

BRIGHTSIDE PRODUCE

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“Uniting Communities, Making a Difference.” BrightSide Produce, www.brightsideproduce.org/.

1. Organization Background, History, and current operations

BrightSide strengthens communities by bringing people together, while working to get rid of food deserts. A food desert is an urban area in which it is difficult to buy affordable or good-quality fresh food. BrightSide was founded in 2014 in Minneapolis. In 2017, a second organization was opened in San Diego.

Food insecurity impacts about 16% of the population of San Diego. 494,439 people in San Diego County are food insecure. That’s 330,302 adults and 164,137 children. The organization is fully self-sufficient, selling their products to local community stores and groups. There are currently two major Co-Founders here in San Diego: Dr. Iana A. Castro from San Diego State University, working as a Faculty Director, and Rafael Castro as Operations Director. All past members have engaged in volunteer work and student involvement.

2. Problem Statement - What is the organization fighting to alleviate

San Diego has a very prevalent problem with food insecurity facing certain communities. The BrightSide website shows data of store availability, restaurant availability, food assistance, state food insecurity, food prices and taxes, health and physical activity, local foods, and socioeconomic characteristics for San Diego County. This data shows which states have better access to fresh food, the restaurant availability, local food, and food assistance, you can then compare that data to food prices and taxes, and health and physical activity. If the data is compared, you could see a correlation between each variable, which shows the cause to food insecurity. The organization claims to strive to eliminate food deserts in urban areas by bringing communities together through people and produce.

3. Participant and Community Description - Who does the organization serve?

The organization caters to low-income families and people who do not have easy access to food. Brightside Currently has seven partnered stores in the National City area providing a large demographic of mainly Mexican, Filipino and African American residents.

4. Programming - What is order to alleviate the problems listed in #2

Brightside has created a program that is called Buyers Club. The program was created with the goal of creating a convenient, and on campus option for fresh produce. The brightside organization has brought this program to the SDSU campus. SDSU students can preorder the produce package that is desired, and pick up their packages the following week on Thursdays. This program helps university students gain an easy access to fresh and healthy food. Brightside has created this program to bring together teens and university students to decrease food insecurity in the community.

5. Need for your work - Provide a description of the importance of your work!

This work is important because it helps people in our communities who don't have easy access to food by eliminating food deserts. Brightside's work is valuable because the organization allows university students who typically are not able to gain access to fresh produce whether it is due to money, transportation, or a busy schedule, Brightside is allowing University students to attain the access to fresh produce. The work that we will be doing with the program is important because we will be able to physically go to SDSU and volunteer our time to help the students get their produce.

1. List why the data were collected (note: agency or organization typically lists a reason for data collection on the website).

The data were collected to create statistics about food environment, in order to create further research opportunities about food choices and diet quality. Also, to provide an overview of a certain community's access to healthy food.

2. List variables included in the dataset.

There are demographic variables, including:

- Access and Proximity to Grocery Store
 - Number of people in a county living more than 1 mile from a supermarket, when living in a urban environment or people living more than 10 miles from a supermarket or large grocery store if living in a rural area.
- Store Availability
- Restaurant Availability and Expenditures
- Food Assistance
 - The average SNAP (Supplemental Nutrition Assistance Program) redemption amount per SNAP-authorized store in a county.
- State Food Insecurity
- Food Prices and Taxes
- Local Foods
- Health and Physical Activity
 - Physical Activity including, percentage of high schoolers physically active, Recreation and fitness facilities, Percentage change of recreation and fitness facilities, Recreation and fitness facilities per 1,000 population, percentage change of Recreation and fitness facilities per 1,000 population,
 - Health including, adult obesity rate and adult diabetes rate
- Socioeconomic Characteristics
 - Race: White, Black, Hispanic, Asian, American Indian or Native Alaskan, Hawaiian.
 - Age: 65 years or older, Under 18
 - Median household income
 - Poverty Rate, child poverty rate, persistent country child poverty rate
 - Education
 - Occupation

