The Tooth Of The Matter

SODA CONSUMPTION VS. # OF CAVITIES
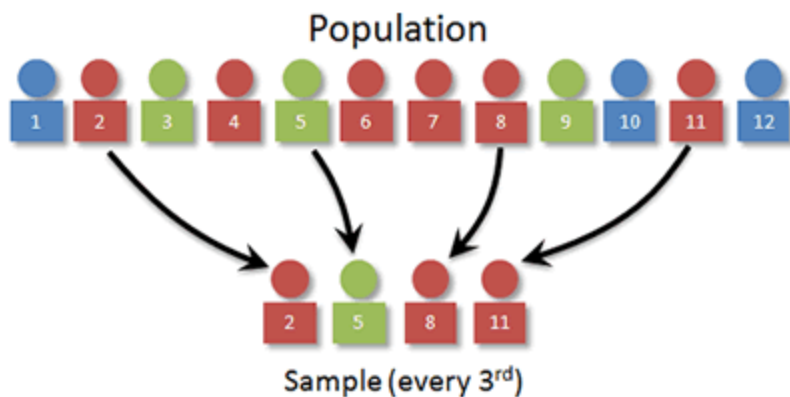
Does this.....Lead to this?

Gathering the data.....

We obtained **35 people** for the random sample. We used a **systemic sampling process**. The goal would be for each of us to collect seven responses, from contacts in the mall/work.

Population

Sample (every 3rd)

We started at the **7ᵗʰ contact**, and sampled **every 9th contact** until our desired number of responses had been collected.

The Data

Soda consumption

&

Cavities Reported

Our first quantitative variable is daily soda consumption.

The unit of measurement for this variable is ounces.

Values for this first quantitative variable are 12oz, 24oz, and 36oz 48 oz.
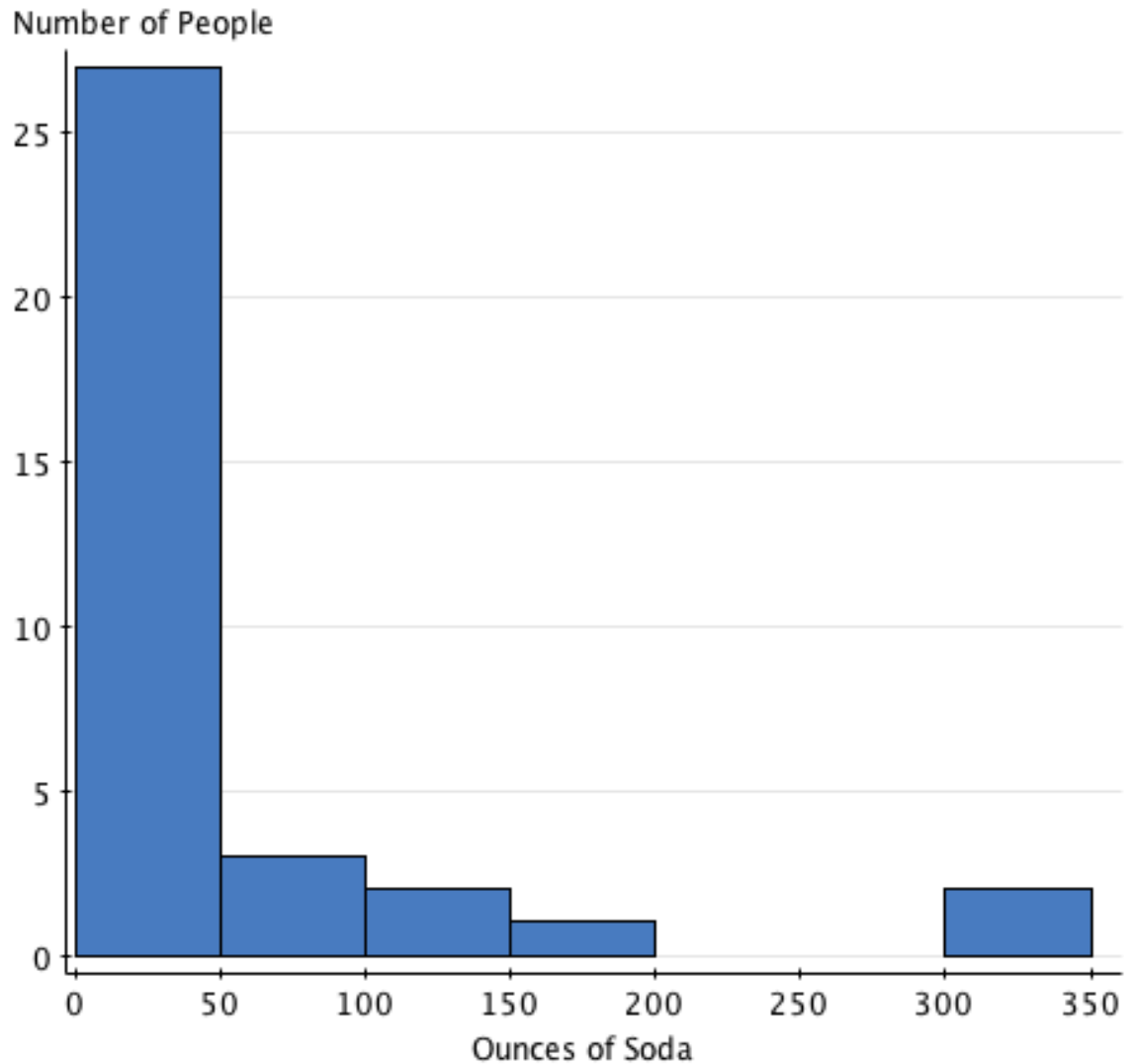
Amount of Soda

