

## Research Topic

Does the father figure going to jail and closeness with the father figure associated with the child be more likely to be imprisoned as well?

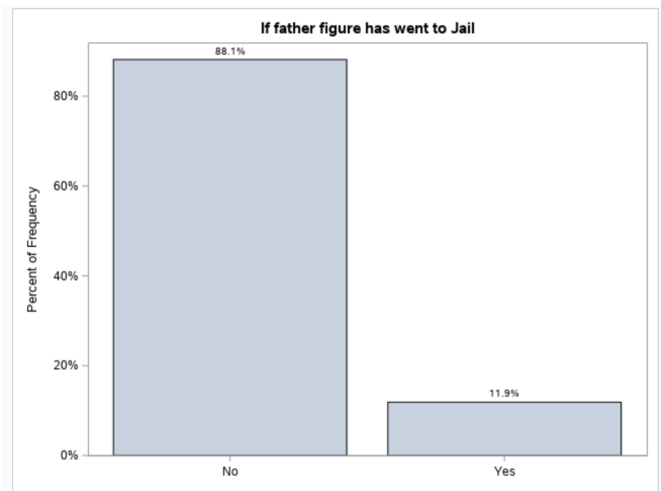
(i have no qualitative variables.)

## 5 Categorical variables and their graphs:

### Categorical Variable #1 → If Father Figure went to Jail

#### Summary:

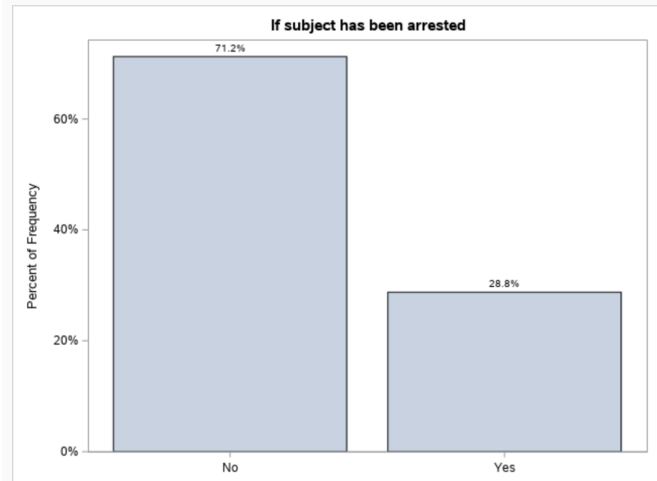
- A. The variable is H4WP30. The bar chart shows that the percentage of the Father figure who has gone to jail is 11.86% and the Father figure who has not gone to jail is 88.14%
- B. X-axis is the categories of responses which is No and Yes. The Y-axis is the percent of frequency. For example, the percentage of frequency for No is 88.14% which means father figure who has not gone to jail.



### Categorical Variable #2 → If the subject has been arrested

#### Summary:

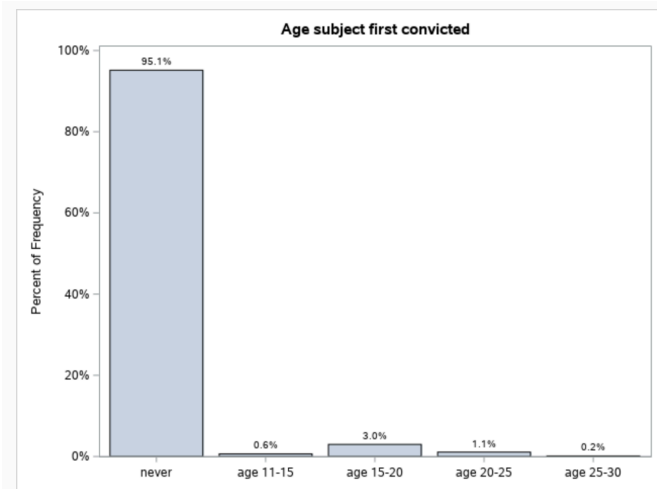
- C. The variable is H4CJ1. The bar chart shows that the percentage of subjects that have not been arrested is 71.12% and 28.8% have gone to jail.
- D. X-axis is the categories of responses which is No and Yes. The Y-axis is the percent of frequency. For example, the percentage of frequency for No is 71.12% which means the subject has not gone to jail.