3. List how data were collected and during what year.

This data were collected from various groups that include:

- The Center for Disease Control and Prevention
- U.S Census Bureau
- USDA Agricultural Marketing Services
- USDA Food and Nutrition Service

- National Farm-To-School Network
- Bridging the Gap Program

This data were released on: February 2014, November 2012, June 2012, January 2011, and February 2010

4. Provide the summary statistics for 5 variables in your dataset. Interpret these figures in context of the variable.

	Restaurant Availability: Fast food restaurants per 1,000 population	Socioeconomic: White percentage	Health and Physical Activity: Adults with Diabetes	Food Prices and Taxes: National average soda price	Local Foods: Farms with direct sale (percentage)
Max	6.968641115	99.16318	19.8	1.241477	100
Min	0	2.667918	3.2	0.9009972	0
Mean/Median	0.5919636853	78.29469769	10.33158062	0.9917759573	6.457795432
Q1	0.4267419675	66.917367	8.9	0.9502338	2.8
Q2		85.76345	11.7	1.038527	8.1

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Restaurant Availability: This data shows that per 1,000 population that there is a maximum of 99.16 fast food restaurants available for the county and a minimum of 2.66 fast food restaurants in 2007. There is an average of 78 fast food restaurants per county.

Socioeconomics: This data shows that there is a maximum 99.1% white population per county and a minimum of 2.66% white population per county. The average percentage of white population per county is 10.33%.

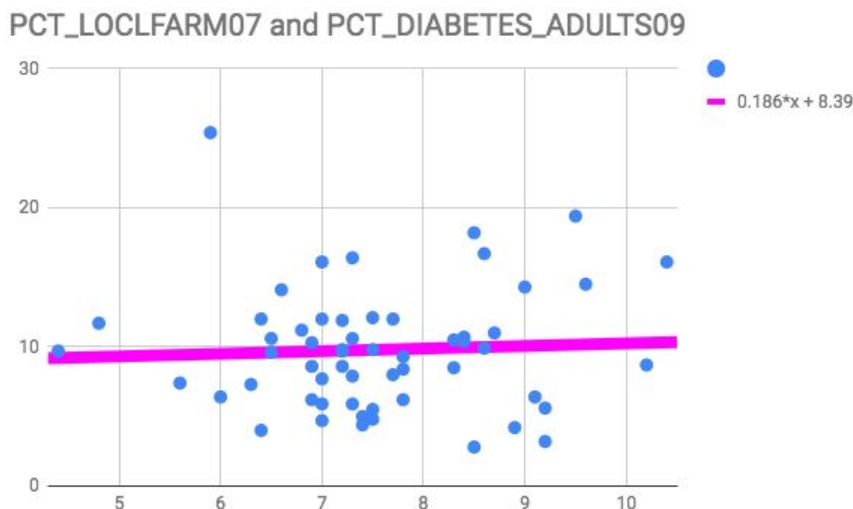
Health and Physical Activity: The data shows that per county there is a maximum of 19 adults with diabetes and a minimum of 3. The average per county is 10 adults with diabetes.

Food Prices and Taxes: The data shows that the maximum national average soda price is 1.24, and the minimum is 0.90. The average price per county is 0.99.

Local Foods: This data shows that per county the maximum direct sale percentage is 100% and the minimum is 0%. The average per county is 6.45%

