

# Coronavirus Villages Rapid Testing

*A visual analysis of Covid-19 test data*



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## INTRODUCTION

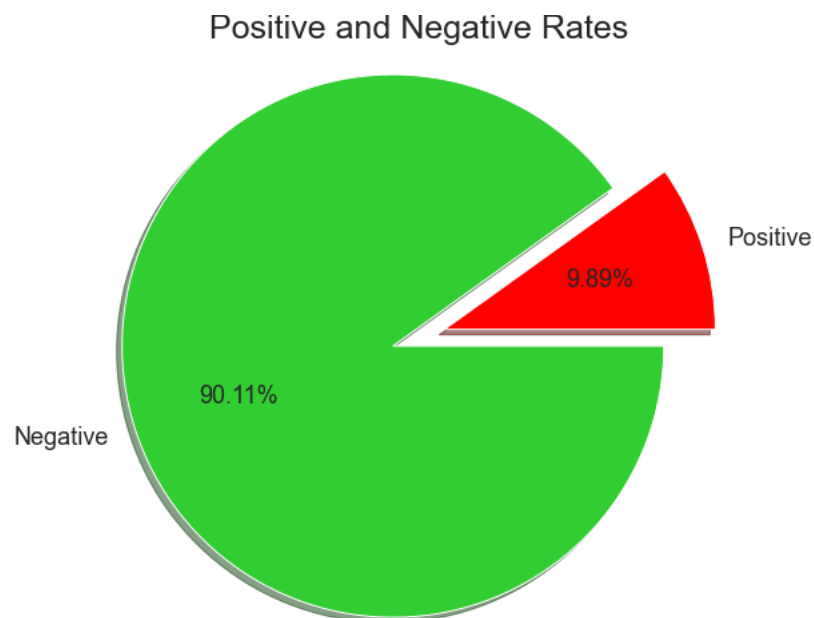
The tests were performed on people of different age groups in the major care centers of The Villages in Florida. The centers include Santa Barbara, Creekside, Pinellas, Brownwood, Colony, Mulberry, Sharon Morse.

## STUDY

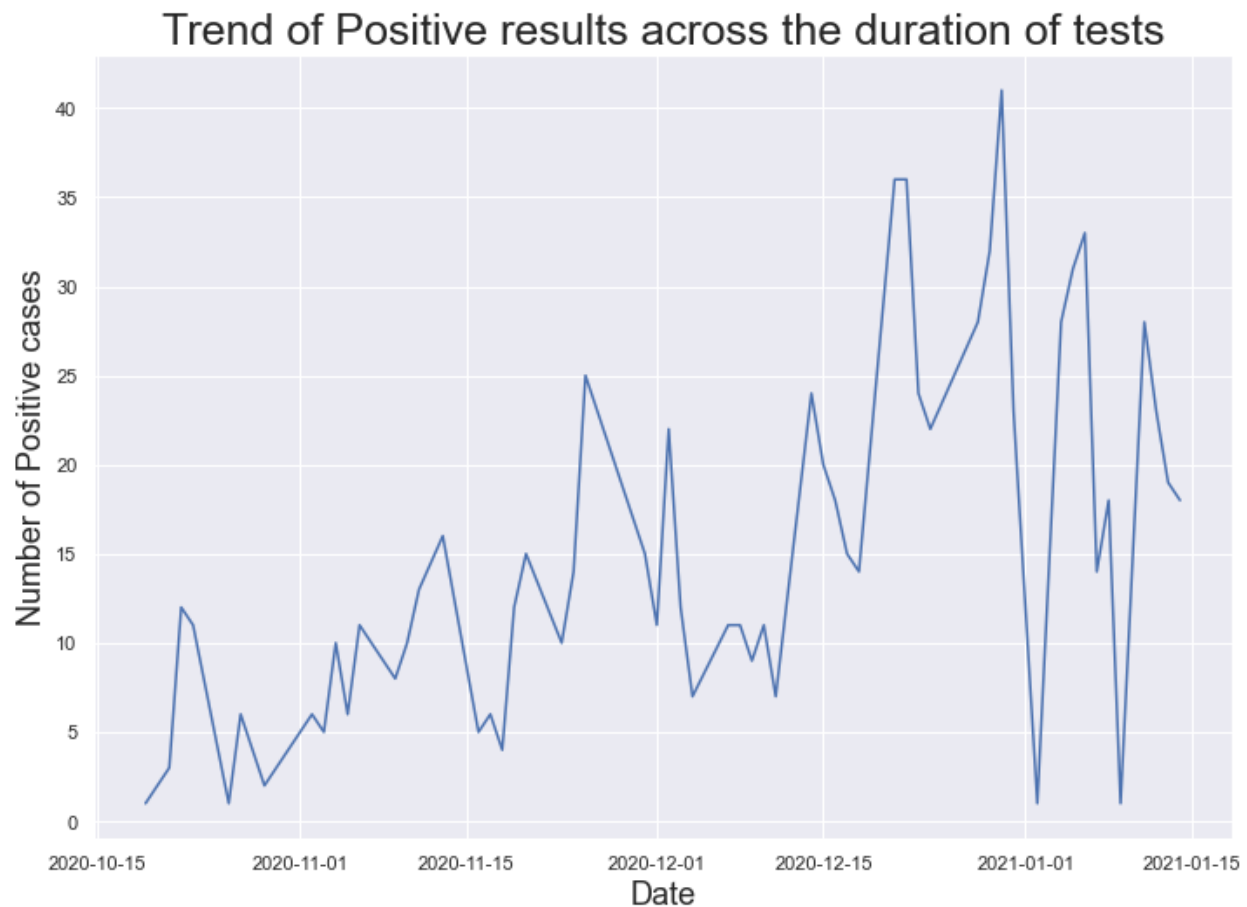
All the data pre-processing and visualizations are done using different modules of Python like pandas, seaborn, matplotlib.

