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Visual Influences on Self-Served Foods

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Visual Influences on Self-Served Foods

Abstract

Objective: With an increasing dinner plate and portion sizes, a better understanding of self-serving food behaviors is needed to help individuals develop and maintain healthy eating habits. The goal of this project is to educate students on the Delboeuf Illusion to increase self-efficacy and minimize over-serving food to oneself.

Method: This project examines four aspects of self-serving behaviors of college students by using pre- and post-test measurements. An understanding of the difference between a serving and a portion, and daily-recommended servings, is evaluated. Knowledge of food serving equivalencies to common, everyday objects is reviewed. The influence of the Delboeuf Illusion is measured. Confidence of dishing up an appropriate serving of food to oneself is also measured.

Results: Anticipated findings will include significant increases of knowledge of food serving equivalencies and the Delboeuf Illusion, and modest increases in food groups and servings.

Conclusion: Providing education on the influence of visual illusions and common-object equivalencies for appropriate serving sizes will help increase self-efficacy regarding self-served foods.

Keywords

portion, visual cues, Delboeuf illusion, serving size

Disciplines

Public Health

Visual Influences on Self-Served Foods

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Intervention

Review the difference between a serving and a portion
Explain the Delboeuf Illusion and color contrast

Measurements

Pre- and Post-test knowledge of servings sizes and food equivalencies
Pre- and Post-test Likert scale, self-reported confidence of self-served food habits

Results

Increased knowledge of serving sizes, from 13.5% to 79.5%
Increased understanding of the visual environment and how it affects self-serving habits, from 43.2% to 64.1%
Increased confidence to “dish up” an appropriate serving of food, from 8.10% to 30.8%
None of the participants had exposure to the Delboeuf Illusion prior to the intervention, although 10.5% of the participants reported taking a college-level nutrition class

Conclusion

While educating on visual illusions increases confidence in serving oneself an appropriate serving of food, basic nutrition fundamentals – such as the difference between a serving and a portion – must also be explained.

With an increasing dinner plate and portion sizes, a better understanding of self-serving food behaviors is needed to help individuals develop and maintain healthy eating habits.

Visual cues, such as the size and color of a plate, influence the amount of food an individual serves oneself.

Low contrast between the color of the food and the color of the plate distort the visual cue and encourage larger portions.



Image: bonappetit.com

The Delboeuf Illusion

Similar amounts of food on two differently sized plates creates the illusion of less food on the larger plate and more food on the smaller plate. High contrast between the food and the edge of the larger plate makes the food appear smaller, which can distort the amount of food served to oneself.

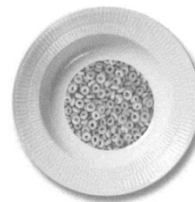


Image: Van Ittersum, K. & Wansink, B. (2012)

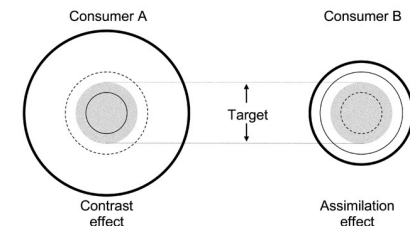


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