- Mean: 46.4
- Standard Deviation: 82.5246
- Five number summary:
- Min: 0
- Q1: 0
- Med: 12
- Q3: 48
- Max: 336
- Range: 336
- Mode: 0
- Outliers: 336

The United States ranks first among countries for soft drink consumption with a per capita consumption of approximately 15 ounces a day.
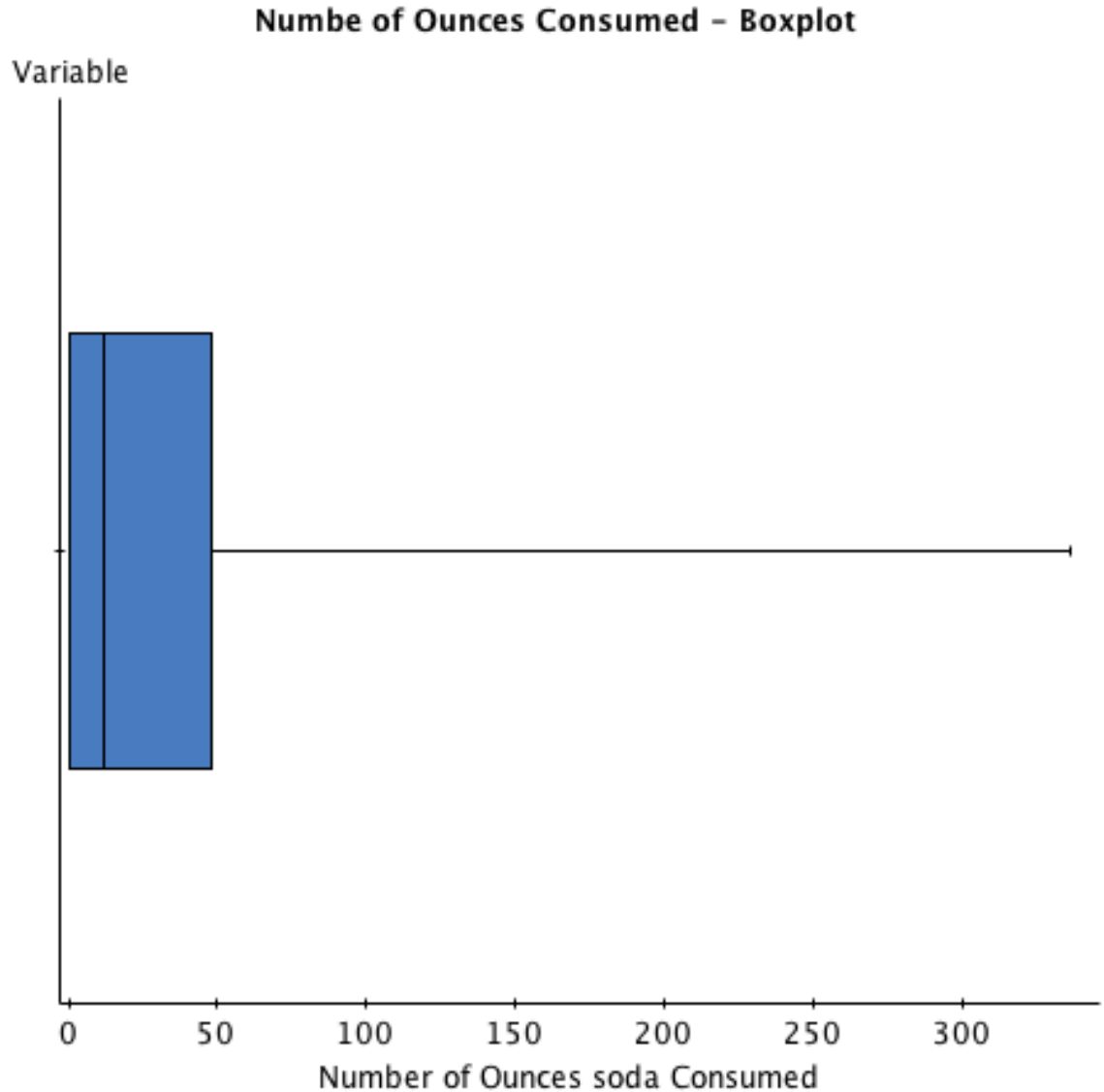
Ounces of Soda Consumed vs. Number of People

