week_2_submission

Lindsey Greenhill

2/11/2022

Question 1

```
## `summarise()` ungrouping output (override with `.groups` argument)
## `summarise()` ungrouping output (override with `.groups` argument)
```

Part a and b

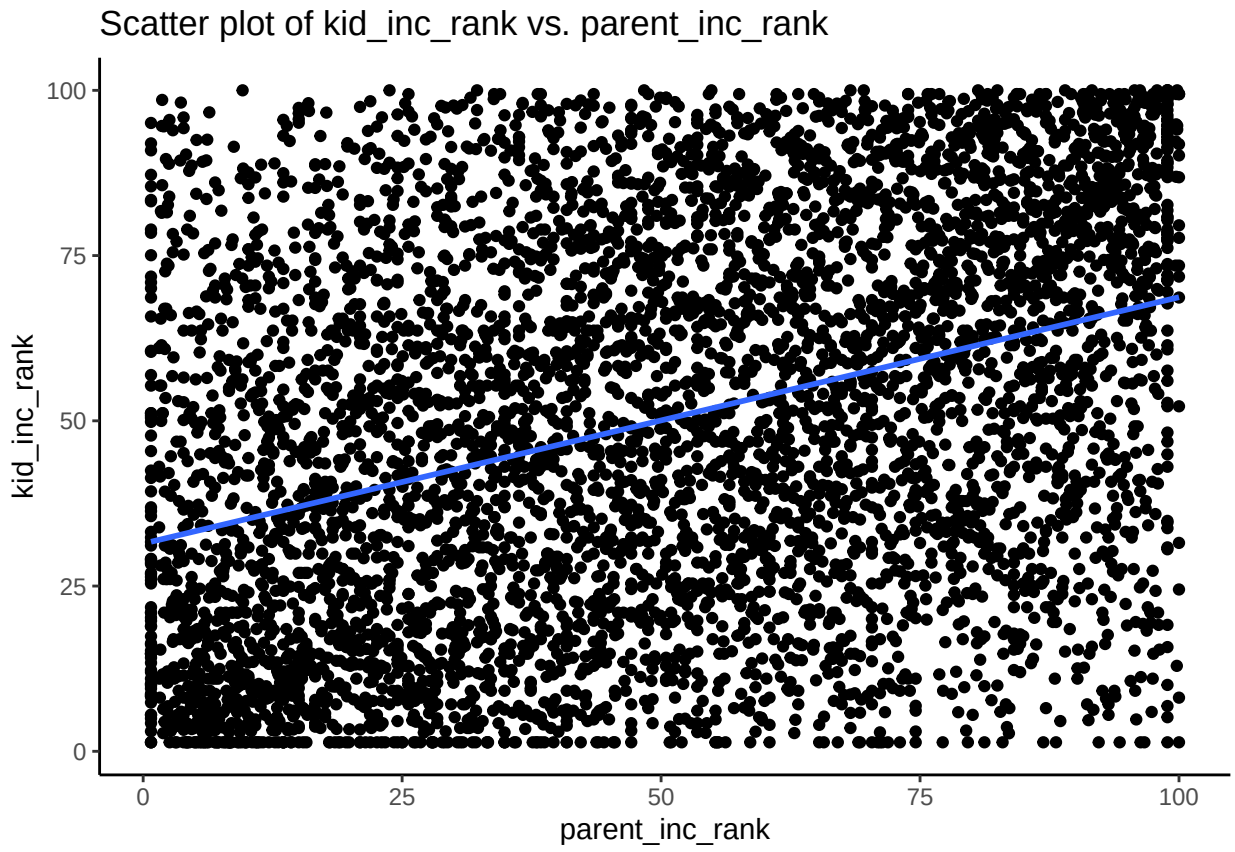
18.18% of the children whose parents had a high school degree or less went on to receive a college degree or higher. The standard deviation os this statistic is 38.6%. With this is mind, 18.18% seems close to 20.9% because 20.9% is well within one standard deviation of 18.2%.

