

Use Data to Analysis Human Development Index in Lancaster

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Abstract: This paper will discuss life expectancy at birth, infant mortality rate, and education in Lancaster, PA. The paper will analyze the data about life expectancy, infant mortality rate, and education in Lancaster.

1. Introduction

Lancaster nowadays is an old but vivid county. The population is most live around colleges and schools. Therefore, some people are engaging in many things about Lancaster. Such as the population of Lancaster, education level, medical level in Lancaster. Therefore, this paper will count and talk about those things that people influence by Human Development Index.

2. History of Lancaster

2.1 City History

Lancaster is one of the oldest cities in the United States of America. People first settled in the area in 1709. After several years, more people join in, and the county gets developed. In 1729, John Wright, an outstanding citizen, named this county “Lancaster.” Lancaster became a regular city show on the map in 1818. During the Revolutionary war, Lancaster is an important center of supplies. (1)

2.2 Population of Lancaster

Fig.1 Shows the Population in Lancaster from 1800 to 2021.

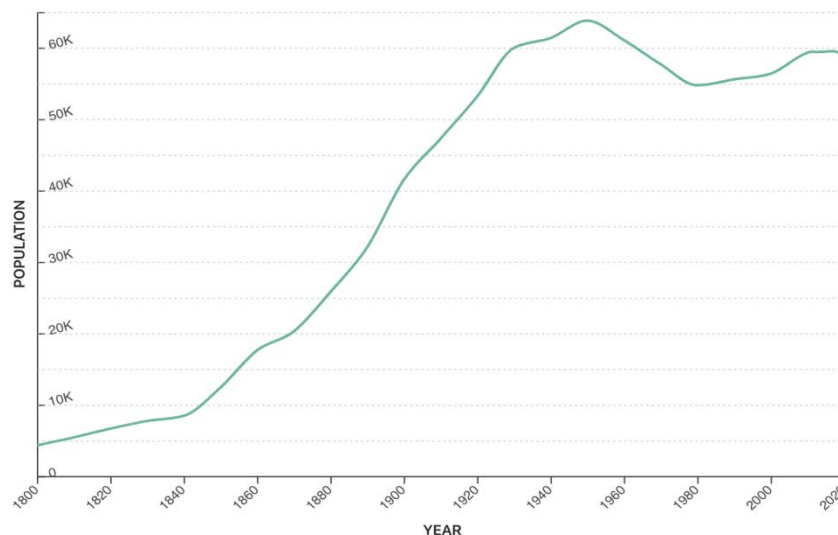


Fig.1 Population in Lancaster from 1800 to 2021

As we can see, Lancaster was a small city that starts in 1800 with only 4.3K population. Nevertheless, the population get stable increasing and reach 63.8K in 1950. Then, by the influence of the Vietnam war, the population reduce between 1950 and 1980. After that, the population has a small spring back, and the population stays around 59K. In 2021, the population of Lancaster is 58,981. (3)

3. Life Expectancy At Birth in Lancaster

The Fig. 2 is the life expectancy at birth in Lancaster in 2019.

County	County Value	Error Margin	Black	Hispanic	White
Lancaster	80.1	79.9-80.3	76.1	81.7	80.2

Fig.2 Life Expectancy At Birth in Lancaster in 2019

The life expectancy at birth in Lancaster is an average of 80.1 years from the Picture above. This data flows between 79.9 and 80.3 years. According to the World Bank, the average life expectancy at birth all over the United States is 78.5. Compares to that, Lancaster has a higher number. So that may mean that life in Lancaster is better, so people can live longer. Also, medical treatment should be better in Lancaster to be less likely to die early because of disease or injury. (4)

Moreover, for different races of people, that data changes. For Black people, their expectancy is 76.1 years. For Hispanic people, their expectancy is 81.7 years. Moreover, for White people, their expectancy is 80.2 years. So Black people in Lancaster get much fewer average compares to Hispanic and White people. It may be because the community environment in Lancaster is not suitable for Black people. Maybe they get to discriminate against others. Alternatively, maybe Black people get weaker bodies than Hispanic and White. Many issues could affect this data, but what causes the life expectancy of Black people to be much less than the Hispanic and White's is not clear and hard to analyze.

4. Infant Mortality Rate in Lancaster

Infant mortality means an infant dies before his or her first birthday. Infant mortality rate counts the death of an infant for every 1,000 live births. (5) The Table below shows the infant mortality rate in Lancaster from 2009 to 2017.

Table Infant Mortality Rate in Lancaster from 2009 to 2017

County	2009-2013	2010-2014	2011-2015	2012-2016	2013-2017
Lancaster	6.8%	6.8%	6.6%	6.4%	6.2%

According to the Table above, the Pennsylvania Department of Health breaks the past few years into five-time blocks. And they are 2009-2013, 2010-2014, 2011-2015, 2012-2016, 2013-2017. Each of them is four years. The second line of Table 1 shows the rate of infant mortality in percentage. The rate is decreasing for each time block. That means that life is better each year in Lancaster, and the medical treatment for pregnant women is better so that infants are less likely to mortality.

