

Comparison of Calorie Counting vs. Self Evaluation Methodology for Weight Loss

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INTRODUCTION: Obesity is a major health concern in the United States and one way to control it is through proper nutrition techniques (BRFSS, 2007, 2009). One technique, calorie counting, is used to control energy intake. Mindful eating, another technique, requires individuals to understand and interpret internal cues that control hunger (Timmerman, 2012). Smartphone applications have been created in order to facilitate these two techniques. Although both techniques have been proven efficacious in specific settings, the two techniques when supported by digital applications have never been compared. The purpose of this study was to analyze the effectiveness of digital support in both methodologies for weight loss and compare their effectiveness to each other. **METHODS:** 39 adults (36 female) were recruited, 27 of which completed the post test. Inclusion criteria was BMI of ≥ 25 , between and 18 and 80, free of major disease, not currently pregnant, own and use and smart phone, and not currently following an established weight loss regimen. All participants were randomly assigned into four groups: 1-Mindful Eating, 2-Mindful Eating with the Healthy Bytes digital application, 3- Calorie Control through MyPlate Portions, and 4-Calorie Control with Myfitnesspal digital application. Each individual received education based on the group they were placed in. Participants were asked to implement their assigned weight loss plan for four weeks. Pre and post assessments included weight, height, BMI, blood pressure, waist to hip ratio, fasting glucose levels, fasting total cholesterol, and body composition for every participant. **RESULTS:** A repeated measure ANOVA revealed that only Group 4 had a significant decrease in weight loss ($p=0.032$). One-way ANOVA's were used to compare between group differences for changes in assessed variables. These analyses showed significantly greater decreases in BMI and diastolic BP in Group 4 than the other three groups ($p=0.017$; $p=.009$). Group 3 showed a significant increase in diastolic BP when compared to the other groups ($p=.033$). No other significant differences were detected. **CONCLUSION:** A combination of portion size education and an electronic medium for calorie counting was the superior weight loss technique compared to portion education alone without an app to log calories. While a larger sample size and a longer duration would have been beneficial, there is evidence that continuing to educate the American public on portion sizes and appropriate caloric intake is important for combating the obesity epidemic.

