The Physical and Psychological Effects and Aspects of Intuitive Eating

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What is Intuitive Eating?

- A strong connection with, understanding of, and eating in response to physiological hunger and satiety cues, coupled with a low preoccupation with food.
- Also called non-dieting, undieting, or mindful eating.
- The three central features of intuitive eating:
  1) unconditional permission to eat when hungry
  2) eating for physical (not emotional) reasons
  3) reliance on internal hunger and satiety cues


The Intuitive Eating Scale (IES)

• Used by many of the studies to follow
• A 21-item self-report questionnaire
• Response format is a 5-point Likert scale
  (1=strongly disagree to 5=strongly agree)
  – Higher scores indicate higher levels of intuitive eating.
• Assesses the three central features of intuitive eating
  (unconditional permission to eat; eating for physiological reasons; reliance on hunger/satiety)
• Participants rate statements such as:
  – I have forbidden foods.
  – I find myself eating when I’m emotional.
  – I trust my body to tell me how much to eat.

A Paradigm Shift

• As the prevalence of obesity, dieting, and eating disorders in this country continues to increase, it becomes apparent that new approaches to healthy weight management are needed.

• Critics of dieting suggest a paradigm shift that focuses on health behavior changes as opposed to weight loss alone.

• Intuitive eaters are intrinsic and unaffected eaters; these traits are hard to come by in our society where we encounter a constant stream of weight, food, and nutrition-related information on a daily basis.

• Intuitive eating has become popularized as a possible approach to healthy weight management.

• Should dieting be replaced with intuitive eating? What are the physical and psychological effects of intuitive eating?

Outline

• What promotes intuitive eating?
• Physical effects
  – Weight/BMI
• Psychological effects
  – Depression
  – Self-esteem/Self-concept
• Conclusions/Implications for practice
• Questions
What promotes intuitive eating?
Acceptance Model of Intuitive Eating
Avalos & Tylka (2006)

• Since there are already model frameworks to explain body dissatisfaction and ED symptomatology, they explored how variables might work together to predict positive body image and adaptive eating practices.
  – They created a model of intuitive eating based on a foundation of acceptance.
Acceptance Model of Intuitive Eating
Avalos & Tylka (2006)

• Variables:
  – **General unconditional acceptance**: total acceptance by the most influential significant other growing up
    • Measured by Barrett-Lennard Relationship Inventory
  – **Body acceptance by others**: perception that others accept your body, so less preoccupied with changing outer appearance
    • Measured by The Body Acceptance by Others Scale
  – **Body function**: focus on how body feels internally rather than on external appearance
    • Measured by the Body Surveillance subscale of the Objectified Body Consciousness Scale
  – **Body appreciation**: satisfaction with body; awareness and respect of body needs
    • Measured by Body Appreciation Scale
All paths of the model were significant. The four proposed variables either indirectly or directly predicted intuitive eating.
Conclusions

• Acceptance by others, and positive self-body attitudes (body function and body appreciation) are associated with greater awareness of bodily signals and an increased tendency to honor these signals through intuitive eating.
Experimental Studies of Intuitive Eating

Physical Effect:
Weight/BMI
### Relationship between BMI and IE score

<table>
<thead>
<tr>
<th>Study</th>
<th>Participants</th>
<th>Methodology</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawks et al., 2005</td>
<td>32 female college students</td>
<td>Researchers calculated BMI, took IES</td>
<td>Participants grouped into high and low intuitive eating groups based on their results from the IES. High intuitive eaters had lower BMI than low intuitive eaters (P&lt;0.01). A negative correlation found between total intuitive eating score and BMI (r=-0.576, p&lt;0.001).</td>
</tr>
<tr>
<td>Smith and Hawks, 2006</td>
<td>343 male and female college students</td>
<td>Researchers calculated BMI, took IES</td>
<td>A negative correlation was found between total intuitive eating score and BMI (r=-0.327, p&lt;0.001).</td>
</tr>
</tbody>
</table>

The higher the intuitive eating score, the lower the BMI.
The diet group had a significantly lower weight and BMI at post-treatment (24 weeks) and at post-aftercare (52 weeks). But, at follow-up (104 weeks), the diet group’s weight was unchanged from their starting baseline.

The non-diet group’s weight and BMI remained unchanged throughout.

Weight: Restrictive dieters vs. “Undieters”

The restrictive dieters lost weight during the intervention (P<0.001).

