The Effects of Mindful Eating Education on Increasing Satiety Signals
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Introduction
Mindful eating is a practice that incorporates focusing on thoughts, emotions, and sensations within the body. The alteration of the satiety signaling from the GI tract has been linked to the development of obesity. Satiety is defined as a state of fullness where there is no longer an intake of food. Mindful eating techniques could help college students identify their hunger and satiety signals and respond to those cues instead of detrimental environmental or psychosocial cues that could lead to over-eating. Currently, there has not been sufficient research examining the impact of mindful eating education on satiety signals. Giving mindful eating education has the possibility to help people recognize their satiety signals and stop eating sooner.

Purpose
To examine the effects of mindful eating education on increasing satiety signals.

Methods
Participants were recruited from Loma Linda University by word of mouth, flyers, and emails. The study consisted of 25 participants (Table 1): 6 males and 19 females. Ages 18-30. 20% followed special diet, 80% did not.

- Procedure:
  - Visit 1:
    - Subjects ate their meal as normal
    - Subjects filled out the satiety questionnaire
  - Visit 2:
    - Subjects ate their meal as normal
  - Visit 3:
    - Subjects answered an up survey, and mindful eating education.

- Instruments: satiety questionnaire, follow-up survey, and mindful eating educational material
- Satiety Questionnaire: questions on demographics, current nutrition habits, and feelings of fullness.
- Follow-up survey: questions on participants being aware of satiety cues, and changes in portion sizes.
- Mindful Eating Education: participants were given tips such as asking yourself if you are truly feeling hungry, noticing reactions to food, savoring food, slowing down to eat meals for at least 20 minutes, and consider the steps it takes to bring food from the farm to your table.

Mindful Eating Tips:
- Take a breath and ask yourself, “Am I truly hungry”, before you reach for food
- Begin practicing mindfulness. Start by eating one meal a day in a slower, more aware manner.
- Focus on eating. Avoid doing other activities while you eat (working, talking on the phone, etc.)
- Seat a timer for 20 minutes and take the whole time to eat the meal.
- Eat silently for 5 minutes. (think about what it took to produce that meal, from the sun and water, to the farmer, to the grocer, to the cook).

Results
- No significant difference was found comparing satiety time during visit 1 and visit 2 (P-value = 0.459) (Table 2)
- There was a significant difference when comparing the meal completion time during visit 1 and visit 2, statistical significance was found (P-value = 0.008) (Table 2)
- A significant association was found between age and response to: What have you learned from this mindful eating study? (P-value = 0.023) (Table 3)
- A significant association was found between gender and response to: Do you prepare your own food? (P-value = 0.031) (Table 3)
- Of the participants, 68% stated they have not changed the rate at which they eat after participating in this study. However, 92% stated they are more aware of satiety and hunger cues after participating in this study.

Conclusion
- Mindful eating can potentially be used as an intervention to increase satiety signals.
- Mindful eating may help people be more aware of satiety and hunger cues.
- Further research is warranted with a larger sample size and longer duration to observe other possible significant outcomes, and to establish appropriate amounts and duration of mindful eating education.

References available upon request.