- A total of 8922 tests were performed out of which 882 tests turned out to be positive and 8040 were negative.

Total Tests	Positive	Negative
8922	882	8040

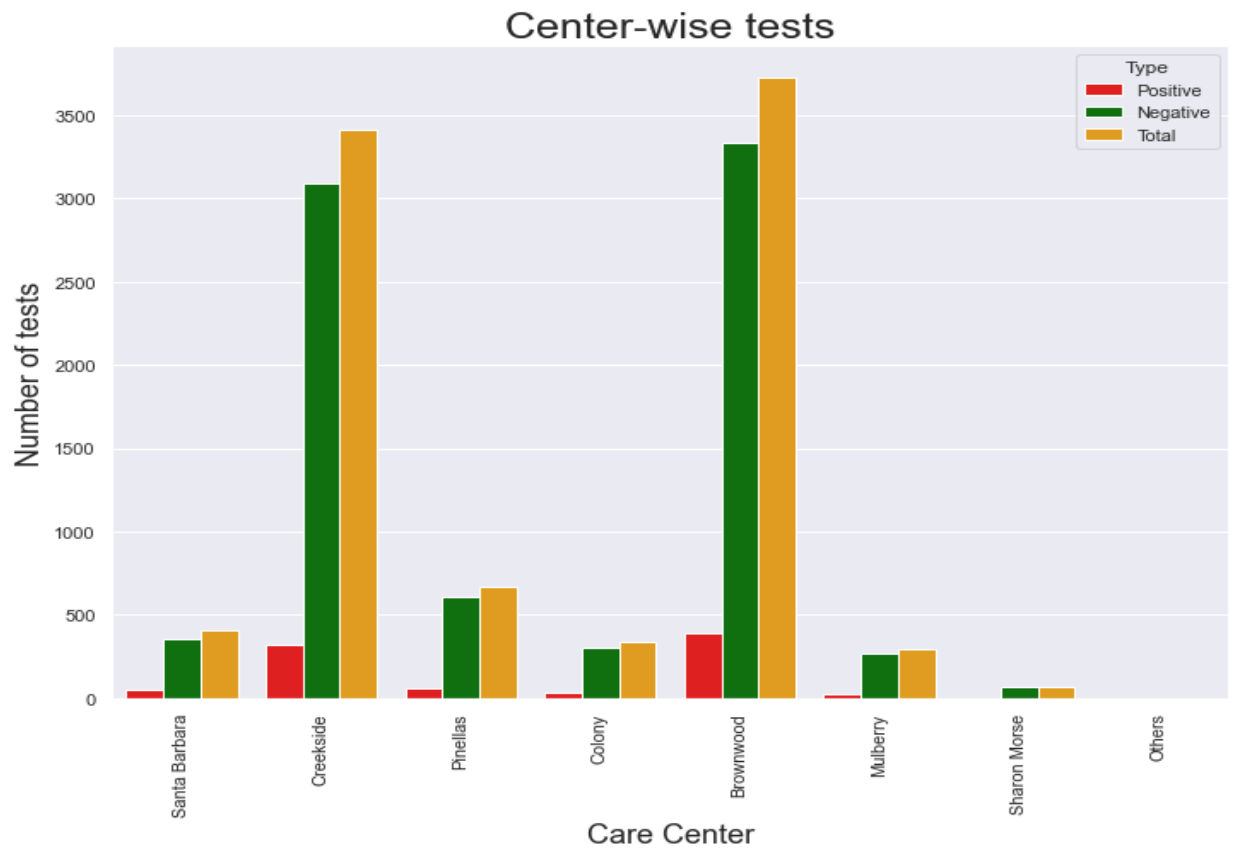


- The tests were done approximately during the duration of 15th October 2020 to 15th January 2021. While there are many intermediate ups and downs but the overall curve sees an increase in positive cases per day which peaks around the end of December and then the positive cases took a decreasing curve.