#### Categorical Variable #3 → Age first convicted

#### Summary:

- E. The variable is H4CJ12. The bar chart shows the different ages the subject is first convicted. A majority, 95.1% have not been arrested. The rest got convicted : ages 11-15 — 0.6%, ages 15-20 — 3 %, ages 20-25 — 1.1 % and ages 25-30 — 0.2 %
- F. X-axis is the categories of responses which are the ranges of ages. The Y-axis is the percent of frequency. For example, 3% were arrested ages 15-20.



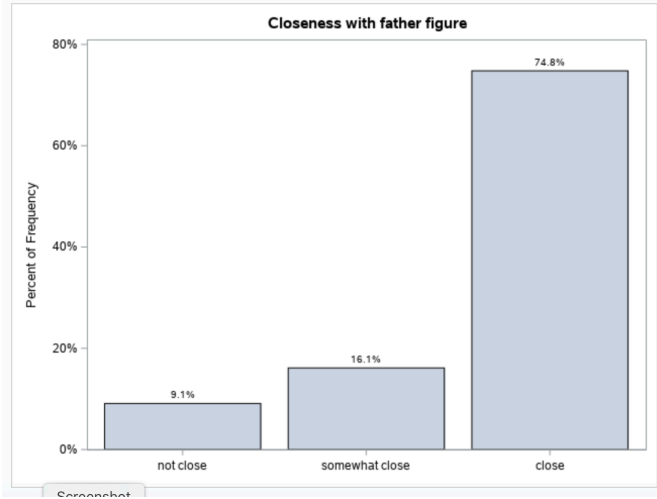
#### Categorical Variable #5 → Closeness with Father figure

#### Summary:

- G. The variable is H4WP38. The bar chart

shows the different closeness people have with their father figures. A majority, are close with their father figure at 74.8%. 16.12% are somewhat close and 9.1% are not close.

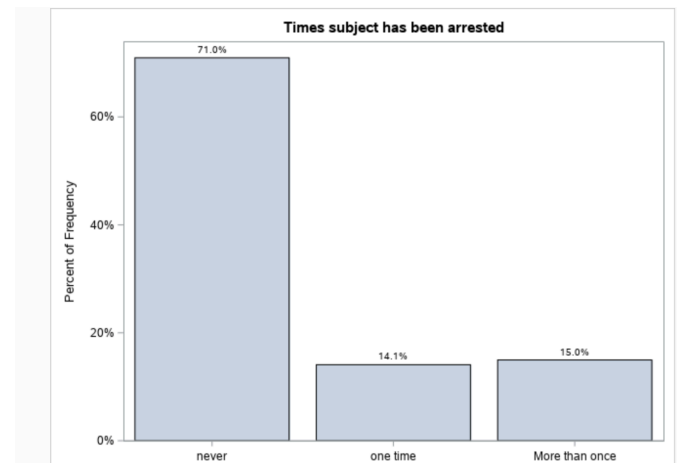
- H. X-axis is the categories of responses which are the rate of closeness. The Y-axis is the percent of frequency. For example, 9.1% are not close with their father figure.



#### Categorical Variable #4 → Times Subject has been arrested

Summary:

- I. The variable is H4CJ2. The bar chart shows the times subject has been arrested. A majority has never gone to jail- 71.0 %, 14.1% has gone to jail only once- 14.96% has gone to jail more than once
- J. X-axis is the categories of responses which is never, one time and more than once.. The Y-axis is the percent of frequency. For example, 71.0 % have never been arrested.