Nevertheless, it compares to the rate of infant mortality all over the country, which is 5.8%, from the Center for Disease Control and Prevention. Lancaster gets a higher rate of infant mortality than the country average. So that means although treatment for pregnant women in Lancaster is getting better each year, it still does not reach the average treatment level of the country, so the infant mortality rate is higher than the country average. So Lancaster still gets things to do in the pregnant women treatment part.

5. Education in Lancaster

5.1 School

There are 69 elementary schools in Lancaster; most of them are K6 and K5. One hundred three preschools and 37 public district schools. Moreover, there are 116 private schools. As for 58 thousand populations, the primary school is good enough. For higher-level schools, there are only 41 middle schools and 16 high schools. Therefore, Lancaster is a slight lack of higher-level schools. (7) There are six colleges in Lancaster. Elizabethtown College, Franklin & Marshall College, Lancaster Bible College, Millersville University of Pennsylvania, Pennsylvania College of Art & Design, and Pennsylvania College of Health Sciences. (8)

5.2 School Attainment

The Fig.3 is the school attainment in Lancaster.

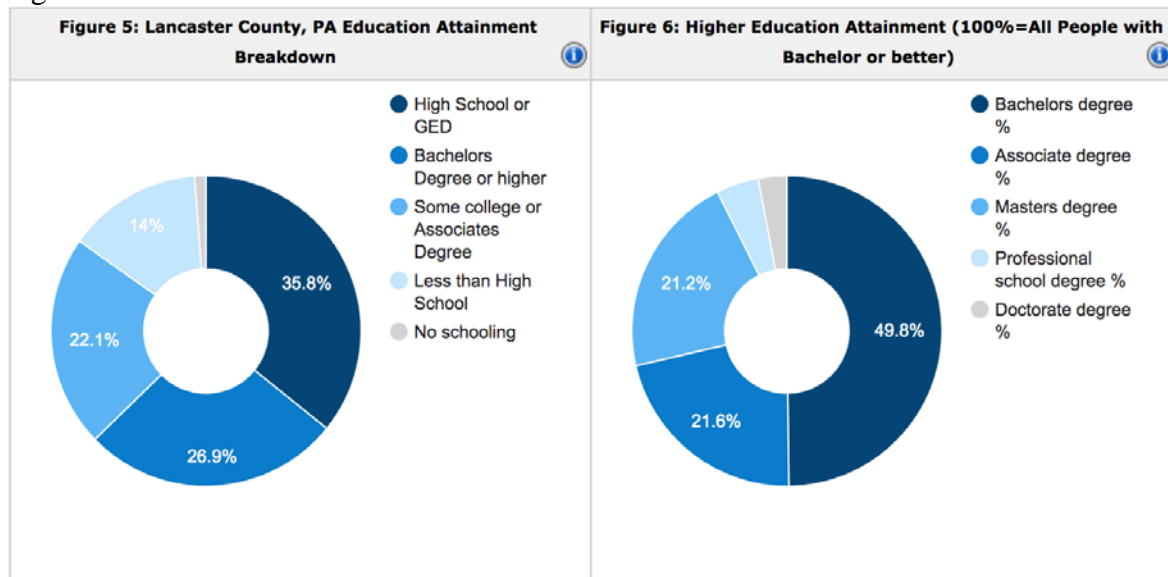


Fig.3 The School Attainment in Lancaster

From the Picture above, we know that only 15.2% of people in Lancaster have not attained school or have education less than high school. So that means about 84.8% of people in Lancaster get an education in high school or even beyond high school. That is excellent news because more educated people can work better and make the community better. Although 84.8% of well-educated people in Lancaster are reasonable, it can be better. So together community should help people that cannot attain school because of medical issue or wealth problem. Give them a chance to get an education and make the whole society better. (9)

5.3 Student Loan

According to the WGAL News post on January 14, 2020, Pennsylvania's average student loan debt is nearly \$35,000. Compared to the data collected by Credit that the average student loan debt for recent graduates is \$28,800, Lancaster students tend to have more loan debt than the country's average. That means students in Lancaster will get more pressure after graduation because they get more loan debt, and that kind of pressure is not suitable for them. Those student loan companies in Lancaster may cause this higher loan debt. They may raise the student loan debt to get more profit, but that increases the pressure on the students. The colleges in Lancaster may also cause a higher loan. Maybe the colleges in Lancaster have a higher tuition fee for students, so they must take higher loan debt. Alternatively, maybe just the overall cost in Lancaster is higher than in other counties and states. All these reasons can cause the student loan debt in Lancaster higher than the country's average. (10, 11)

6. Conclusion

To sum up, Lancaster is a big city with 58,981 populations. The average life expectancy is 80.1 but would be different for different races people. Infant mortality is a little bit higher than the average level. However, the education level is outstanding.

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