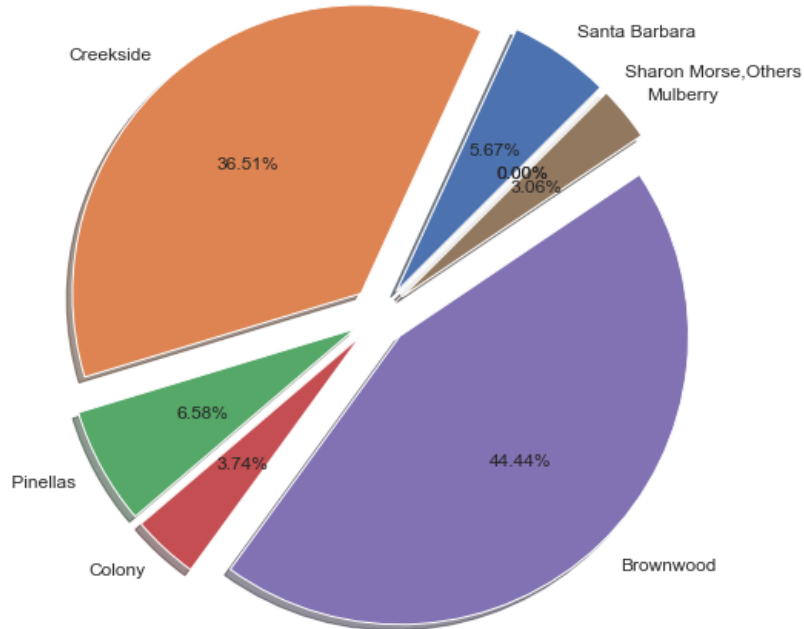


- Out of all the 8922 tests performed across different test centers, most tests are performed at “Brownwood Health Care Center” and “Creekside” stands next to it. **It can be observed that centers with more tests have reported more positive cases.**

Test Center	Total tests	Positive	Negative
Santa Barbara	407	50	357
Creekside	3411	322	3089
Pinellas	669	58	611
Colony	337	33	304
Brownwood	3727	392	3335
Mulberry	298	27	271
Sharon Morse	72	0	72
Others	1	0	1