#### CODE for all 3 variables

```
/*tells SAS where to find my data set*/
libname mydata "~/my_shared_file_links/wangc1" access=readonly;
/*tell sas which data set to use. We are using Addhelath wave4 with demographics*/
data new; set mydata.addhealth4wdemographics;

/*Labeling*/
label H4WP30 = "If father figure has went to Jail"; /* Categorical*/
label H4CJ1 = "If subject has been arrested"; /*Categorical*/
label H4CJ2 = "Times subject have been arrested"; /*Quantitative*/
```

```
label H4WP38 = "Closeness with father figure"; /*categorical*/
```

```
label H4CJ12 = "Age subject first convicted"; /*Categorical*/
```

```
/*treating for missing variables*/
```

```
IF H4WP30 GE 6 THEN H4WP30 = .; /* item 6, 8, and "." will be assigned as missing value */
```

```
IF H4CJ1 GE 6 THEN H4CJ1 = .; /* item 6, 8, and "." will be assigned as missing value */
```

```
IF H4CJ2 EQ 7 THEN H4CJ2 = 0; /* reassign legitimate skip as being arrested 0 time */
```

```
ELSE IF H4CJ2 GE 6 THEN H4CJ2 = .; /* item 6, 8, and "." will be assigned as missing value */
```

```
IF H4WP38 GE 6 THEN H4WP38= .; /* item 6, 8, and "." will be assigned as missing value */
```

```
ELSE IF H4WP38 LE 2 THEN H4WP38=1;
```

```
ELSE IF H4WP38 EQ 3 THEN H4WP38=2;
```

```
ELSE IF H4WP38 LE 5 THEN H4WP38=3;
```

```
IF H4CJ12 = 97 THEN H4CJ12 = 0; /* reassign legitimate skip as being arrested 0 time */
```

```
ELSE IF H4CJ12 = 96 THEN H4CJ12= .;
```

```
ELSE IF H4CJ12 = 98 THEN H4CJ12= .;
```

```
ELSE IF H4CJ12 LE 15 THEN H4CJ12= 1;
```

```
ELSE IF H4CJ12 LE 20 THEN H4CJ12=2;
```

```
ELSE IF H4CJ12 LE 25 THEN H4CJ12=3;
```

```
ELSE IF H4CJ12 LE 30 THEN H4CJ12=4;
```

```
/*Rename Variables*/
```

```
RENAME H4WP30 = Father_figure_in_Jail;
```

```
RENAME H4CJ1 = Subject_arrested;
```

```
RENAME H4WP38= Closeness_with_father;
```

```
RENAME H4CJ12= age_first_convicted;
```

```
/*Formatting the Categories */
```

```
PROC FORMAT;
```

```
VALUE Father_figure_in_Jail_Format
```

```
0 = "No"
```

```
1 = "Yes"
```

```
;
```

```
PROC FORMAT;
```

```
VALUE Subject_arrested_Format
```

```
0 = "No"
```

```
1 = "Yes"
```

```
;
```

```
PROC FORMAT;
```

```
VALUE Closeness_with_father_figure_Format
```

```
1 = "not close"
```

```
1 = "somewhat close"
```

```
2 = "close "
```

```
;
```

```
PROC FORMAT;
```

```
VALUE age_first_convicted_Format
```

```

0 = "never"
1 = "age 11-15"
2 = "age 15-20"
3 = "age 20-25"
4 = "age 25-30"
;

/*Bar Chart Code*/
PROC SGPLOT;
VBAR Father_figure_in_Jail/ datalabel stat=percent;
TITLE 'If father figure has went to Jail';
XAXIS DISPLAY=(nolabel);
FORMAT Father_figure_in_Jail Father_figure_in_Jail_Format.;

PROC SGPLOT; /*Bar Chart Code*/
VBAR Subject_arrested/ datalabel stat=percent;
TITLE 'If subject has been arrested';
XAXIS DISPLAY=(nolabel);
FORMAT Subject_arrested Subject_arrested_Format. ;

PROC SGPLOT; /*Bar Chart Code*/
VBAR Closeness_with_father/ datalabel stat=percent;
TITLE 'Closeness with father figure';
XAXIS DISPLAY=(nolabel);
FORMAT Closeness_with_father Closeness_with_father_figure_Format. ;

PROC SGPLOT; /*Bar Chart Code*/
VBAR age_first_convicted/ datalabel stat=percent;
TITLE 'Age subject first convicted';
XAXIS DISPLAY=(nolabel);
FORMAT age_first_convicted age_first_convicted_Format. ;

PROC SGPLOT; /*Bar Chart Code*/
VBAR Times_arrested/ datalabel stat=percent;
TITLE 'Times subject has been arrested';
XAXIS DISPLAY=(nolabel);
FORMAT Times_arrested Times_arrested_Format. ;

PROC SORT; by aid;

/*tells SAS that I want frequency tables and for what variables*/
proc freq; tables H4WP30 H4CJ2 H4CJ2 H4WP38 H4CJ12;

/*tells SAS to analyze the data*/
run;