The weight of the “undieters” remained unchanged.

Weight: Mindful Eating and Living (MEAL)
(contradictory results)

All participants followed the non-dieting MEAL program.

They all lost weight (P<0.01) and had a reduced BMI (P<0.01) at the 12 week follow-up.

Conclusions

• Intuitive eating score is negatively associated with BMI.

• Intuitive eating and non-diet approaches do not appear to be reliably effective for achieving significant weight loss in overweight and obese individuals.
Experimental Studies of Intuitive Eating

Psychological Effect: Depression
All participants followed the non-dieting MEAL program. They all had decreases in depression at the end of the six-week program (P=0.002) as well as at the 12-week follow-up (P=0.05).
## Depression: Non-dieting with Relaxation Response


### Table 2: Health outcomes by treatment condition over time for three non-dieting programs conducted in Dunedin, New Zealand 2002–2004

<table>
<thead>
<tr>
<th>Measure</th>
<th>Program</th>
<th>Baseline mean (SD)b</th>
<th>Change from baseline mean (SD)a</th>
<th>Within-treatment comparison p-valueb</th>
<th>Effect Sizec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diet quality scored</td>
<td>1</td>
<td>10.9 (2.9)</td>
<td>0.8 (2.5)</td>
<td>0.04*</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>11.0 (3.0)</td>
<td>1.4 (2.9)</td>
<td>&lt;0.001***</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>11.1 (2.7)</td>
<td>1.1 (3.0)</td>
<td>&lt;0.001***</td>
<td>0.51</td>
</tr>
<tr>
<td>Stress management behaviorsf</td>
<td>1</td>
<td>2.1 (0.4)</td>
<td>0.60 (0.55)</td>
<td>&lt;0.001***</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.2 (0.4)</td>
<td>0.35 (0.40)</td>
<td>&lt;0.001***</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2.3 (0.5)</td>
<td>0.23 (0.47)</td>
<td>&lt;0.001***</td>
<td>0.41</td>
</tr>
<tr>
<td>Eating self-efficacy scalef</td>
<td>1</td>
<td>101.1 (30.0)</td>
<td>-12.8 (28.9)</td>
<td>0.007**</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>103.5 (30.9)</td>
<td>-12.8 (38.7)</td>
<td>0.002**</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>98.9 (28.8)</td>
<td>-12.9 (36.4)</td>
<td>0.001**</td>
<td>0.39</td>
</tr>
<tr>
<td>Global severity index (symptoms checklist-90-revised)g</td>
<td>1</td>
<td>0.50 (0.36)</td>
<td>-0.22 (0.26)</td>
<td>0.001***</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.56 (0.44)</td>
<td>-0.19 (0.29)</td>
<td>&lt;0.001***</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0.57 (0.30)</td>
<td>-0.09 (0.25)</td>
<td>&lt;0.001***</td>
<td>0.13</td>
</tr>
<tr>
<td>Depression symptoms checklist-90-revisedg</td>
<td>1</td>
<td>0.75 (0.62)</td>
<td>-0.41 (0.52)</td>
<td>0.001***</td>
<td>0.41</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.76 (0.65)</td>
<td>-0.22 (0.41)</td>
<td>0.001***</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0.53 (0.46)</td>
<td>-0.06 (0.40)</td>
<td>0.004**</td>
<td>0.04</td>
</tr>
<tr>
<td>Frequency of medical symptomsh</td>
<td>1</td>
<td>214 (144)</td>
<td>-5.5 (10.5)</td>
<td>0.001***</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>269 (193)</td>
<td>-21 (16.5)</td>
<td>0.001***</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>19.9 (12.6)</td>
<td>-3.4 (9.4)</td>
<td>0.004**</td>
<td>0.10</td>
</tr>
<tr>
<td>Discomfort from medical symptomsb</td>
<td>1</td>
<td>262 (17.4)</td>
<td>-7.1 (17.0)</td>
<td>0.03***</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>349 (22.4)</td>
<td>-5.3 (12.4)</td>
<td>0.03**</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>24.8 (18.0)</td>
<td>-5.3 (12.4)</td>
<td>0.01**</td>
<td>0.06</td>
</tr>
<tr>
<td>Interference of medical symptomsh</td>
<td>1</td>
<td>216 (20.1)</td>
<td>-17.4 (18.5)</td>
<td>0.025*</td>
<td>0.41</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>300 (23.4)</td>
<td>-1.1 (28.1)</td>
<td>0.160</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>204 (17.2)</td>
<td>-4.1 (13.4)</td>
<td>0.03*</td>
<td>0.27</td>
</tr>
<tr>
<td>Body weight (kg)</td>
<td>1</td>
<td>95.5 (15.7)</td>
<td>-9.0 (5.9)</td>
<td>0.89</td>
<td>0.055</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>93.2 (14.7)</td>
<td>-12.3 (9.3)</td>
<td>0.26</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>93.9 (17.3)</td>
<td>-3.9 (4.9)</td>
<td>0.71</td>
<td>0.12</td>
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<tr>
<td>Systolic blood pressure (mm Hg)</td>
<td>1</td>
<td>1332 (143)</td>
<td>-22 (13.1)</td>
<td>0.09</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1360 (179)</td>
<td>-42 (16.4)</td>
<td>0.096</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1340 (175)</td>
<td>-28 (15.6)</td>
<td>0.086</td>
<td>0.31</td>
</tr>
<tr>
<td>Diastolic blood pressure (mm Hg)</td>
<td>1</td>
<td>1332 (143)</td>
<td>-22 (13.1)</td>
<td>0.09</td>
<td>0.15</td>
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</tr>
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</table>