## Share of positive cases across the centers

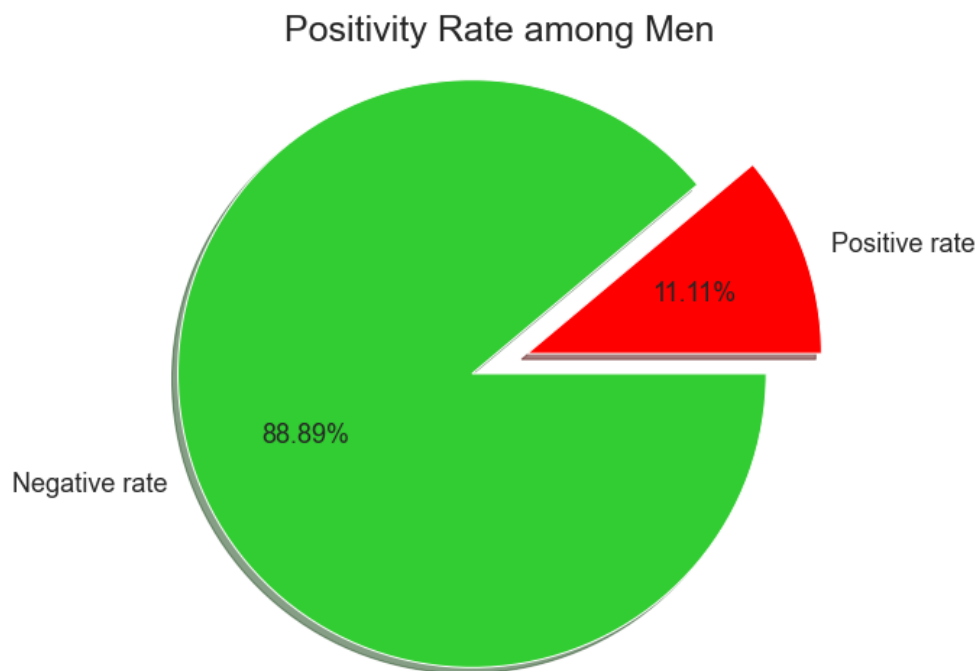
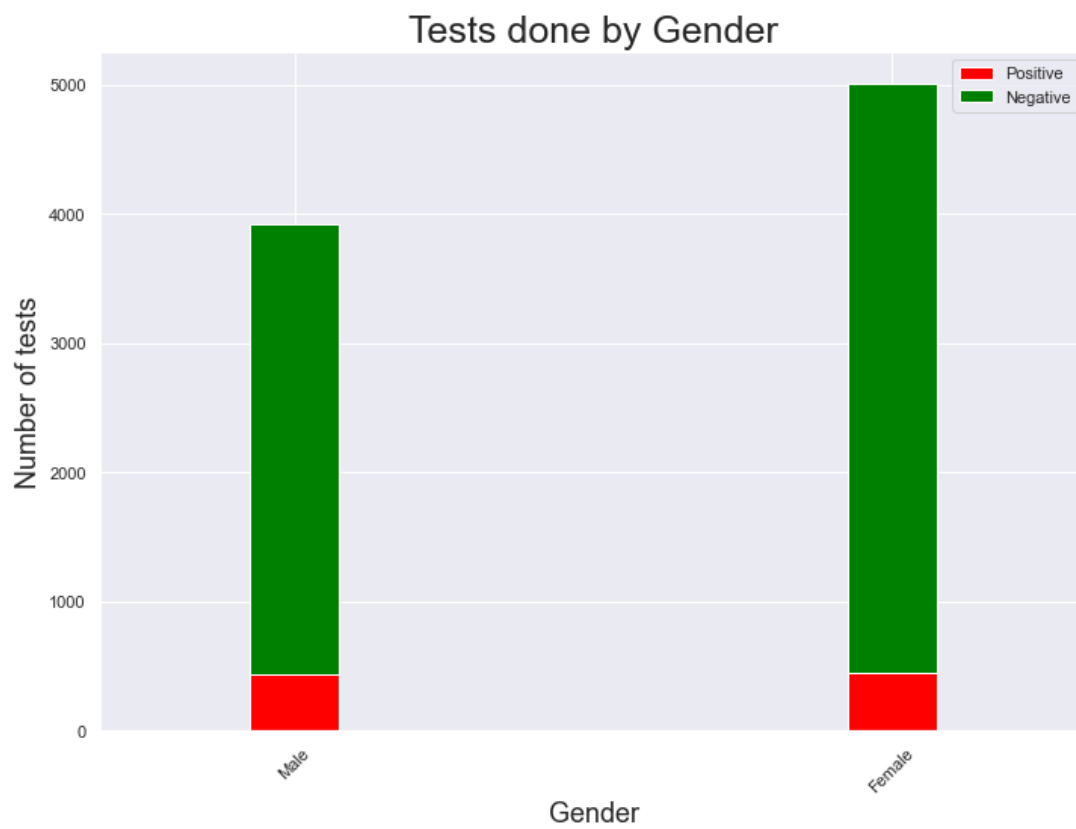


➤ The tests include male and