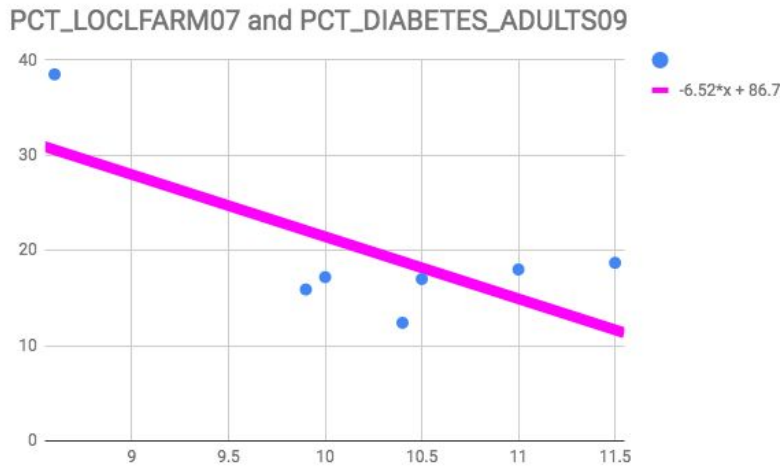
5. Represent data on two of the variables on a scatter plot, and describe how the variables are related.

CA:



This graph shows the relationship between the local farms and the adult population with diabetes in New Jersey

NJ:



This graph shows the relationship between the local farms and the adult population with diabetes in California.

6. Fit a function to the data graphed in # 4. Interpret the slope and y-intercept in the context of the data.

California:

y-intercept: 9

Slope: 0.186

When the number of adults with diabetes rises, the percentage of local farms rises slightly by 0.186. When the number of local farms is 9, the number of adults with diabetes is 0.

New Jersey:

y-Intercept: 32

Slope: -6.52

When the number of adults with diabetes rises, the percentage of local farms decreases by 6.52. When the number of local farms is 32, then there will be 0 adults with Diabetes.

7. Calculate the correlation coefficient of the data graphed in # 4.

New Jersey Correlation Coefficient : -0.5068856554

California Correlation Coefficient: -0.4911902334

8. Interpret this value in the context of the data with a description of the difference between correlation and causation.

This means that when there is an increase in the X variable, then there is a decrease in the Y variable.

New Jersey: When the number of adults with diabetes increases by 1 then the number of local farms will decrease by -0.5068856554

California: When the number of adults with diabetes increases by 1 then the number of local farms will decrease by -0.4911902334

9. Is there outside research for the evidence provided in # 4-7?

We got information from San Diego Hunger Coalition, as well as data provided from the Food Environment Atlas.

<https://www.sandiegohungercoalition.org/sdhc-research-reports/>

10. Shuffle the data and randomly select 30 observations (rows of data) to include in a sample. Then, calculate the summary statistics for this random sample, including the standard deviation.

Min: 1,113.00

Max: 72,069.00

Median: 25,578.00

Q1: 17618.5

Q3: 44792.5

Mean: 28,979.33

Standard Deviation: 17114

11. Use data from this sample to estimate the population mean or proportion by developing a margin of error around the sample mean or proportion. Estimate the population mean or proportion with 90%, 95%, and 99% confidence.

90% Z= 1.645

95% Z= 1.96

99% Z= 2.58

28,979.33+/- (Z*s/srt(n))

90= 28,979 +/- (1.645*/17114/Srt(30)) = (23839.07, 34118.92)

95= 28,979 +/- (1.96*/17114/Srt(30)) = (22854.83, 35103.166)

99= 28,979 +/- (2.58*/17114/Srt(30)) = (20917.6, 37040.4)

12. Use data from this sample to compare two treatment groups (note: in your dataset, this is how observations are grouped - whether by gender, state, ethnicity, or other)

The two treatment groups that we used were California and New Jersey. Our randomized data shows that there are differences between the two groups.

We have rejected our Null Hypothesis of No Difference in the Percent of Individuals with Low Access because we realized there was no significant difference between the averages.

	CA	NJ
Mean	19.80492376	31.09120485
Standard Deviation	9.048761638	11.81593905
Number	15	15
Difference between Averages	-11.2862811	
SE	3.842711741	
T-Score	-2.9370616	
T-Critical	2.042	

13. Use your random sample to decide if differences between parameters are statistically significant

We decided with our random sample we conclude that there are not major differences between the two states.