Sugar and acid in soft drinks so easily dissolves tooth enamel..

Enamel breakdown leads to cavities.

Numbe of Ounces Consumed – Boxplot

Variable

Number of Ounces soda Consumed

The second quantitative variable is how many cavities a person has had.

The unit of measurement for this variable is one unit for every cavity a person has had.

Values for this second quantitative variable are 1 cavity, 2 cavities and 3 cavities 4 cavities
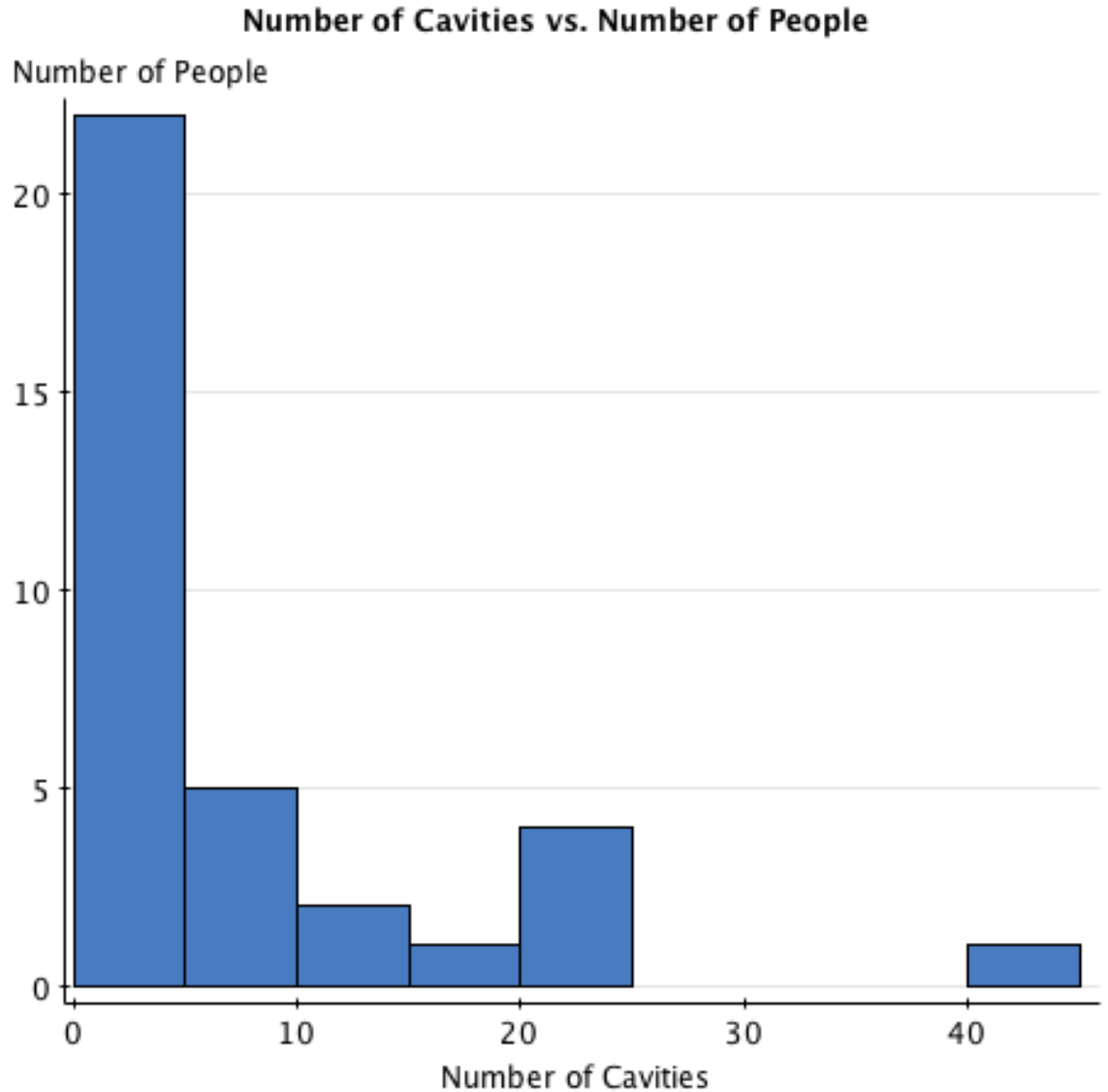
Number of Cavities

