

The Effects of Intermittent Fasting on Weight Loss and Mood among College Students

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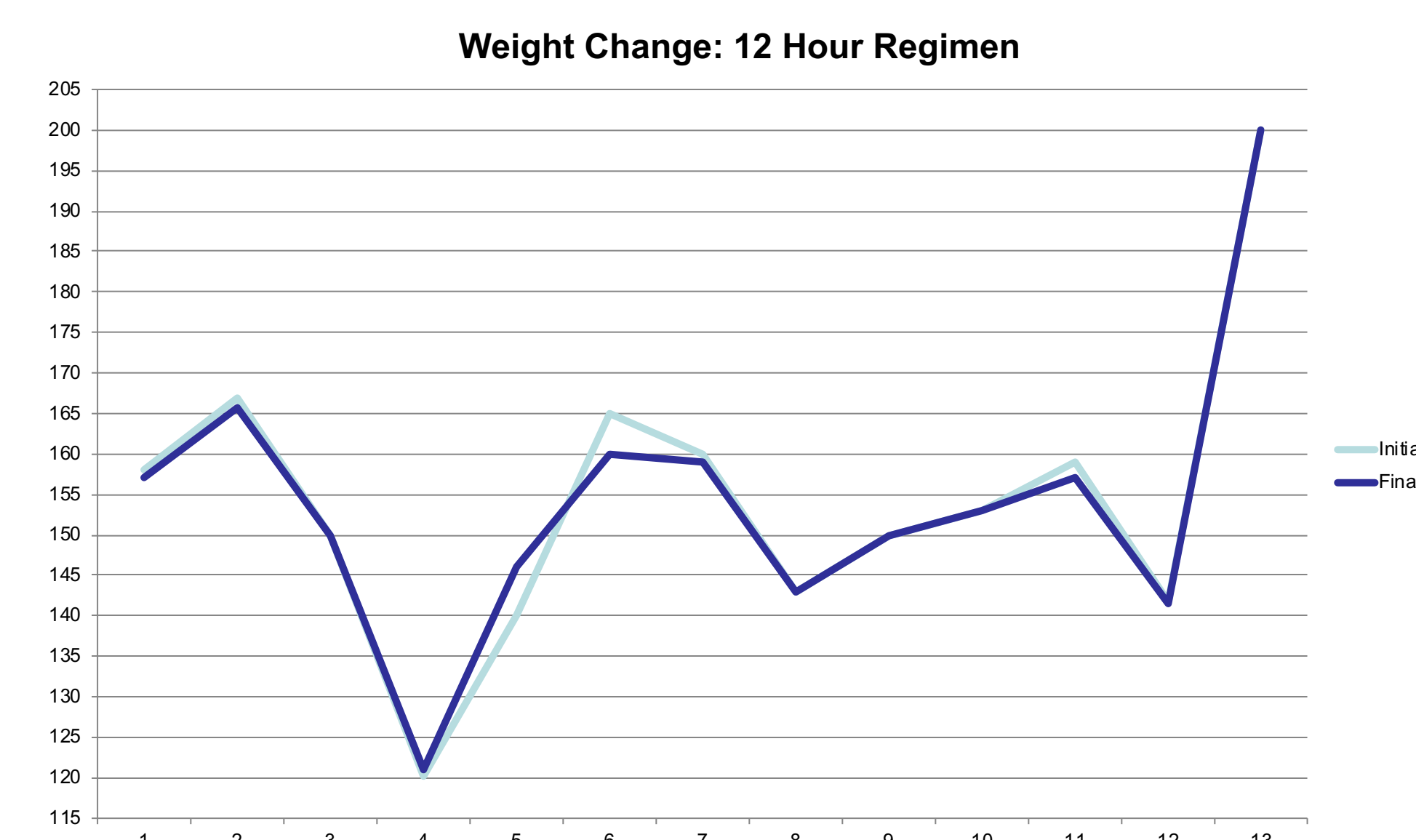
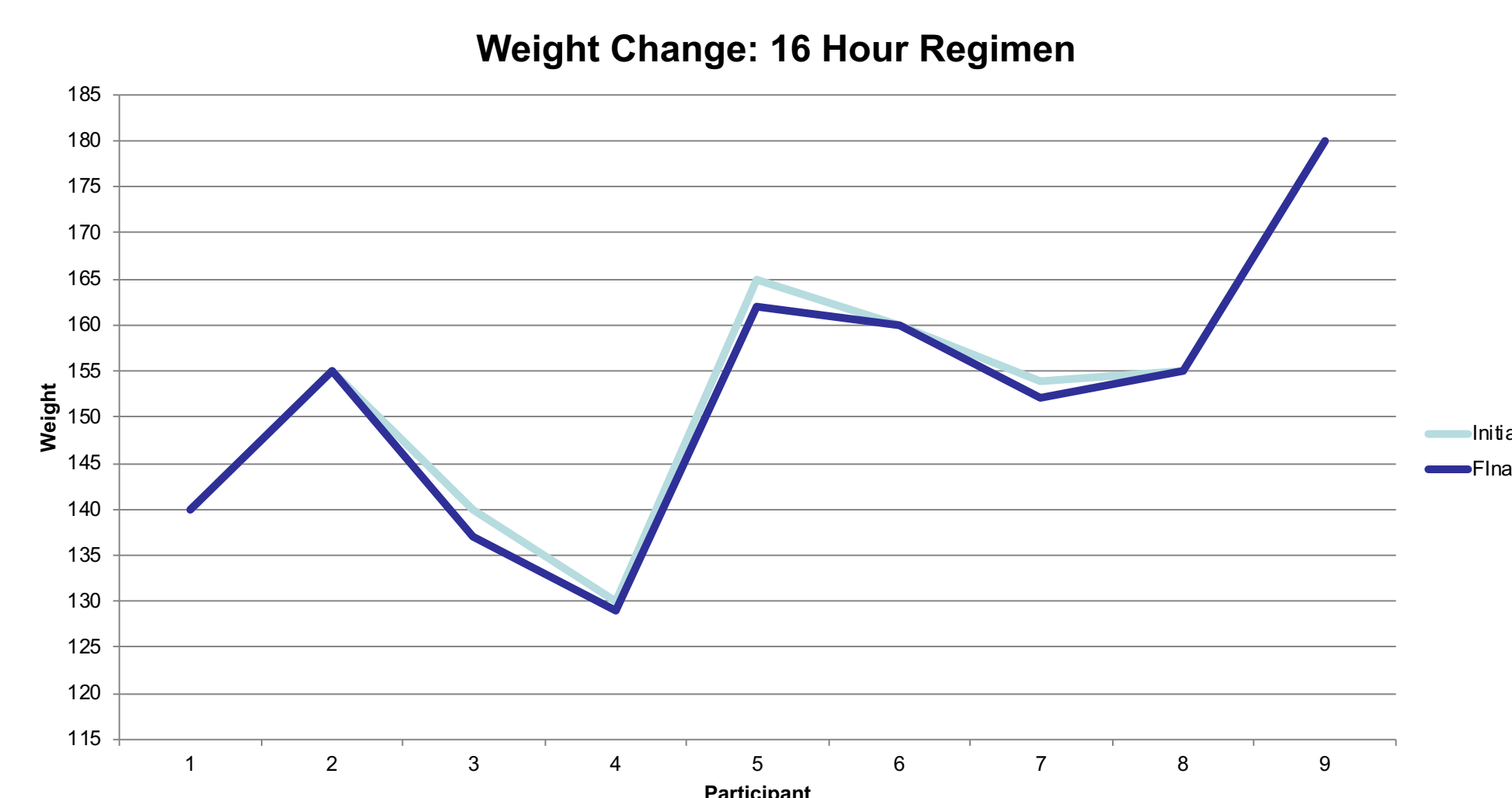
INTRODUCTION