- a: Unadjusted mean and mean change score from baseline to each time point.
- b: p-values adjusted for cohort, age category, baseline smoking status, education, having a partner, having children and work status.
- c: Effect sizes calculated as: baseline to 2-year adjusted change score / sample baseline standard deviation.
- d: Higher scores indicate greater dietary quality.
- e: Stress management subscale of the Health-Promoting Lifestyle Profile Questionnaire (HPLP-II) was scored on a 4-point Likert scale from 0 'never' to 3 'routinely'.
- f: Eating self-efficacy scale (SESES), a 25-item scale from 1 'No difficulty controlling eating' to 7 'Most difficulty controlling eating'.
- g: Revised Symptom Checklist (SCL-90-R); a 5-point scale from 0 'not at all' to 4 'extremely' was used to derive scores for Global Severity Index and Depression subscale.
- h: The Medical Symptoms Checklist is comprised of three subscales: the frequency medical symptoms (9 point scale from 0 'never' to 8 'constantly'), the degree of discomfort (0 'no discomfort' to 10 'extreme discomfort') and the degree of interference in daily activities (0 'no interference' to 10 'extreme interference').

* p<0.05
** p<0.01
*** p<0.001
† Significant between-treatment difference P1 and P2, p<0.05
‡ Significant between-treatment difference P1 and P3, p<0.001
Both P1 and P2 subjects showed reductions in depression at one year ($P<0.0001$ and $P=0.001$ respectively), but only P1 subjects maintained this reduction at two years ($P=0.002$).

Conclusions

- Non-dieting approaches can lead to reductions in depression.
- However, there have been studies (although none presented here) that have found that dieting approaches can also reduce depression.
Experimental Studies of Intuitive Eating

Psychological Effect:
Self-Concept and Self-Esteem
After one year, all participants showed an improvement in mean self-concept scores (P<0.001), but the improvements did not differ significantly between BFC and SMP groups. However, after two years, the mean scores of all participants were unchanged from baseline.

Figure 3. Change in self-concept scores after 1 and 2 years. BFC = better food choices diet method group; SMP = structured meal plan diet method group.
Increases in self-esteem occurred in both the dieters and non-dieters (P<0.001).

There was also an unanticipated increase in self-esteem in the control group (P<0.01).

Conclusions

• Non-diet approaches can lead to improvements in self-esteem and self-concept.
• But, these improvements can also occur in traditional diet approaches.
Conclusions/Implications for Practice

• Research is somewhat mixed.
• Benefits of intuitive eating:
  – Reduces depression
  – Improves self-esteem/self-concept
  – Associated with lower BMI
• IE should not be recommended as a primary method for weight loss in overweight/obese individuals who need to lose weight for medical reasons.
• Recommend as a lifestyle to clients who are interested in weight maintenance or gradual weight loss, and are not looking for a quick fix.
• There are some concerns about IE: possibility of nutritional inadequacy if people eat in a non-restrictive, unregulated way.
• My recommendation: an eating lifestyle based on internal hunger satisfaction; to have moderation, variety, and balance in food choices; and to remove the “good” and “bad” stigmas associated with food.
Thank you!

Questions?
References