****

**Overall Homelessness in Different States in USA Between Year 2015-2020**

**By Zahra Alavi**

**Summer 2021**

# Introduction

I believe that one of the most challenging problems in society is managing homelessness. It can affect the life of families especially the young children of homeless people. In my opinion the most critical homelessness is the one among people younger than 18 years old. They are in a stage of their life that can be changed easier and can affect the society more. Therefore, one of my focuses in this project is studying the growth of population of young people in different states to know which states needs more volunteers and resources to educate and treat the people who are more exposed to homelessness and poverty.

I am very interested in making solutions to ease social problems and curious about finding reasons for homelessness and how it can be managed better or prevented by the help of government and volunteer people.

# About the Dataset

The dataset that I used for doing this project was collected and prepared by The Annual Homeless Assessment Report. The Annual Homeless Assessment Report (AHAR) is a HUD report to the U.S. Congress that provides nationwide estimates of homelessness, including information about the demographic characteristics of homeless persons, service use patterns, and the capacity to house homeless persons. The report is based on data about persons who experience homelessness during a 12-month period, point-in-time counts of people experiencing homelessness on one day in January, and data about the inventory of shelter and housing available in a community.[1]

# Data Cleaning

The first step was cleaning the data. My origin dataset included 1 sheet for each years and I had to Union them by Tableau. To be able to do that, I had to change every column name and put the same name for the given column in each sheet. As there were a lot of columns in every sheet, I used python to change them. Finally, I used union to have a single dataset and use it in my analyzing.

Here are some screen shots of my code and checking them. The number of columns was different in 2015 and 2016 sheets, therefore, I had to clean them separately.

Graphical user interface, text, application, email

Description automatically generated

Year 2017-2020

Graphical user interface, text, application, email

Description automatically generated

Year 2016

Graphical user interface, text, application, email

Description automatically generated

Year 2015

# Dashboards and Discussion

Chart

Description automatically generated with medium confidence

My first Dashboard’s focus is on showing a simple comparing view of average overall homelessness in different states. It gives us a whole idea of rate of homelessness in different part of USA. This dashboard consists of 3 charts. The activity can be done with selecting the states on the map. It has an influence on the other 2 charts that are connected by action and set. The darkest state shows the highest number of homeless people on map and the green portion on the bar chart and pie chart shows the maximum number and the average number of homeless people respectively.

Graphical user interface, chart, application

Description automatically generated

The second dashboard consists of 3 charts. The whole gaol of this chart is to show a brief illustration of number of homeless people with different nationality, gender and in different kinds of shelters.

The pie chart shows Top 10 States for Homelessness with detailed average number of genders of homeless people. States are separated with color and the size of the slice shows the average of overall people with different genders.

The map shows the average overall homeless people in different kinds of shelters. The darkest color on the map shows the highest number of Emergency Sheltered people that is greater than every state in NJ and NV respectively.

The bar chart shows the number of overall Homeless people with different nationality in different states. Most of the population of homeless people are African-Americans in USA, Therefore, I filtered the top range of overall homeless African-Americans to show the top states in overall homelessness and by race. In my opinion, the more the culture of USA directs towards anti-racism, the more distributed race kind we can see in the future number of homeless people. One of the reasons of being mentally dependent and weak and ending up being homeless is dealing with social problems like being bullied and deprive in the society.

Graphical user interface, chart, bubble chart

Description automatically generated

The third dashboard’s focus is on the age range of overall homeless people.

The bubble chart shows the number of overall homeless people over and under 18 years old. The Number of homeless people under 18 years old in each state is demonstrated with colour (Light to dark, less to more) and the number of homeless people over 18 years old in each state is demonstrated with size. NY and CA have the highest number of younger than 18 years old people.

The box-plot chart shows the distribution of homeless people who are under 18 years old in different states in each year. In 2015, the distribution of younger people among overall homeless people are more in comparison with other years.

The third chart shows the percent of total homelessness in different age range using dual axis chart and table calculation. As we can see the majority of population of overall homeless people are people that are older than 24 years old.

Graphical user interface, table, Excel

Description automatically generated

The fourth dashboard consists of four charts and the main focus of these charts are comparing overall sheltered and unsheltered homelessness in different years and different states. It is important to have detailed information about the rate of unsheltered people in different states and know about the trend of growth of it in years to be able to get prepared to provide more help in those areas at the right time.

The first chart shows the ratio of sheltered to unsheltered homelessness in different years. We see that the less ratio is in 2020 and the more ratio is in 2015 that shows the effect of covid-19 on the growth of number of homelessness and results in a fall off of ratio of sheltered to unsheltered homelessness in year 2020. Therefore, there is a need to build more temporary shelters to take care of people who lost their job and are in need.

The second chart shows the unsheltered and sheltered grand total by Level of Details for all the states and as we filter it by different states it shows the exact grand total and not always 100 percent. As you can see in the dashboard, CA has the most unsheltered and sheltered homeless people.

The Third chart shows a dual axis bar and line chart that shows the maximum number of sheltered homeless people in different kind of shelters in different years. The bar chart shows the maximum number of overall sheltered homeless people and the line charts shows the maximum number of sheltered homeless people in 3 kinds of shelters. As we can see, the trend of maximum number of Emergency sheltered in 2019(the beginning of covid-19) is the highest one in the chart.

The last chart shows the trend of shelters available for homeless people. As the years pass, the number of unsheltered homeless people grows that shows the need of providing new shelters in states with more needs.

The best aggregation for the charts that I made, is average, maximum and in some cases Sum.

[1] <https://www.hudexchange.info/homelessness-assistance/ahar/#2020-reports>