By eating only during a certain time frame, research suggests that the body will go into fat metabolism while eating and avoid muscle catabolism while fasting. Effective weight loss, retention of lean body mass, and a safe rise in ketone levels contribute to intermittent fasting becoming an increasingly popular way to lose weight. The results of a particular study by Appleton came to the conclusion that decreased mood resulted from the distraction of fasting rather than the act itself. By practicing a time-restricted eating regimen, the body can theoretically maintain normal energy levels throughout the day while burning fat during the fasting periods. As intermittent fasting becomes more and more popular, this study aims to examine its effects on a younger population. The hypothesis for this study is that intermittent fasting will have an effect on weight loss and mood in college students.

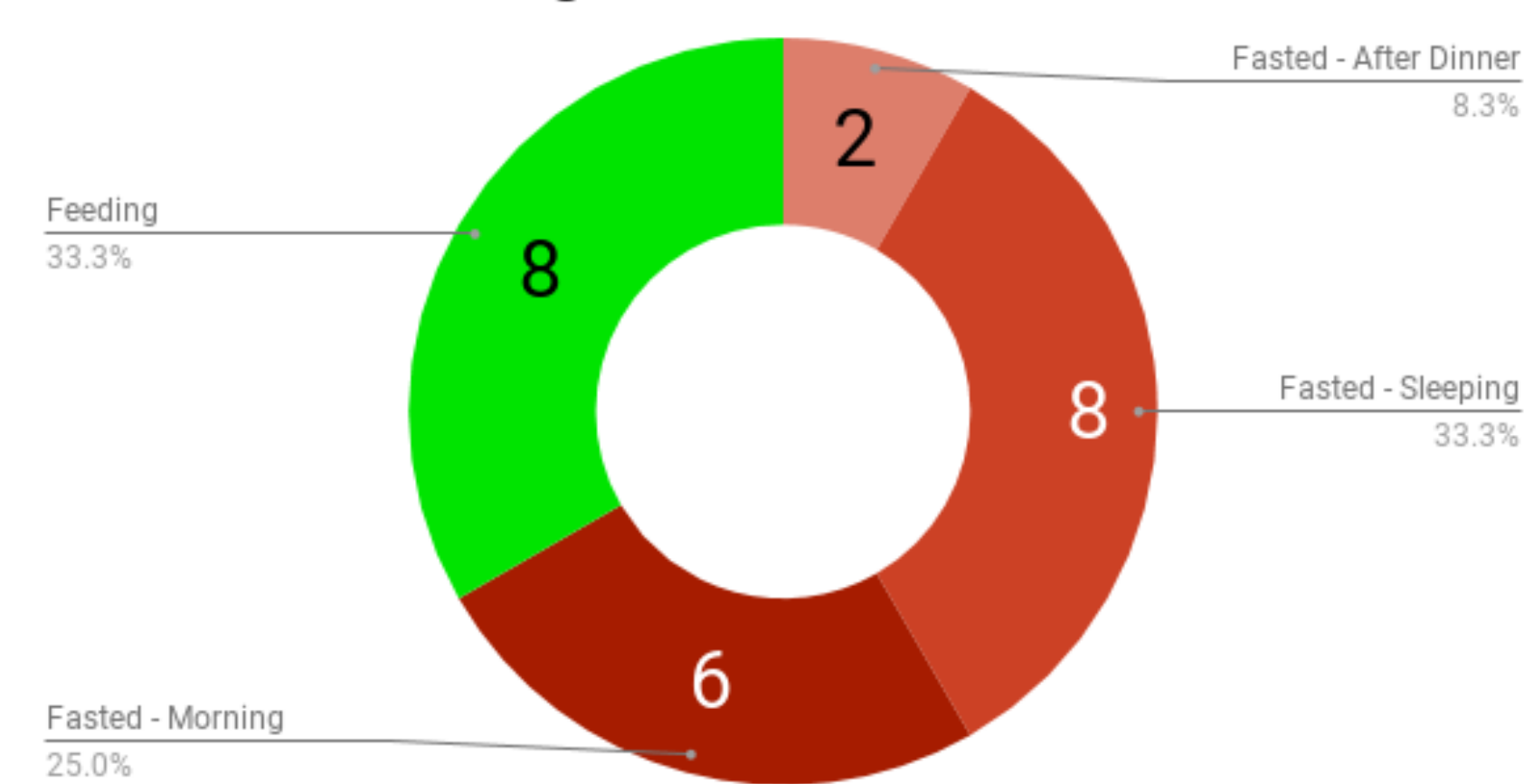
METHODS

This exploratory study looks to examine the impact of fasting on subjects' bodyweight and general mood. The sample included between 20-25 participants of different genders, ages, and fitness levels. Participants will be assigned to one of two conditions; either 12 hours of continuous fasting or 16 hours of continuous fasting. Participants will be informed that they should not change their diet or exercise routine during this study. Participants will dedicate five days to the fasting regimen with two days to their normal eating habits. Every two days, participants will complete an online survey answering questions about weight and mood change. The mood portion of the survey came from Mayer, J. D. & Gaschke, Y. N. (2013). An independent-samples T-tests will be performed between the 12 hour fasting and the 16 hour fasting groups for both mood and weight loss. Data will be summarized by graphing mood change and weight change of each participant in each fasting group by calculating the mean and standard deviation.

