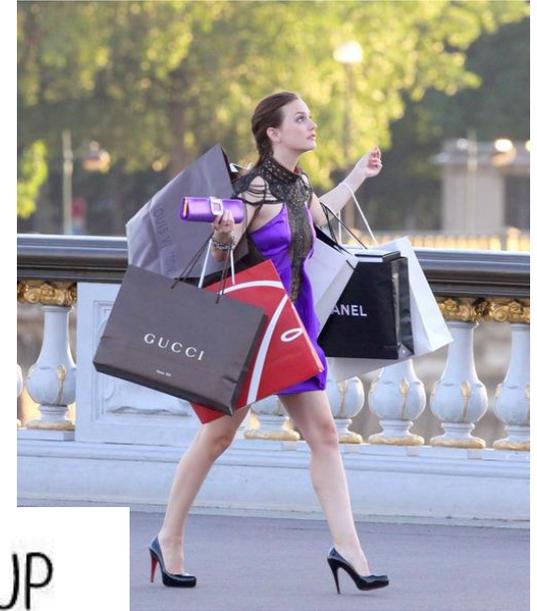


# Do Senior girls or boys shop more?



I COULD GIVE UP  
**SHOPPING**  
BUT I'M NOT A QUITTER

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# Summary of Research

- The first shopping mall was the Country Club Plaza, founded by the J.C. Nichols Company and opened near Kansas City, Mo., in 1922.
- A study done by the Boston Consulting Group reported that 73% of US household spending is “controlled” by women.
- “Men Buy, Women Shop”

# Continued

- “Men are more likely to respond to more utilitarian aspects of the experience — such as the availability of parking, whether the item they came for is in stock, and the length of the checkout line.”
- Women are more likely to experience problems while shopping than men — 53% vs. 48%, with women over age 40 reporting more problems than men in the same age group.

# Continued

- For men, an associate's interest in helping them find an item is most important, followed by the sales associate's effort in getting them through checkout quickly.
- For women, store loyalty is related to sales associates' familiarity with the products in the store and an ability to determine what products best suit the customer.

# Summary of Data

- SRS
- AP Economics class, Video Production, Random kids walking around campus
- Senior girls v Senior boys
- Survey

# Our Survey

1. Do you prefer shopping online or in store?

A. Online

B. In store

2. Do you go shopping because you enjoy it? Or because you have to?

A. Enjoy it

B. Have to

3. How much money have you spent on shopping in the last month?

4. How many times have you gone shopping in the last month?

5. If the following were the only 10 stores, which **ONE** would you shop at?

Macy's, Urban Outfitters, Nike, Converse, Hot Topic, American Eagle, Tillys,  
Burlington Coat Factory, Target, Ross Dress For Less

# Results

## 2-Prop Z-Test

$$z = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\hat{p}_c(1-\hat{p}_c)(1/n_1 + 1/n_2)}}$$

$$\hat{p}_c = \frac{x_1 + x_2}{n_1 + n_2}$$

# Continued

$$H_0: p_1 = p_2$$

$$H_a: p_1 > p_2$$

$\hat{p}_1$  = proportion of girls who enjoy going shopping

$\hat{p}_2$  = proportion of boys who enjoy going shopping

$$\hat{p}_1 = \frac{19}{25} = .76$$

$$\hat{p}_2 = \frac{10}{25} = .40$$

$$z = \frac{.76 - .40}{\sqrt{.58(.42)(1/25 + 1/25)}} = 2.58$$

$$p = .005$$

# Continued

- Reject null hypothesis at  $\alpha = .05$  and conclude that the proportion of girls who enjoy going shopping is greater than that of the boys.

# Continued

- Test Of Association

- 

Gen der	M	UO	N	C	HT	AE	TI	B	TA	R	Tot al
B	5	4	7	0	0	2	5	0	6	2	25
G	5	4	4	1	0	4	0	1	4	2	25
Tota l	10	8	4	1	0	6	5	1	4	4	50

# Continued

$$\begin{array}{cccccc} \frac{25(10)}{50} + \frac{25(8)}{50} + \frac{25(11)}{50} + \frac{25(1)}{50} + \frac{25(0)}{50} + \frac{25(6)}{50} + \\ \frac{25(5)}{50} + \frac{25(1)}{50} + \frac{25(4)}{50} + \frac{25(4)}{50} & = & \end{array}$$

$$5 + 4 + 5.5 + .5 + 0 + 3 + 2.5 + .5 + 2 + 2$$

# Continued

- SRS - Sample is stratified
  - None of the expected counts are 0 - X
  - Hot Topic yielded 0 for an expected count which made the test impossible
  - No more than 20% of the expected counts are less than 5 - X
  - 70% of the expected counts are less than 5.