- Mean: 6.9
- Standard Deviation: 8.8
- 5 Number Summary-
- Min: 0
- Q1: 1
- Med: 3
- Q3: 9
- Max: 40
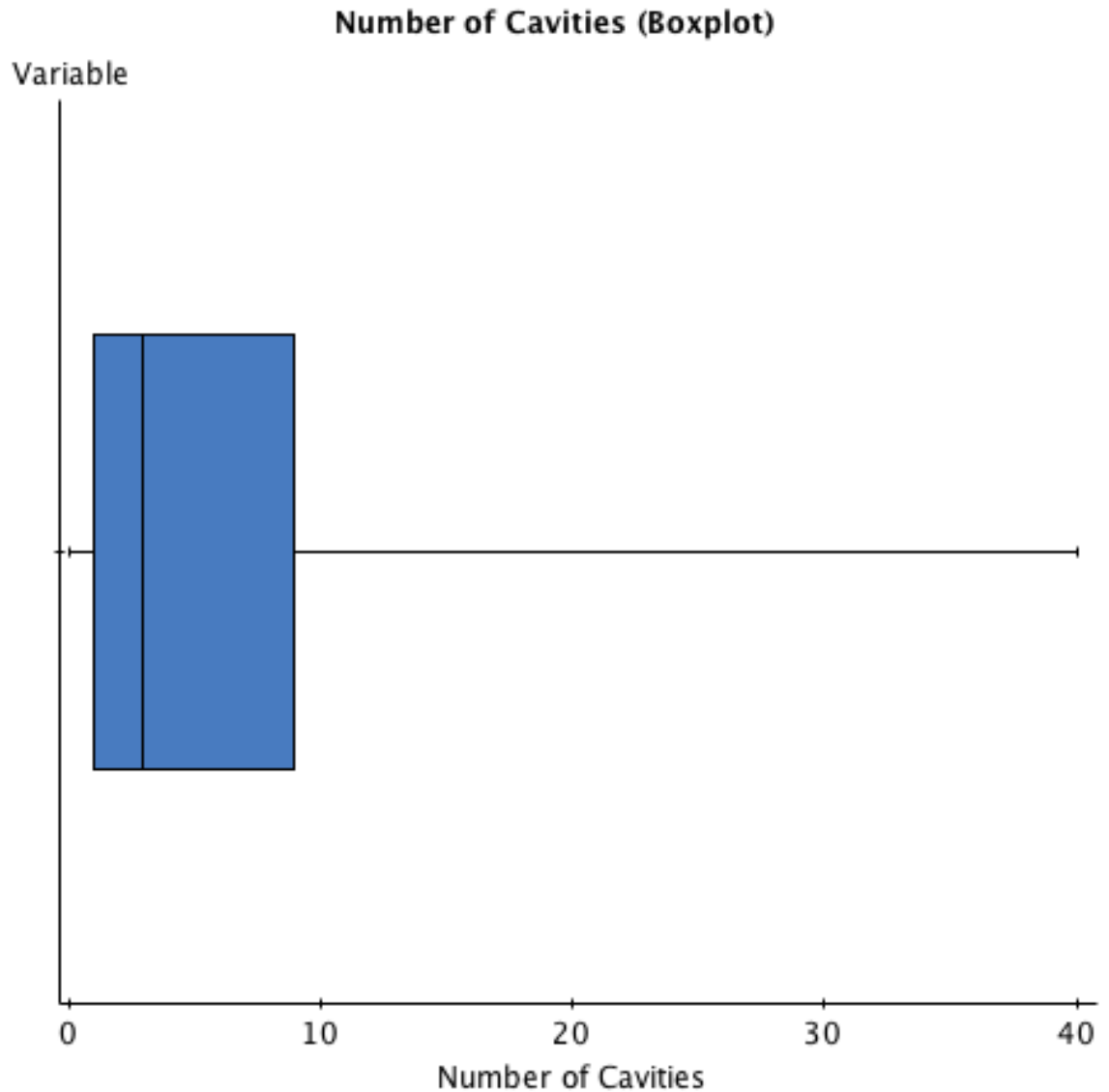- Range: 40
- Mode: 0
- Outliers: 24, 40