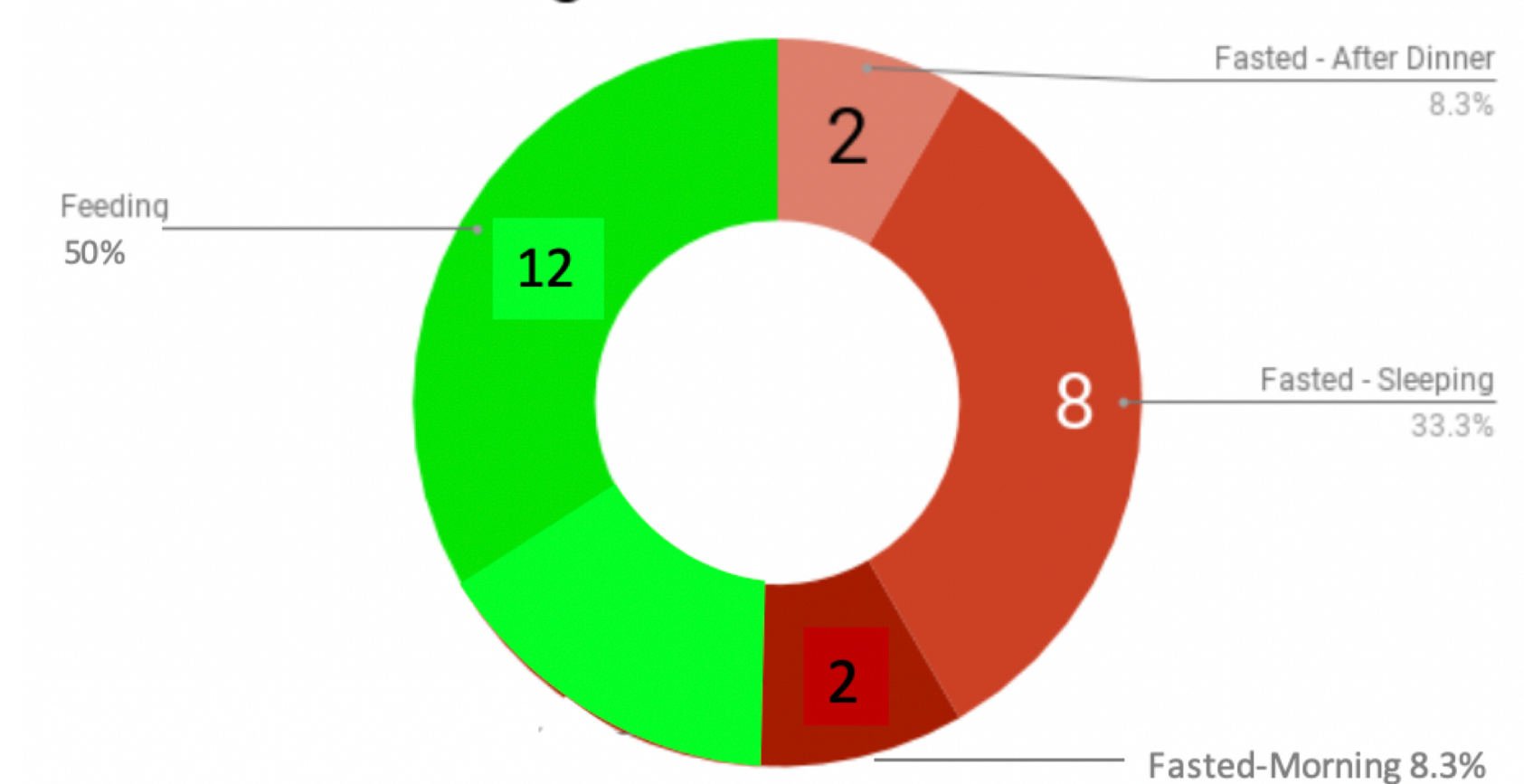
RESULTS



16/8 Fasting Protocol Over 24 Hours