```



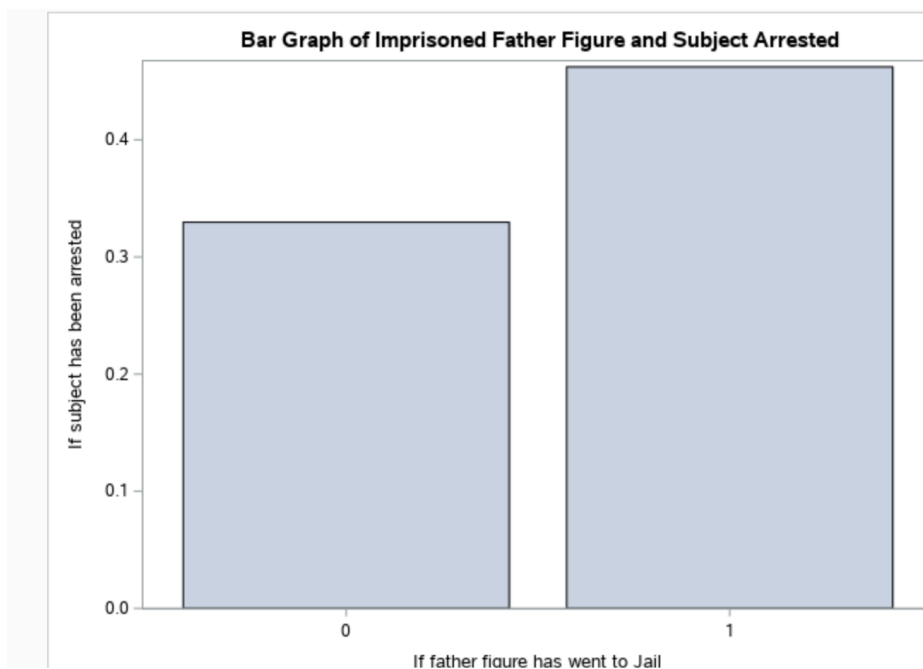
## Research Topics

Does the father figure going to jail and closeness with the father figure associated with the child be more likely to be imprisoned as well?

### A. Categorical to Categorical Variable :

Relation:

Is there a relationship between if father figure has gone to jail and their children going to jail?



Legend:

**X-axis**

0- has not gone to jail

1 - has gone to jail

**Y-axis**

The proportion of children/  
subject that has gone to  
jail

Summary:

- The explanatory variable is "if the father figure has gone to jail" and the response variable is "if the subject has been arrested".
- According to our bivariate bar graphs, children, whose father figures have gone to jail, are more likely to go to jail compared to children whose father figure didn't go to jail. It shows that if the father figure did not go to jail about 32% did not go to jail. If the father figure went to jail, about 45% of children went to jail.

