However, today we set aside our differences to focus on solving and understanding a greater complexity when it comes one the alcoholic beverage -its healthiness.

…. when it comes to wine – its healthiness

While we rely on one of our five senses, taste, to largely determine our liking for wine, we look to explore on a more granular level the chemical makeup of wine and which one essentially is deemed the healthier option for people.

(“for people” – redundant)

We will investigate a number of physicochemical variables to determine how largely red and white wines differ. For our study, we will be utilizing data focusing on the Portuguese "Vinho Verde" wine, one of the most famous wine varieties of Portugal. Through our data exploration and analysis, we seek to determine which wine is the healthier option for consumption.

(rearranged the paragraph)

In our analysis, we utilize two datasets that of the red and white Portuguese "Vinho Verde" wine brand to determine if the chemical components levels correlate with our hypothesis of the healthier wine. In both datasets, each focus on the same variables, which are part of our merged dataset.

(… with our hypothesis -- what is the hypothesis??)

Both datasets focus on the same variables

Before diving into our investigation and research questions, let’s take a step back to further understand a few of the explanatory variables are essential in the chemistry of wine and its balance crucial to make to the wine.

(instead of explanatory, exploratory variables that are essential in the wine making process)

The presence of sulfates on labels can sometimes worry consumers, its pros in wine are crucial to the consumption and longevity of the wine stored in the bottle itself.

(The presence of sulfates on labels can sometimes worry consumers. However, its pros in wine are crucial to the longevity of the wine stored in the bottle itself. )

Sulfates help to prevent wine from browning and minimize oxidation in wine and maintain its freshness.

(Sulfates help prevent the wine from browning, a process that can alter the wine’s color and flavor. Also, they minimize its oxidation and maintain its freshness.)

Other effects ?? on the winemaking process include preventing the growth of unwanted microorganisms, promoting the growth of yeast for better fermentation, and improving the release of desirable compounds from grapes. From a health standpoint, that are a few risks associated that individuals can develop with consumption. Some side effects that can be presented include:

(In addition, during the winemaking process, sulfates prevent the growth of unwanted microorganisms, promote the growth of yeast for better fermentation, and improve the release of desirable compounds from grapes.

From a health standpoint, there are a few risks associated with sulfate consumption that one can develop. Typical side effects that can be presented include:

Acidity:

Wine acidity greatly affects its flavor and aroma in several ways. Wines that present high acidity have a sharper taste while also affecting how the consumption affects how it will sit in an individual’s stomach. Fixed and volatile acidity tells us the concentration of acids present in wine. pH levels inform us of the intensity of acids present.

Wine acidity greatly affects its flavor and aroma in several ways. Wines that present high acidity have a sharper taste. Acidity can also affect how well wine sits in one’s stomach, with higher acid content naturally causing a higher risk of indigestion and the acid reflux.

Residual sugar:

Residual sugars is essentially the natural grape sugar contents left behind and do not end up being converted to alcohol during the fermentation process. Residual sugar content after fermentation is inversely proportionate to the alcohol level. Meaning that higher alcohol wines contain less sugar, while low alcohol wines have more sugar. The RS amount is measured in grams per litre (g/L) and will affect a wine’s sweetness.

Residual sugars are natural grape sugars that are not converted into alcohol during the fermentation process.

Alcohol content:

This is the percentage of alcohol content of the wine. Veraison, the process that ripens the grapes that produces sugar, combined with fermentation, the yeast used in the winemaking transforms sugar into ethanol (alcohol), heat, and carbon dioxide. Essentially, the higher the sugar levels in the grape, the higher the alcohol levels in the wine.

Alcohol content is the amount of alcohol in wine and it can be anywhere between 5% and 23%.  The process that makes a wine an alcoholic beverage is called fermentation. It is the fermentation of grapes using yeast. The yeast breaks down the sugars present in the grapes (the higher the sugar levels in the grape, the higher the alcohol levels in the wine). The sugars are converted into carbon dioxide and ethanol. ABV which stands for “alcohol by volume” is the alcohol percentage measurement in a beverage. **The alcohol content of red wine usually falls between 12% and 15%, with an average of 13.5% ABV. The alcohol content in white wine varies from 5% to 14% but comes in at an average of 10% ABV.**

Density:

The density of wine is primarily determined by the concentration of alcohol.