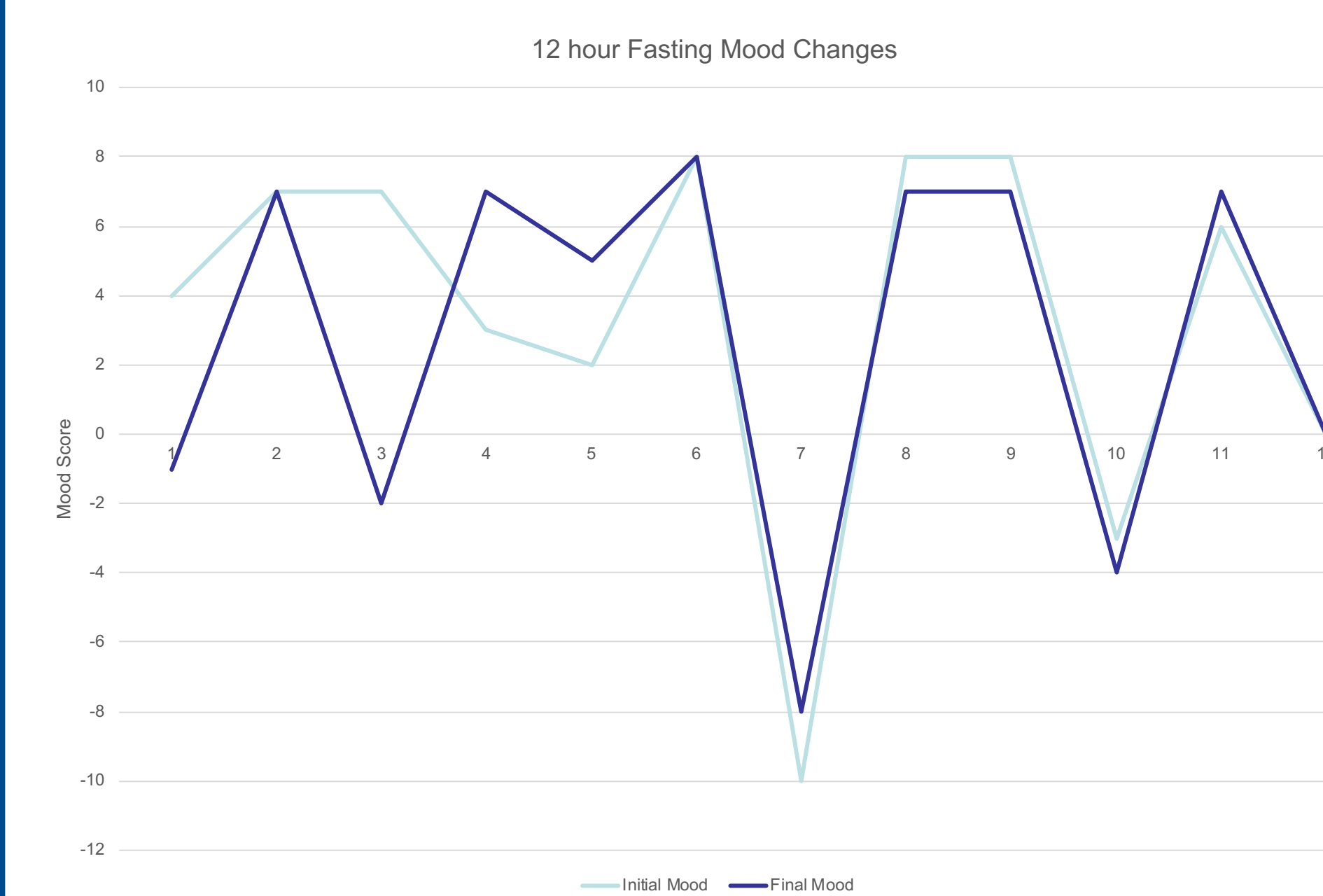
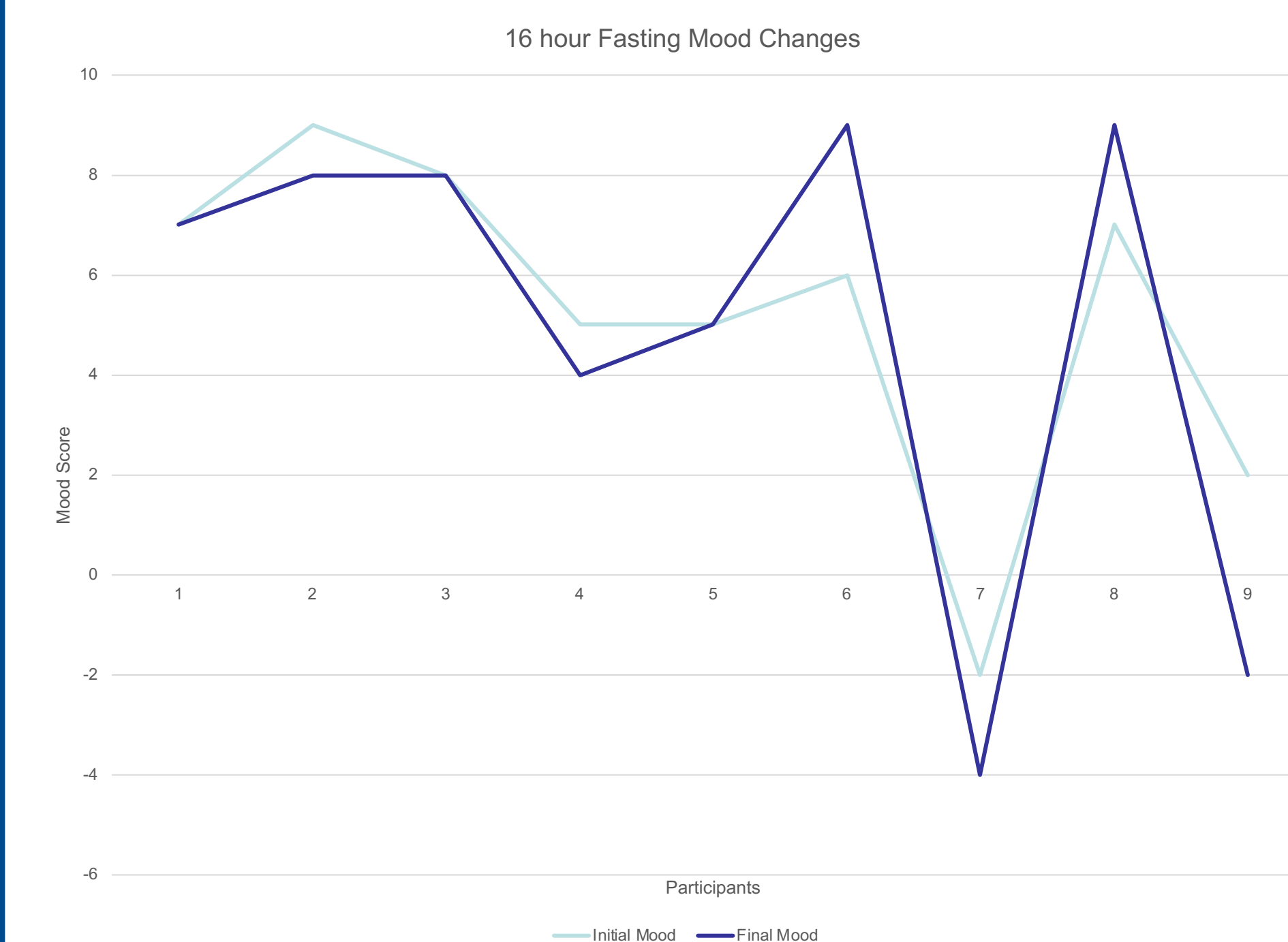