Question 2

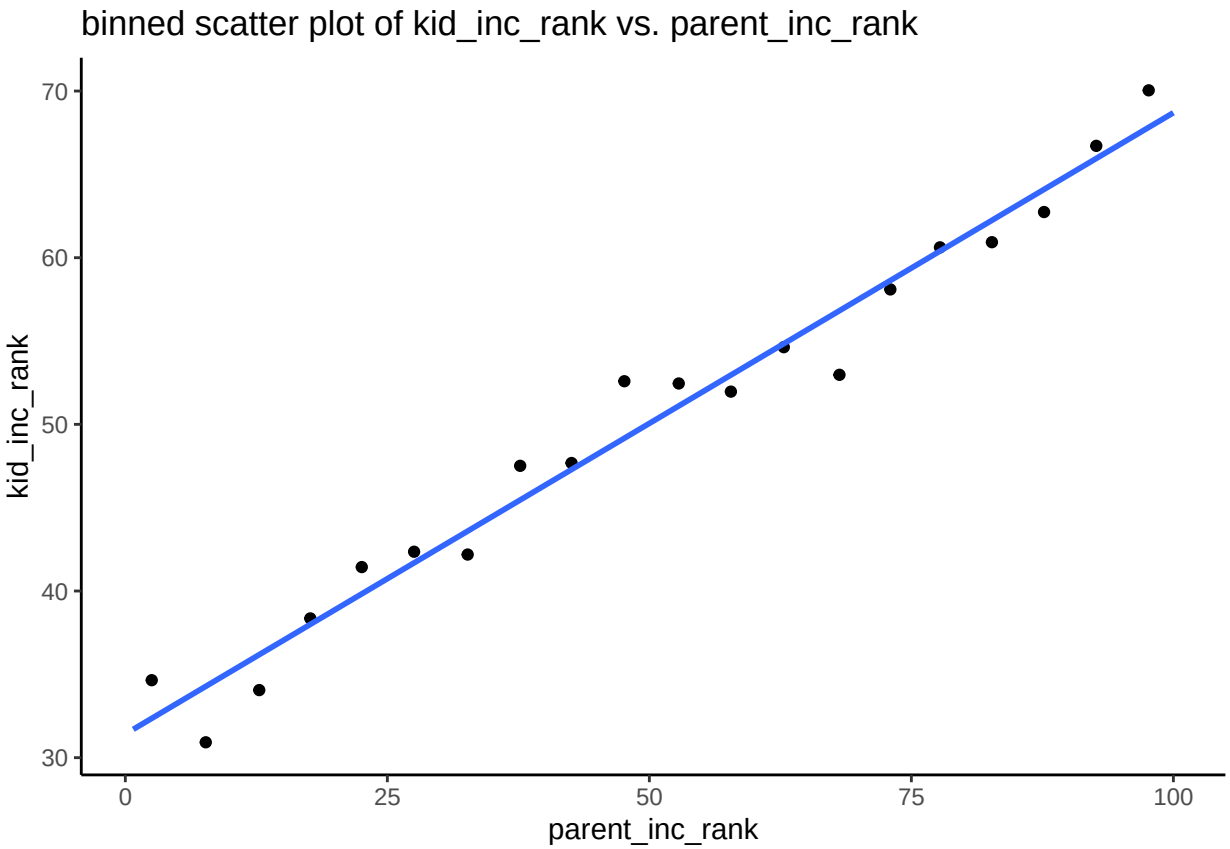
Ranks generated in code.

Question 3

```
## `geom_smooth()` using formula 'y ~ x'
```




```
## `geom_smooth()` using formula 'y ~ x'
```



I think that the binned scatter plot is more useful in this instance because it is much easier to see the relationship between the two variables. In the basic scatter plot, many of the points overlap and it is difficult to discern any clear pattern. With that being said, the scatterplot also probably gives a more clear picture of the variability in the data.

Question 4

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Fri, Feb 11, 2022 - 11:38:26

Table 1:

	Dependent variable:
	kid_inc_rank
parent_inc_rank	0.373^{***}
	(0.013)
Constant	31.418^{***}
	(0.725)
Observations	5,486
R^2	0.139
Adjusted R^2	0.139
Residual Std. Error	26.833 (df = 5484)
F Statistic	884.774^{***} (df = 1; 5484)
Note:	*p<0.1; **p<0.05; ***p<0.01

The intercept of the regression = 31.418. The estimated slope = .372.

Question 5

Part a

Statistic 1 for the sample = 40.7383. This is less than the value Chetty found using the full population data.

Part b

Statistic 2 for the sample = 37.28. This value is higher than the value Chetty found using the full population data.

Part c

Statistic 3 for the sample = 7.37%. This value is less than the value Chetty found using the full population data.

Part d

Statistic 4 for the sample = 50.9% (adjusting for inflation). This value is slightly higher than the value Chetty calculated.

Question 6

Black Men Stats

- Statistic 1 = 33.03
- Statistic 2 = 29.43
- Statistic 3 = 5.785%
- Statistic 4 = 48.9%

White Men Stats

- Statistic 1 = 46.783
- Statistic 2 = 26.692
- Statistic 3 = 10.27%
- Statistic 4 = 48.3%

Comparison

Mobility seems higher for White men than Black men when comparing statistics 1, 2, and 3. Mobility seems higher for Black men than for White men when comparing statistic 2 and 4.

Question 7

Part a

The arithmetic mean of kid_inc_rank for children with parent_inc_rank between 21.5 and 27.5 (inclusive) = 40.74838. This is pretty much the same value as Statistic 1 calculated in 5a (40.7383.

Part b

Statistic 1 for my random sample = 37.278

Part c

The mean of the kid_inc_rank for children with parent_inc_rank between 21.5 and 27.5 (inclusive) = 25.116 for my random sample.

Part d

The value I calculated in 7b is closer than the value I calculated in 7c to Chetty's estimate.