SAS CODE for C → C

```

/*tells SAS where to find my data set*/
libname mydata "~/my_shared_file_links/wangc1" access=readonly;
/*tell sas which data set to use. We are using Addhelath wave4 with demographics*/
data new; set mydata.addhealth4wdemographics;

/*Labeling*/
label H4WP30 = "If father figure has went to Jail"; /* Categorical*/
label H4CJ1 = "If subject has been arrested"; /*Categorical*/
label H4CJ2 = "Times subject have been arrested"; /*Categorical*/
label H4WP38 = "Closeness with father figure"; /*categorical*/
label H4CJ12 = "Age subject first convicted"; /*Categorical*/

/*treating for missing variables*/
IF H4WP30 GE 6 THEN H4WP30 = .; /* item 6, 8, and "." will be assigned as missing value */
IF H4CJ1 GE 6 THEN H4CJ1 = .; /* item 6, 8, and "." will be assigned as missing value */
IF H4CJ2 EQ 7 THEN H4CJ2 = 0; /* reassign legitimate skip as being arrested 0 time */
ELSE IF H4CJ2 GE 6 THEN H4CJ2 = .; /* item 6, 8, and "." will be assigned as missing value */

IF H4WP38 GE 6 THEN H4WP38= .; /* item 6, 8, and "." will be assigned as missing value */
ELSE IF H4WP38 LE 2 THEN H4WP38=1;
ELSE IF H4WP38 EQ 3 THEN H4WP38=2;
ELSE IF H4WP38 LE 5 THEN H4WP38=3;

IF H4CJ12 = 97 THEN H4CJ12 = 0; /* reassign legitimate skip as being arrested 0 time */
ELSE IF H4CJ12 = 96 THEN H4CJ12= .;
ELSE IF H4CJ12 = 98 THEN H4CJ12= .;
ELSE IF H4CJ12 LE 15 THEN H4CJ12= 1;
ELSE IF H4CJ12 LE 20 THEN H4CJ12=2;
ELSE IF H4CJ12 LE 25 THEN H4CJ12=3;
ELSE IF H4CJ12 LE 30 THEN H4CJ12=4;

/*Rename Variables*/
RENAME H4WP30 = Father_figure_in_Jail;
RENAME H4CJ1 = Subject_arrested;
RENAME H4WP38= Closeness_with_father;
RENAME H4CJ12= age_first_convicted;
RENAME H4CJ2= Times_arrested;

/*Formatting the Categories */
PROC FORMAT;
VALUE Father_figure_in_Jail_Format
0 = "No"
1 = "Yes"
;

PROC FORMAT;
VALUE Subject_arrested_Format
0 = "No"
1 = "Yes"
;

```



```

PROC FORMAT;
VALUE Closeness_with_father_figure_Format
  1 = "not close"
  2 = "somewhat close"
  3 = "close "
;

PROC FORMAT;
VALUE age_first_convicted_Format
  0 = "never"
  1 = "age 11-15"
  2 = "age 15-20"
  3 = "age 20-25"
  4 = "age 25-30"
;

PROC FORMAT;
VALUE Times_arrested_Format
  0 = "never"
  1 = "one time"
  2 = "More than once"
;

/*Code for Bivariate Bar Graph (C to C)*/

Proc SGPLOT; vbar Father_figure_in_Jail /response=Subject_arrested stat=mean;

Title 'Bar Graph of Imprisoned Father Figure and Subject Arrested';

PROC SORT; by aid;

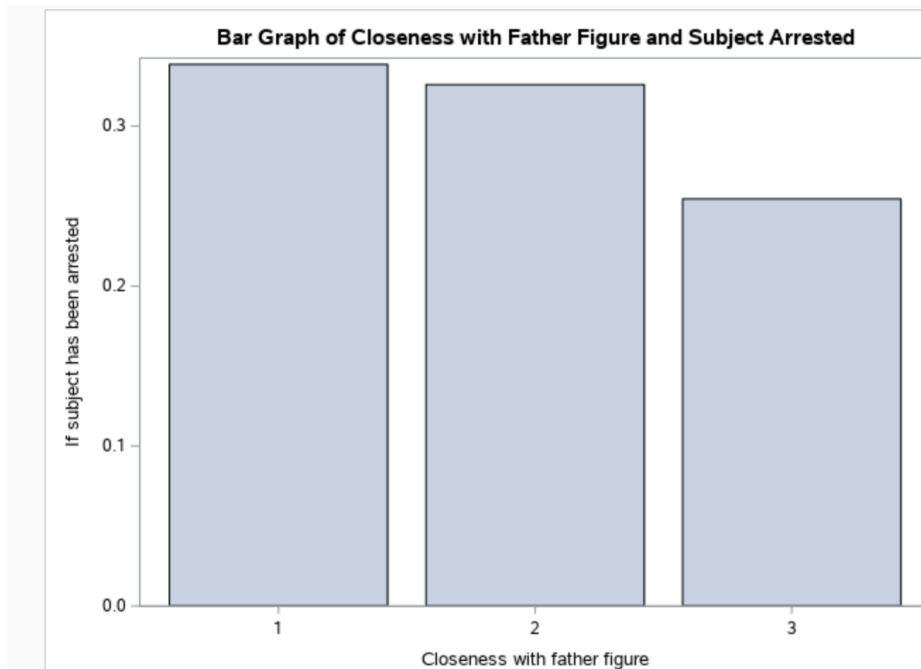
/*tells SAS to analyze the data*/
run;