12/12 Fasting Protocol Over 24 Hours



Pie charts retrieved from <http://campusgains.com/college-diet-intermittent-fasting/>

The weight change between the 12 hour group ($M = -0.30$, $SD = 2.49$) and the 16 hour group ($M = -1.00$, $SD = 1.32$) showed no significant difference ($t = -0.764$, $p > .05$). The mood change between the 12 hour group ($M = -0.58$, $SD = 3.50$) and the 16 hour group ($M = -0.33$, $SD = 2.06$) showed no significant difference ($t = 0.190$, $p > .05$).



Group	Weight Change	Mood Change
12 hours	-0.30 lbs	-0.58
16 hours	-1.00 lbs	-0.33
Significance	0.454	0.851

DISCUSSION OF RESULTS

The changes in weight and mood are not significant because the level of significance is greater than 0.05. The impact of intermittent fasting on mood and weight change cannot be determined from this study. Possible reasons for this could be due to the method of the experiment. We instructed subjects to fill out a survey every two days; we had to exclude five participants because of attrition. Mood is subjective to many factors, and may be related to day of the week, time of day, or level of stress from school, all of which can be totally unrelated to intermittent fasting. The study was conducted for one week which is a short amount of time to see any changes in mood or weight. Therefore, we suggest future studies to continue the fasting for two to three weeks to see results.

While we expected to see a slight decrease in weight and relatively no change in mood, these predictions cannot be confirmed or denied by the results. The data analysis confirming these results can be seen in the graphs and data tables. A further study in which more weeks are spent practicing the fasting protocols (16 and 12 hours) would be recommended to gather further data and find the most efficient way to practice intermittent fasting.

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