"Sip all day.

Get decay."

-Minnesota Dental Association

Number of Cavities vs. Number of People

Drinking soda pop regularly increases your chances of tooth decay and staining.

So....?

So what does the data say?

Is there a relationship?

Our R-value came to **0.2982** which was less than Our p value of **p <.05**.

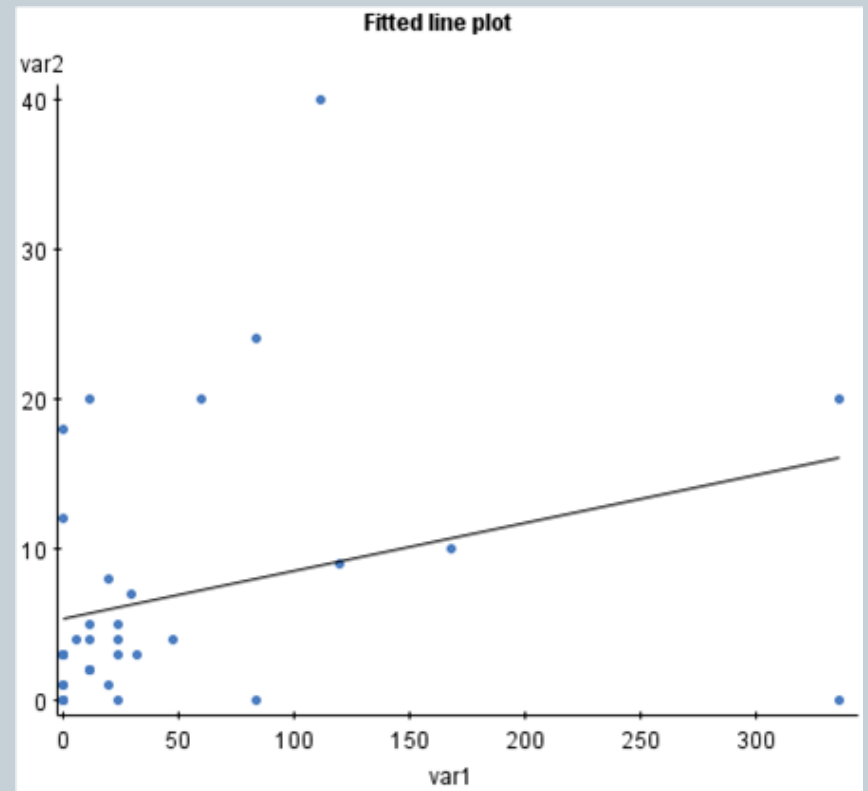This showed us that **there is not a significant relationship** between soda consumption and cavities.

However…

As the soda consumption increased, the number of cavities increased also with those individuals….so it may not be an immediate cause, but does have some impact.

Fitted line plot

var2

var1

Dental Tips

Substitute different drinks

Rinse with water

Use fluoride and mouth rinse

Use a straw to sip your soda

Be Soda Smart!

So enjoy a soda!

But remember, your teeth are counting on you.

Thank You

Special thanks to…

- Heather Andresen- Variable 1 slide/ information, regression line graph

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- Jessica Heckman: Variable 2 slide/ information

- Chris Harris: graphs (box plots, histograms)

- Ryan Hermansen: composition of slide show, pictures, additional medical data