

# Does Sugar Improve Happiness?

Learn / Courses / Introduction to Statistics in Python

Exercise

### Does sugar improve happiness?

A new column has been added to `world_happiness` called `grams_sugar_per_day`, which contains the average amount of sugar eaten per person per day in each country. In this exercise, you'll examine the effect of a country's average sugar consumption on its happiness score.

`pandas` as `pd`, `matplotlib.pyplot` as `plt`, and `seaborn` as `sns` are imported, and `world_happiness` is loaded.

Instructions 1/2 50 XP 1 - 2

- Create a `seaborn` scatterplot showing the relationship between `grams_sugar_per_day` (on the x-axis) and `happiness_score` (on the y-axis).
- Calculate the correlation between `grams_sugar_per_day` and `happiness_score`.

Take Hint (-15 XP)

script.py

```
1 # Scatterplot of grams_sugar_per_day and happiness_score
2 ____
3 plt.show()
4
5 # Correlation between grams_sugar_per_day and happiness_score
6 cor = ____
7 print(cor)
```

Run Code Submit Answer

IPython Shell

Slides

In [1]:

## Question:

A new column has been added to `world_happiness` called `grams_sugar_per_day`, which contains the average amount of sugar eaten per person per day in each country. In this exercise, examine the effect of a country's average sugar consumption on its happiness score:

1. Create a scatterplot showing the relationship between `grams_sugar_per_day` (on the x-axis) and `happiness_score` (on the y-axis).

2. Calculate the correlation between `grams\_sugar\_per\_day` and `happiness\_score`.

### Explanation of the Question:

This task involves investigating whether there is an association between sugar consumption and happiness levels across countries. A scatterplot is used to visualize the relationship, and the correlation coefficient quantifies the strength of the linear association.

### Answer:

```
# Import necessary libraries
import seaborn as sns
import matplotlib.pyplot as plt

# Scatterplot of grams_sugar_per_day and happiness_score
sns.scatterplot(x='grams_sugar_per_day', y='happiness_score',
data=world_happiness)
plt.show()

# Correlation between grams_sugar_per_day and happiness_score
cor =
world_happiness['grams_sugar_per_day'].corr(world_happiness['happiness_s
core'])
print(cor)
```

### Explanation of the Answer:

The scatterplot is created using seaborn's `scatterplot` function, with `grams\_sugar\_per\_day` on the x-axis and `happiness\_score` on the y-axis. The `corr()` function computes the Pearson correlation coefficient, providing a numerical measure of the strength and direction of the linear relationship between the two variables.