female genders. The gender-wise statistics are

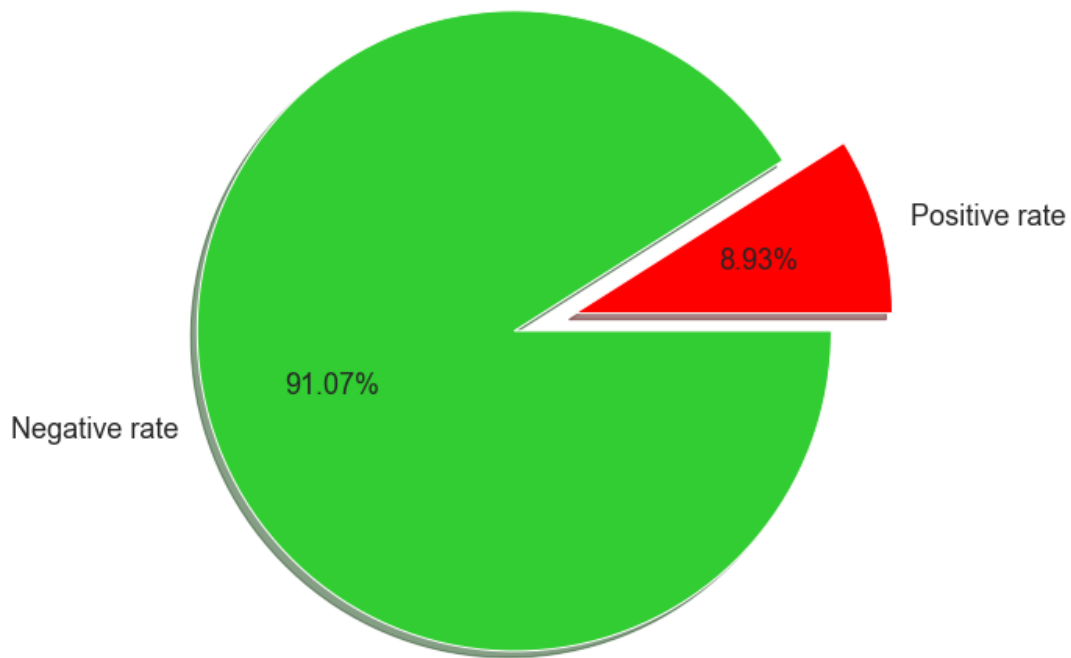
Gender	Tested	Positive	Negative
Female	5007	447	4560
Male	3915	435	3480