```

## B. Categorical to Categorical Variable :

Relation:

Is there a relationship between closeness with one's father figure and themselves going to jail?



Legend:

**X-axis**

1- not close  
2-somewhat close  
3-close

**Y-axis**

The proportion of children/  
subject that has gone to  
jail

Summary:

- C. The explanatory variable is “closeness with father figure” and the response variable is “if the subject has been arrested”.
- D. According to our bivariate bar graphs, children, who are closer to their father figures, are less likely to go to jail compared to children who are not close. It shows that subjects that aren't close, are 35% to get arrested. Subjects are somewhat close, with 33% to get arrested. Meanwhile, subjects who have a close bond with their father figures are the least to go to jail at 25%.

SAS CODE for C → C

```
/*tells SAS where to find my data set*/
libname mydata "~/my_shared_file_links/wangc1" access=readonly;
/*tell sas which data set to use. We are using Addhelath wave4 with demographics*/
data new; set mydata.addhealth4wdemographics;

/*Labeling*/
label H4WP30 = "If father figure has went to Jail"; /* Categorical*/
label H4CJ1 = "If subject has been arrested"; /*Categorical*/
label H4CJ2 = "Times subject have been arrested"; /*Categorical*/
label H4WP38 = "Closeness with father figure"; /*categorical*/
label H4CJ12 = "Age subject first convicted"; /*Categorical*/
```

/\*treating for missing variables\*/

```
IF H4WP30 GE 6 THEN H4WP30 = .; /* item 6, 8, and "." will be assigned as missing value */
IF H4CJ1 GE 6 THEN H4CJ1 = .; /* item 6, 8, and "." will be assigned as missing value */
IF H4CJ2 EQ 7 THEN H4CJ2 = 0; /* reassign legitimate skip as being arrested 0 time */
ELSE IF H4CJ2 GE 6 THEN H4CJ2 = .; /* item 6, 8, and "." will be assigned as missing value */
```

```
IF H4WP38 GE 6 THEN H4WP38= .; /* item 6, 8, and "." will be assigned as missing value */
ELSE IF H4WP38 LE 2 THEN H4WP38=1;
ELSE IF H4WP38 EQ 3 THEN H4WP38=2;
ELSE IF H4WP38 LE 5 THEN H4WP38=3;
```

```
IF H4CJ12 = 97 THEN H4CJ12 = 0; /* reassign legitimate skip as being arrested 0 time */
ELSE IF H4CJ12 = 96 THEN H4CJ12= .;
ELSE IF H4CJ12 = 98 THEN H4CJ12= .;
ELSE IF H4CJ12 LE 15 THEN H4CJ12= 1;
ELSE IF H4CJ12 LE 20 THEN H4CJ12=2;
ELSE IF H4CJ12 LE 25 THEN H4CJ12=3;
ELSE IF H4CJ12 LE 30 THEN H4CJ12=4;
```

/\*Rename Variables\*/

```
RENAME H4WP30 = Father_figure_in_Jail;
RENAME H4CJ1 = Subject_arrested;
RENAME H4WP38= Closeness_with_father;
RENAME H4CJ12= age_first_convicted;
RENAME H4CJ2= Times_arrested;
```

