Statistics Project

Name:

Course:

Institution:

Date:

Introduction

Homelessness is a significant issue facing the United States in the recent years. The National Law Center on Homelessness &Poverty approximates that every year about 2.5 to 3.5 million Americans sleep in transitional housing, sleep in shelters and in public places which are not intended for human habitation. A further 7.4 million people have lost their homes as a result of economic necessity (NAEH, 2018). According to the US Department of Housing and Urban Development out of every ten thousand people in the U.S 17 faced homelessness each night in 2018.

Source: Department of Housing and Urban Development

Above is a map obtained from the Department of Housing and Urban Development from a count done in January 2018 showing the state of homelessness in different regions in the United States. The map indicates varying rates of homelessness across the country. From the map, California and New York had the highest numbers of homeless people with 129,972 and 91,897 homeless people each, with high levels of homelessness per capita. According to the report, despite Florida

and Texas also having great numbers of homeless people, they had low levels of homelessness

per capita.

There are several factors that contribute to homelessness. The purpose of this study is to expound

on the two groups of elements that lead to homelessness.

Table 1: Variables and Definition

Variables	Definition
HOMELESS	Average number of homeless people per 10,000 by state
Economic Variables	
COSTLIVING	Cost of living (Housing, Transportation, Food, utilities)
POVERTY	Poverty rate by State
HOUSEASSIST	Housing assistance by State
Psychological Variables	
MENTALILL	Mental illness, disability
SUBABUSE	Substance abuse (drug/alcohol)

Table 1 shows economic and psychological variables that impact on homelessness in the U.S.

Economic variables

Cost of living comprises of housing, transportation, food and utilities. According to a new report

conducted by researchers from the University of Pennsylvania, Boston University and the

University of New Hampshire there is a high likelihood of people facing the crisis of

homelessness in cities where people use more than a third of their income on rent (Valle, 2018).

In big cities like New York, Los Angeles and Seattle the amount of rent is so much high that

people of all income levels including those with high income salaries compete for the few

affordable apartments that are available. When the price of rent escalates those people with low

income are ultimately forced into homelessness as they cannot afford paying for housing.

Poverty

Poverty is the underlying cause of homelessness in most countries. The conditions of poverty that impact hugely on one becoming homeless includes living in sub-standard accommodation, social exclusion, reliance on public housing, poor mental and physical health, lack of education and debt.

Housing Assistance

Housing assistance programs were started way back during the great depression to solve the crisis of housing in the United States. The Housing Act of 1937 was formulated with an aim of facilitating low rent housing ultimately reducing cases of homelessness in the country (Fenelon et al., 2017).

Mental Illness

Studies have revealed that individuals suffering mental illness experience behavioral problems that pose a huge challenge in earning a stable income which consequently affects them in finding stable housing. Mental illness and homelessness have strong correlation as their combination leads to drug abuse and increased levels of alcoholism amongst the affected persons (Ecker et al., 2018)

Substance Abuse

Substance abuse is both a leading cause and a result of homelessness which often arises after people have lost their house. Drug addiction affects family relations and causes people to lose their jobs. These people end up struggling to pay bills and eventually lose their homes. The

findings of a 2008 survey conducted in 25 cities showed that substance abuse is the leading cause of homelessness for single adults (Didenko, 2008).

Part II: Descriptive Statistics

Table 2: Descriptive Statistics Summary

Homeless		Costliving		Medincome		Pov		Houseassist		Mentill		Subabuse	
Mean	17.53725	Mean	104.6667	Mean	57011.33	Mean	0.148725	Mean	84646.57	Mean	857764.7	Mean	407862.7
Standard Deviation	16.40466	Standard D	18.03382	Standard I	9204.027	Standard I	0.030794	Standard D	100604	Standard I	930426	Standard I	447497.5
Minimum	6.6	Minimum	86	Minimum	40037	Minimum	0.092	Minimum	4999	Minimum	89000	Minimum	40000
Maximum	110.8	Maximum	167.4	Maximum	75675	Maximum	0.219	Maximum	531487	Maximum	5241000	Maximum	2475000

The variable **homeless** has a mean of $17.53725, standard deviation of $16.40466, a minimum of $6.6 and a maximum of $110.8.The variable **cost of living** has a mean of 104.6667, standard deviation of 18.03382, a minimum of 86 and a maximum of 167.4. The variable **medincome** has a mean of $57011.33, standard deviation of $9204.027, a minimum of $40037 and a maximum of $75675.