Female tests are significantly higher than male tests and it is again evident that more the tests more are the positive results. **Out of all the positive cases, the female population contributes 50.65% of cases whereas men contribute to the rest of 49.35% of cases.**

**Also, the positivity rate among men is 11.11% and the same among women is 8.92%.** This tells us that women have slightly better immune power and are less prone to covid virus compared to men but the difference is negligible.



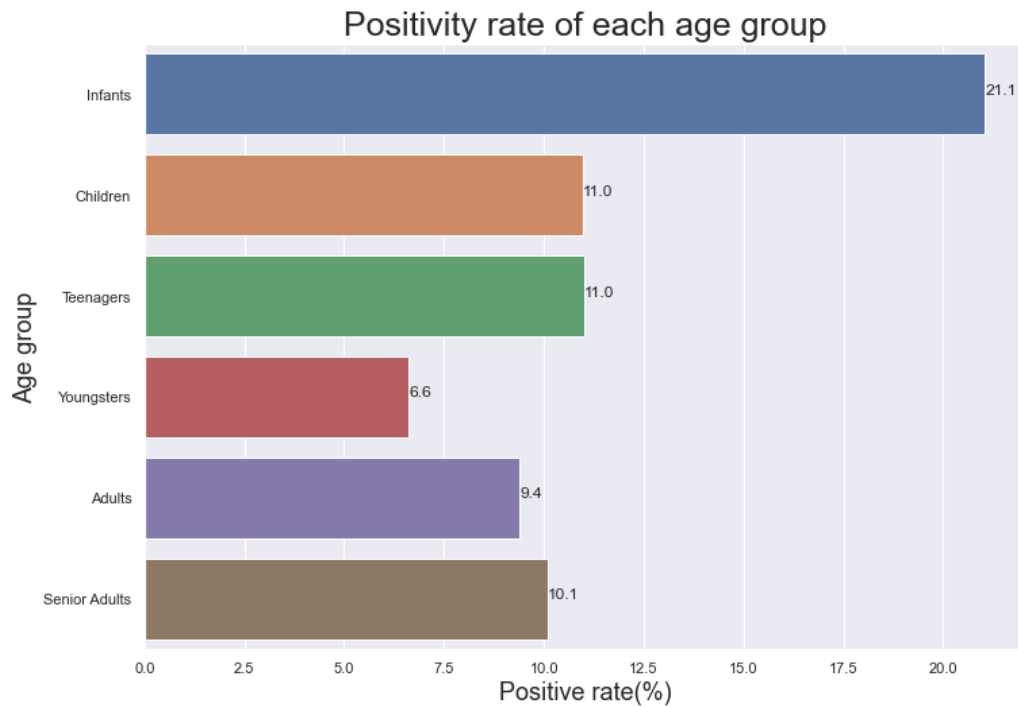
## Positivity Rate among Women



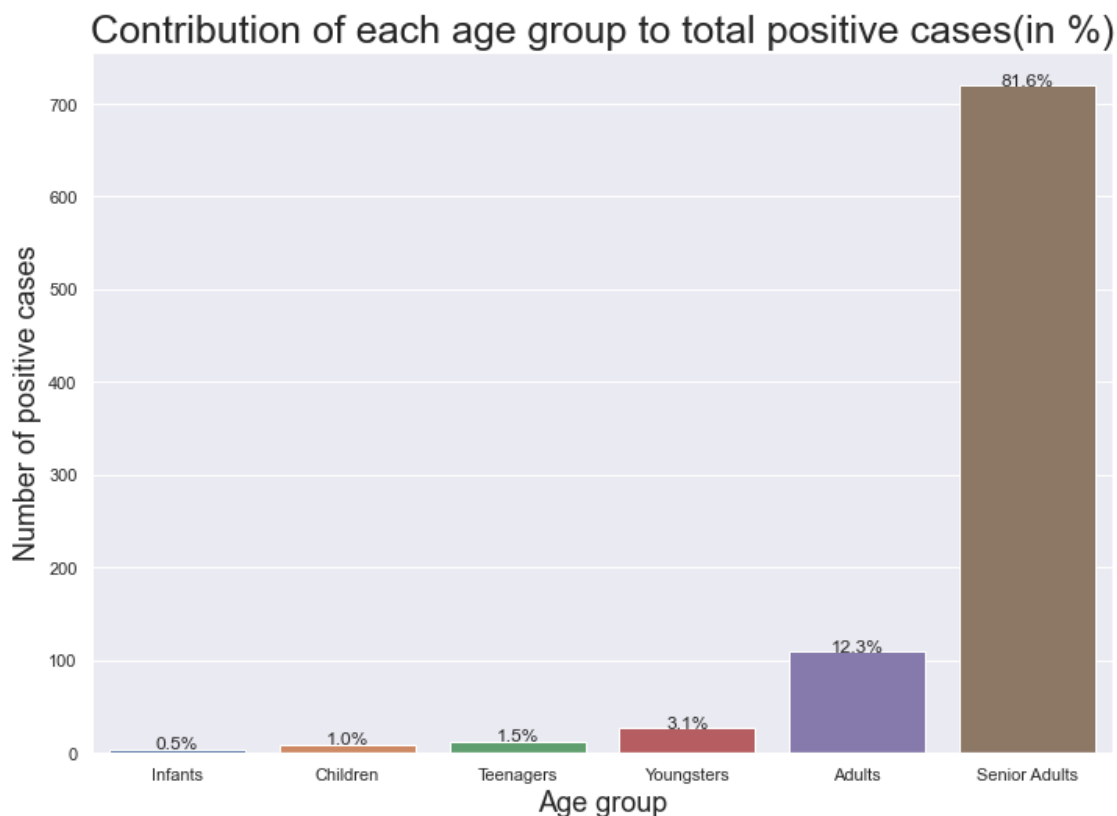
- Age is the most important factor to have key insights into the data. It will also help to determine the vulnerable population and take necessary steps to protect them.

More tests are performed on people age 55 or older. The statistics are as below:

Age	Tested	Positive	Negative	Positivity Rate
Infants(0-3yrs)	19	4	15	21.05%
Children(4-12yrs)	82	9	73	10.97%
Teenagers(13-19yrs)	118	13	105	11.02%
Youngsters(20-29yrs)	408	27	381	6.62%
Adults(30-55yrs)	1161	109	1052	9.39%
Senior Adults(>55yrs)	7134	720	6414	10.09%



The positivity rates from the above table tell us that **Infants have the highest positivity rate of 21.05% whereas youngsters have the least positivity rate of 6.62%.** This shows that children are highly prone to the virus and strict measures should be taken to protect them. Also, youngsters are significantly less prone to the virus.





