data from US Gallup Poll, 2011

Overeating: Mechanism for Obesity and Chronic Pain Relationship?

- Qualitative data suggest this relationship (Janke & Kozak, 2011).
- Descriptive study offers evidence of poor diet of adults with chronic pain (Melenger et al., 2015).
- More evidence needed.

Methods

- Adults with a self-reported chronic pain diagnosis and a prescribed opioid medication completed surveys.
- BMI calculated
- Participants responded to the following:
  1. What happens to your appetite when you are in pain?
     a. eat less  b. no change  c. eat more to feel better
- Risk and odds ratios calculated based on BMI category to determine risk for reporting “c”.

Demographic Variable  Recommended Weight (n=55)  Overweight (n=9)  Obese (n=89)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male 40% 37.7% 27%</th>
<th>Female 56% 52.3% 73%</th>
<th>Missing 2% 0% 3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Type</td>
<td>Chronic Pain 54% 59% 10.8%</td>
<td>Opioid Use Disorder 46% 47% 29.2%</td>
<td></td>
</tr>
<tr>
<td>Mean Age in Years ± Standard Deviation</td>
<td>47.8 ± 16.1 49 ± 14.8 47.5 ± 13.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results
Results

- ANOVA model run to detect differences in BMI based on age, gender, and patient type (persistent pain vs opioid use disorder).
- Model found significant differences in gender and patient type based on BMI:
  - Females had higher mean BMI than males ($F_{1, 219} = 6.559, p = 0.012$).
  - Patients treated for persistent pain had higher mean BMI ($F_{1, 219} = 7.021, p < 0.01$) than those treated for opioid use disorder.

### Results

#### Self-reported Changes in Eating among Adults with Pain by Weight Status

<table>
<thead>
<tr>
<th>Weight Status</th>
<th>Eat Less/No Change in Eating</th>
<th>Increase in Eating to Feel Better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obese</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Risk Ratios and Odds Ratios

<table>
<thead>
<tr>
<th>Weight Status</th>
<th>Risk Ratio</th>
<th>Odds Ratio</th>
<th>Risk Ratio Confidence Interval</th>
<th>Odds Ratio Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obese</td>
<td>3.33</td>
<td>3.84</td>
<td>1.01 – 10.0</td>
<td>0.86 – 9.62</td>
</tr>
<tr>
<td>Overweight</td>
<td>2.91</td>
<td>3.26</td>
<td>0.86 – 9.62</td>
<td></td>
</tr>
<tr>
<td>Obese + Overweight</td>
<td>3.13</td>
<td>3.56</td>
<td>0.99 – 9.9</td>
<td></td>
</tr>
</tbody>
</table>

#### Significance Level

- Risk ratio confidence interval: $p < 0.05$
Implications

• Chronic pain should be treated in context of overweight status if co-occurring.

• Providers should work together with adults with co-occurring pain and overweight to promote self-management of symptoms.

• Interdisciplinary care of the adult with chronic pain and overweight may include referral to a registered dietician.

Contact

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