Stats Project

1. Two-way table

Two-way contingency table for Weight IAT dataset

	Strong preference for fat	Moderate preference for fat	Slight preference for fat	Likes thin and fat equally	Slight preference for thin	Moderate preference for thin	Strong preference for thin	Total
Male	0	4	2	67	46	47	18	184
Female	3	8	22	226	128	66	13	466
Total	3	12	24	293	174	113	31	650

Rows: Sample(Birth-Gender); Columns: Sample(Prefers)

2. Questions for Weight IAT dataset

a. Find the percentage of Weight IAT participants who were born female.

$$\frac{466}{650} = 71.7\%$$

71.7% of the participants in the sample were born female.

b. Find the percentage of Weight IAT participants who indicated that they moderately or strongly prefer thin people.

$$\frac{113 + 31}{650} = \frac{144}{650} = 22.1\%$$

22.1% of the participants in the sample indicated a moderate preference or strong preference for thin people.

c. Find the percentage of Weight IAT participants who were born males who moderately or strongly prefer thin people.

$$\frac{47 + 18}{184} = \frac{65}{184} = 35.3\%$$

35.3% of the male participants in the sample indicated a moderate preference or strong preference for thin people.

d. Find the percentage of Weight IAT participants who moderately prefer fat people who were born female?

$$\frac{8}{12} = 66.7\%$$

66.7% of the participants who indicated a moderate preference for thin people in the sample were born female.

3. Weight IAT: Are born-male participants more likely to indicate that they strongly prefer thin people?

Among males, $\frac{18}{184} = 9.8\%$ of the sample strongly prefers thin people. Whereas for women, $\frac{13}{466} = 2.8\%$ in the sample strongly prefers thin people. This means there is an increase of 7% (nominal) in the percentage of men who strongly prefer thin people compared to the percentage of women who strongly prefer thin people. Alternatively, the percentage of males who strongly prefer thin people is 3.5 times greater to the percentage of females who strongly prefer thin people.

4. Continuous random variable in Weight IAT

Height (reported height to the nearest inch) is a continuous variable. Although the variable is rounded, one could expect to potentially measure any value of height between two previously observed values. This makes the variable continuous and not discrete.

5. Discrete random variable in Weight IAT

Birth-gender is a discrete variable in this dataset because it takes on a finite number of values (two possible values in the dataset, male or female).