/\*Formatting the Categories \*/

```
PROC FORMAT;
VALUE Father_figure_in_Jail_Format
0 = "No"
1 = "Yes"
;
```

```
PROC FORMAT;
VALUE Subject_arrested_Format
0 = "No"
1 = "Yes"
;
```

```
PROC FORMAT;
VALUE Closeness_with_father_figure_Format
1 = "not close"
2 = "somewhat close"
3 = "close "
;
```

```
PROC FORMAT;
VALUE age_first_convicted_Format
0 = "never"
1 = "age 11-15"
```

```

2 = "age 15-20"
3= "age 20-25"
4= "age 25-30"
;

PROC FORMAT;
VALUE Times_arrested_Format
0 = "never"
1 = "one time"
2 = "More than once"
;

/*Code for Bivariate Bar Graph (C to C)*/

Proc SGPLOT; vbar Closeness_with_father /response=Subject_arrested stat=mean;

Title 'Bar Graph of Closeness with Father Figure and Subject Arrested';

PROC SORT; by aid;

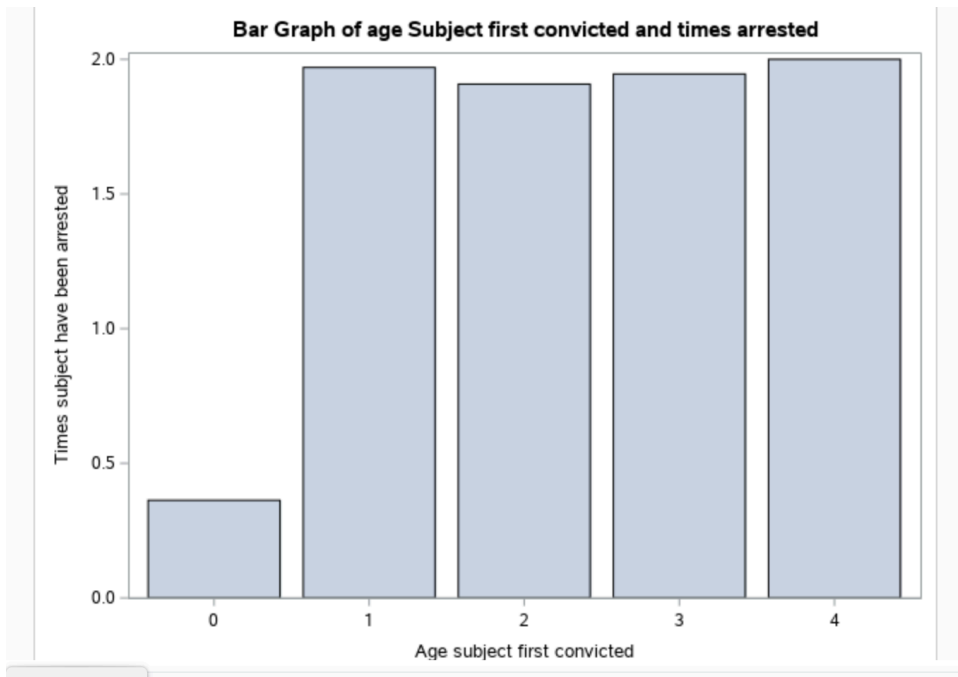
/*tells SAS to analyze the data*/
run;

```

### C. Categorical to Categorical Variable :

Relation:

Is there a relationship between age first convicted and number of times going to jail?



Legend:

X-axis

0- never convicted

1- ages 11 to 15

2- ages 15 to 20

3-ages 20 to 25

4- ages 25 to 30

Y-axis

Times arrested

Summary:

- E. The explanatory variable is "age first convicted" and the response variable is "Times subject has been arrested"
- F. According to our bivariate bar graphs, the result of times being arrested is more or less similar for all age groups. Subjects who get arrested at a young age like 11 to 15 are likely to get arrested again more than 1 times. This is the same for people ages 25 to 30 when they were first convicted. People ages 15 to 20 and 20 to 25 have a slightly lesser value compared to age group 11 to 15 and 25 to 30.