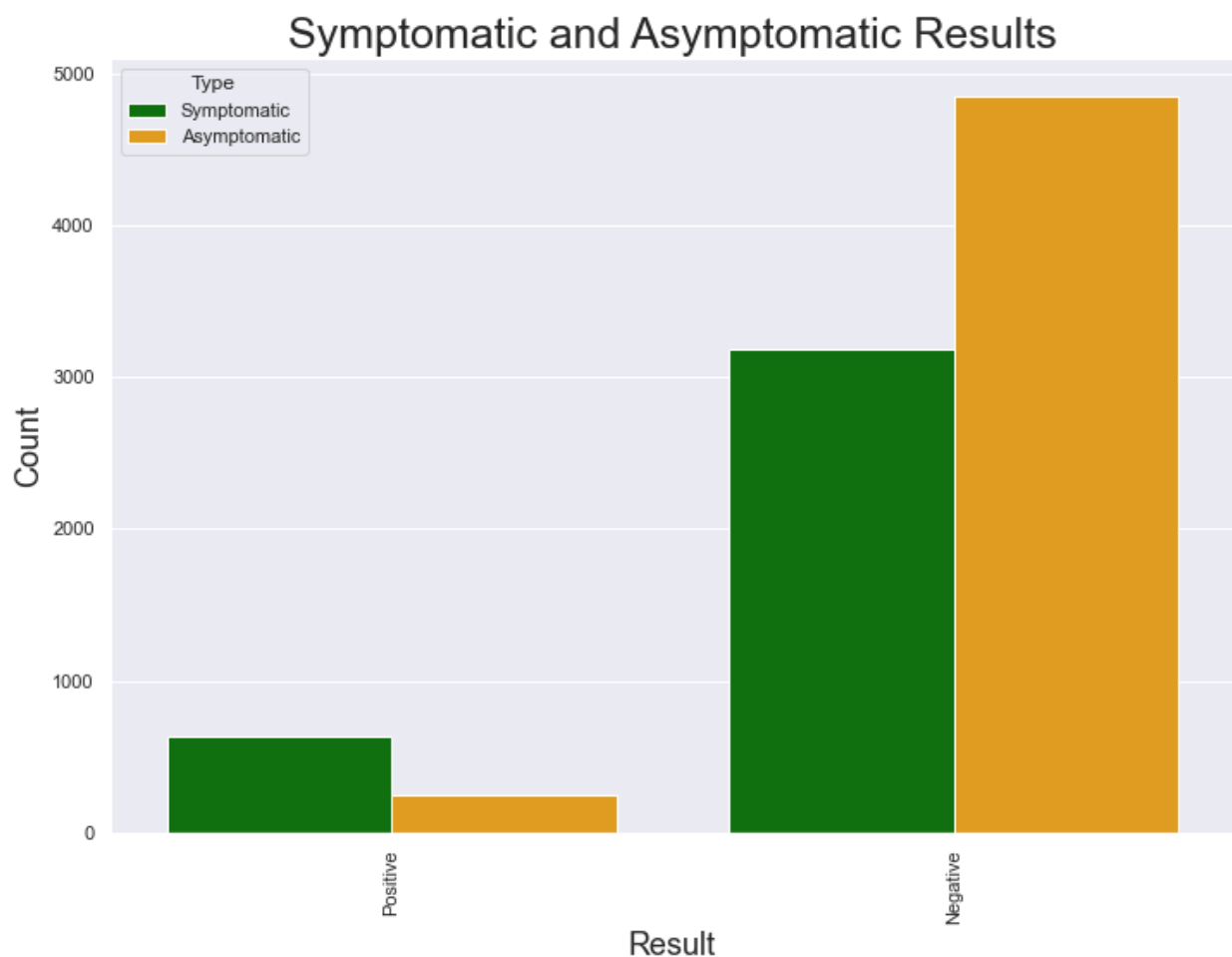
From the above figure, we can observe that senior adults contribute to 81.6% of positive cases. Also, a trend can be observed here, the percentage of contribution to total positive cases increases with an increase in the age of the group.

#### **% Contributions to total positive cases:**

**Infants < Children < Teenagers < Youngsters < Adults < Senior Adults**

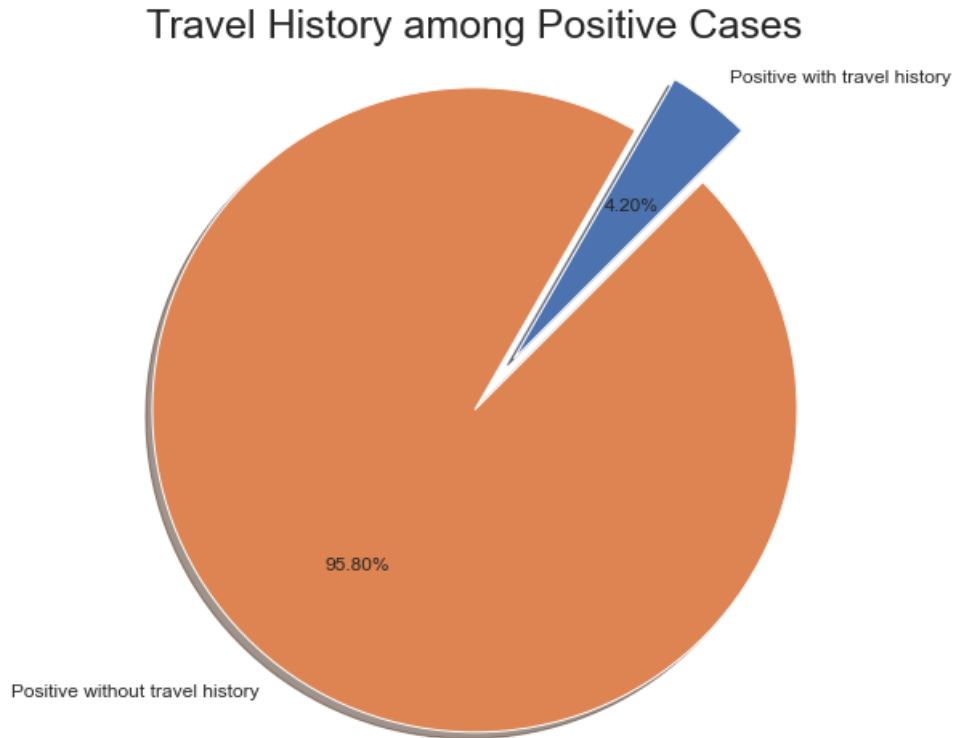
- Understanding the symptoms of the infection will help to detect it in the early stages and prevent its spread. While there are widely known symptoms for Covid-19, there are also many cases that are asymptomatic. So, let's have a close look at these statistics