The variable **poverty** has a mean of 0.148725(14.87%), standard deviation of 0.030794%, a minimum of 0.092(9.2%) and a maximum of 0.219(21.9%). The variable **housing assistance** has a mean of 84646.57, standard deviation of 100604, a minimum of 4999 and a maximum of 531487.The variable **mental illness** has a mean of 857764.7, standard deviation of 930426, a minimum of 89000 and a maximum of 5241000. The variable substance abuse has a mean of 407862.7, standard deviation of 447497.5, a minimum of 40000 and a maximum of 2475000
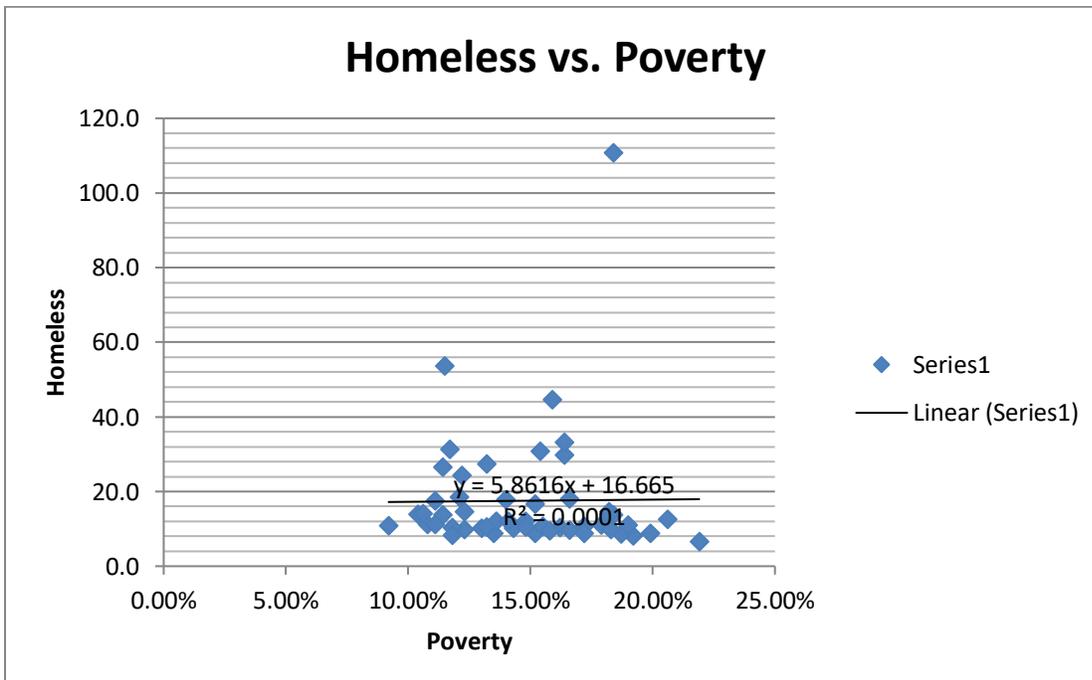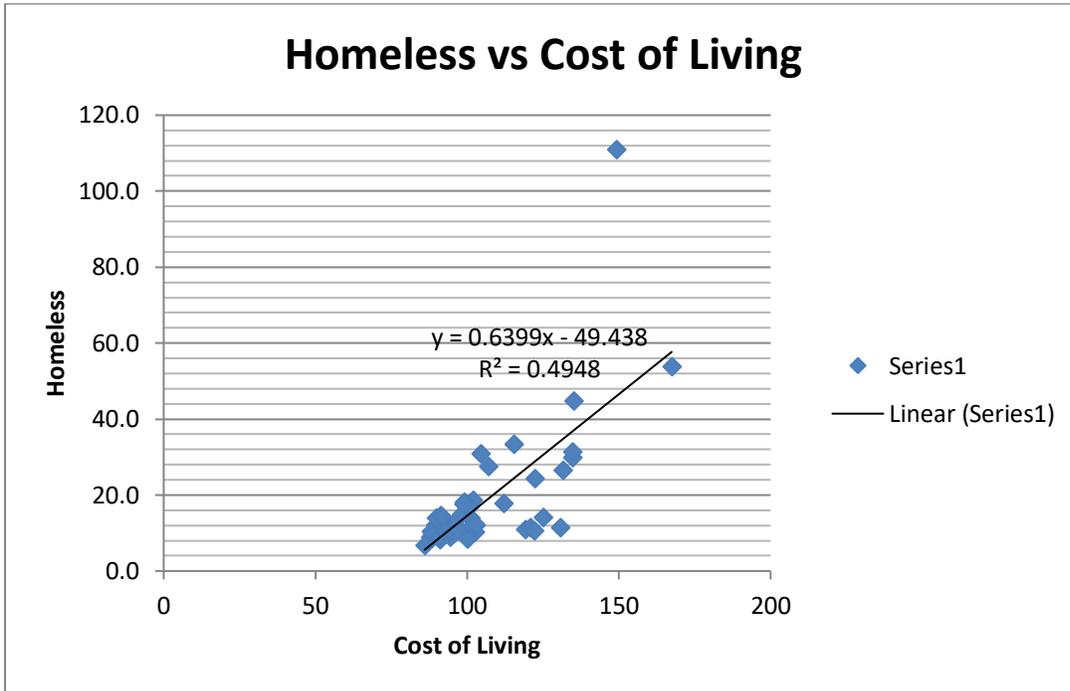
Table 3

