

## Project 2c – Descriptive Statistics Part 1

Kelly Williams

### Mother's Education

1. Frequencies for each of the 8 categories

Grammar or less	7932
Some HS	11601
HS graduate	83449
Postsecondary	19638
Some college	64514
College grad	109217
Some grad school	13710
Grad degree	64460

2. Frequency and percent of missing cases

Frequency: 9294    percent: 2.4%

3. Frequency and percent of the most frequent response to this item

Item: College grad    Frequency: 109217    Percent: 29.2%

4. Mean: 5.21
5. Median: 6.00
6. Minimum: 1
7. Maximum: 8

#### Brief description:

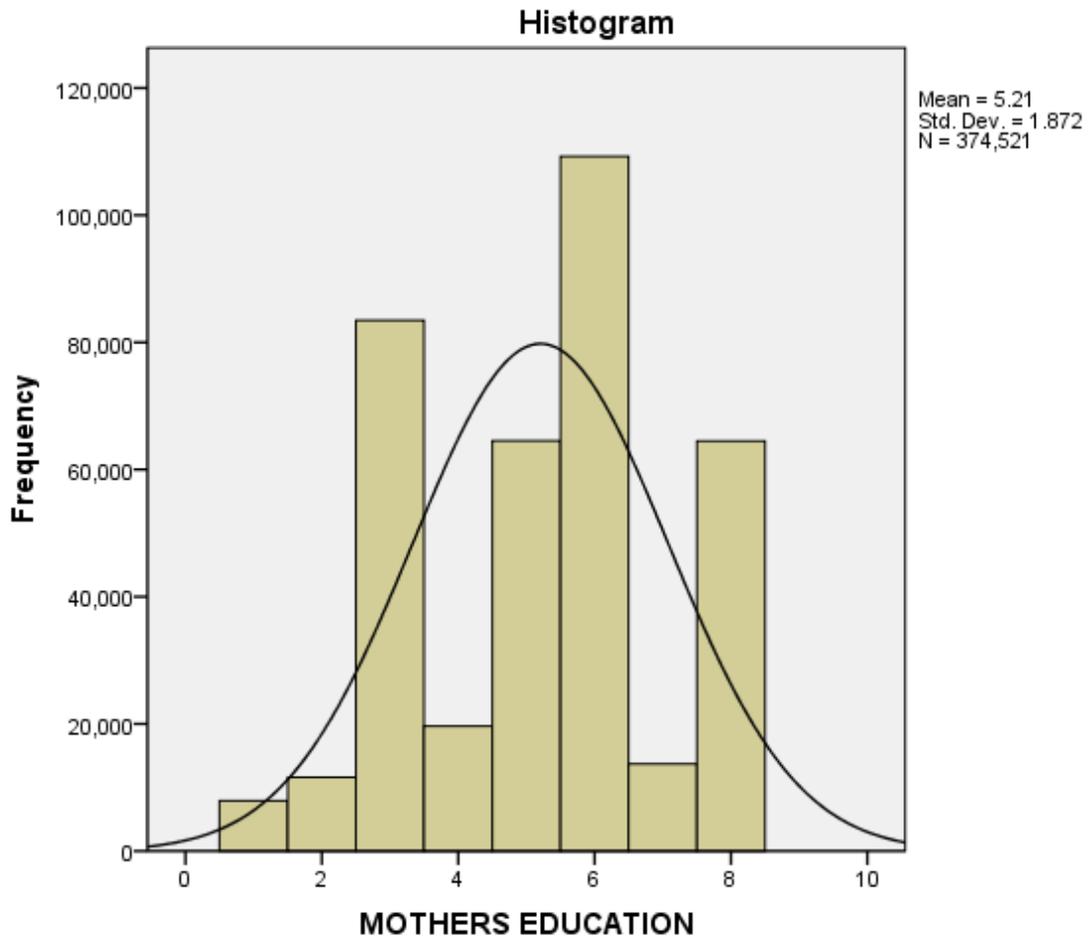
This data set describes the responses to a question regarding the mother's level of education of college freshmen from the year 1998. Out of 383,815 respondents there were 374,521 valid responses to this question and 9294 responses were missing. There were eight choice items for this question including: grammar or less, some high school, high school graduate, postsecondary, some college, college graduate, some grad school, and graduate degree. The highest frequency of responses was for college graduate with a frequency of 109217 and a valid percent of 29.2%. The lowest response was grammar or less with a frequency of 7932 and a valid percent of 2.1%

8. Skewness value: -.147
9. Skewness standard error range (+/- 2 standard deviations): -0.008 to +0.008

10. Kurtosis value:  $-.863$

11. Kurtosis standard error range ( $\pm 2$  standard deviations):  $-.016$  to  $+.016$

Histogram with a normal curve:



Based on the information provided from the analysis, are these data normally distributed? How can you tell? No, these data are not normally distributed. You can tell from two examples. First, there is a significant difference between the skewness value and the standard error of skewness. Since the skewness value does not fall within the range of the standard error of skewness it means that it is not normally distributed. Also, in analyzing the histogram you can visually see where the bar on the graph have points that extended outside of the curve.