Result	Symptomatic	Asymptomatic
Positive	631	251
Negative	3184	4856



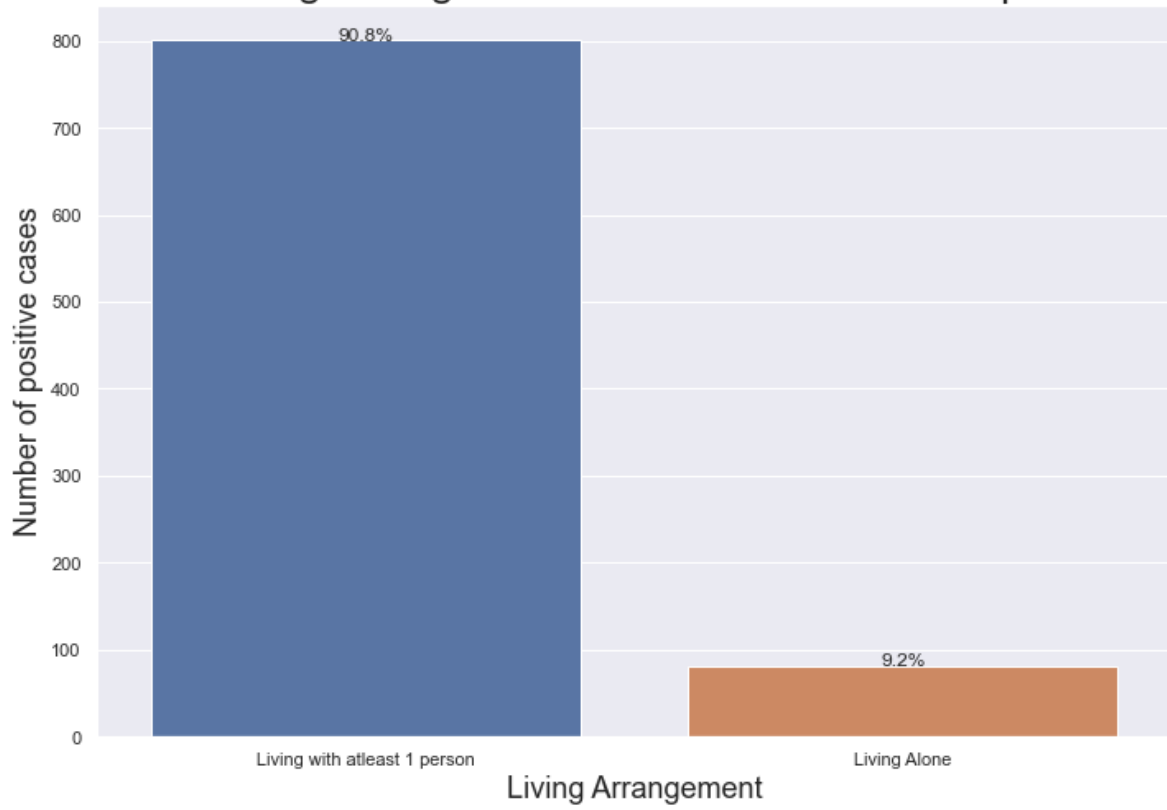
**To conclude, the test results cannot be predicted solely based on the symptoms.**

- Travel History is another key factor that is responsible for the mass spread of the virus. Many countries strictly locked down people in their homes because of this. The travel history also played a significant role in our data, **about 4.2% of the positive cases are due to people who have recent travel history.**



- The living arrangement also will let us know the future possibilities of the spread of Covid. There are high chances that people living with covid-positive people would also get exposed to the virus and they need to be isolated and tested immediately. The data show us that **almost 91% of positive people live with at least one other person.**

## Living Arrangements of Positive-tested People



\*\*\* THE END \*\*\*