	Homeless	Costliving	Medincome	Poverty	Houseassist	Mentill	Subabuse
Homeless	1						
Costliving	0.703442	1					
Medincome	0.34953	0.614504	1				
Poverty	0.011003	-0.36162	-0.80003	1			
Houseassist	0.108886	0.198437	0.062737	0.141838	1		
Mentill	0.004033	0.060817	0.017287	0.197484	0.888286	1	
Subabuse	0.008605	0.069054	0.020828	0.178648	0.877902	0.982183	1

The variables cost of living and homeless have a correlation coefficient of 0.7034 which is a strong positive correlation. The variables medincome and homeless have a correlation coefficient of 0.34953 which is a positive moderate correlation between the two variables. The variables poverty and homeless have a correlation coefficient of 0.011003 which is weak positive correlation between the two variables. The variables house assistance and homeless have a correlation coefficient of 0.108886 which is a weak positive correlation between the two. The variables mental illness and homeless have a correlation coefficient of 0.004033 which is a very weak positive correlation between the two variables. Substance abuse and homeless have a correlation coefficient of 0.008605 which is also a very weak correlation between the two variables.

The result of a very weak positive correlation between the variables poverty and homelessness, mental illness and homelessness & substance abuse and homelessness have differed with my expectation of a very strong correlation existing between the mentioned variables.

Scatter Plots

Homeless vs Cost of Living

y = 0.6399x - 49.438
R² = 0.4948

Homeless vs. Poverty

y = 5.8616x + 16.665
R² = 0.0001

Homeless vs. Mentalill

$y = 7E\text{-}08x + 17.476$

$R^2 = 2E\text{-}05$

Homeless vs substance abuse

$y = 3E\text{-}07x + 17.409$

$R^2 = 7E\text{-}05$

The scatter plot results are consistent with the correlation outputs. Finding the square root of the coefficient of determination in each scatter plot yields to the correlation coefficients found in the correlation matrix found in Table 3.

Table 4: Descriptive Statistics controlling for regional effects (Average Values)

Variables	HOMELESS	COSTLIVING	POVERTY	MENTALILL	SUBABUSE
NEAST	6.0627	28.9588	0.0304	170941.18	84078.43
MWEST	2.3431	20.1882	0.0302	184157.30	84686.27
SOUTHEAST	2.6784	22.0569	0.0412	216215.69	94529.41
SOUTHWEST	0.8980	7.3156	0.0142	98000.00	57843.14
WEST	5.3608	24.2706	0.0292	182490.20	84215.69

Table 4 showed above contains the summary statistics (mean) of homeless, costliving, poverty, mentallill, subabuse. The north east region has the highest average number of those who are homeless while the south west region has the least. The north east region has the highest cost of living (M=28.9588) while the south west region has the lowest cost of living(M=7.3156).The south east region has the highest poverty level(M=0.0412) while the south west region has the least level of poverty(M=0.0142).The south east region has the highest cases of mental illness(M=216215.69) while the south west region has the lowest(M=98000.00).Last but not least the south east region has the highest number of substance abuse cases(M=94529.41) while the south west region has the least(M=57843.14).

Part III: Conclusion and Policy Recommendation

The findings of the data analysis performed on the data shows a strong positive correlation between homelessness and cost of living. The north east region has the highest cases of

homelessness, cost of living and poverty levels followed closely by the western region which also has high cases of the same.

Since there is a strong positive correlation between homelessness and the cost of living as seen in the results, the US Department of Housing and Urban Development should formulate policies to regulate the price of rent in areas with high cost of living i.e. north east region and the west region in a bid to minimize cases of homelessness in those regions. Affordable rent favors both low income and high income earners in securing homes for themselves.

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