**Methodology**

***Data source and sample***

This study uses the combined 2003-2019 American Time Use Surveys (ATUS) dataset, conducted by the U.S. Department of Labor’s Bureau of Labor Statistics. Respondents are asked to provide detailed information about their activities over the last 24 hours. ATUS data include information collected from 436,500 interviews conducted from 2003 through 2019 and can be linked to the U.S. Current Population Survey (CPS), which includes information about employment, earnings, and demographic data. ATUS participants are selected from CPS households, using stratification by household composition and race/ethnicity, and responses are weighted to account for stratification, non-response, and day of the week covered by the time-use questionnaire.

***Measures***

Several measures were used as proxies for *time poverty* in this study. *Discretionary time* was used to denote time available to be spent on education and on other activities such as leisure, volunteering or exercise; *education time* was used to denote time actually spent on education (class attendance, homework, commuting and education-related administrative tasks); and *free time* was used to denote discretionary time remaining after deducting education time. Each of these was measured in minutes per day and treated as a continuous variable.

The primary independent variable of interest was parenthood, which was measured in several different ways, including a binary measure of whether a student had children, the number of children that they had, and the age of their youngest child. Control variables were included in the analysis to account for factors that may significantly impact time poverty or correlate strongly with educational outcomes, including: gender; race/ethnicity; age; citizenship; marital/live-in-partner status and the number of other adults in the household; income; time spent on paid work; and time spent on “housework”.

**Research questions:**

1. Do student parents have less discretionary time available for college than non-parents?
   1. How does this vary based on the number of children that they have?
   2. How does this vary based on the age of their youngest child?
2. Do student parents have less free time than non-parents?
   1. How does this vary based on the number of children that they have?
   2. How does this vary based on the age of their youngest child?
3. Do student parents spend less time on their education than non-parents?
   1. How does this vary based on the number of children that they have?
   2. How does this vary based on the age of their youngest child?
   3. If we only compare student parents with the same amount of discretionary time available for college as non-parents, do they spend less time on their education?
      1. How does this vary based on the number of children or the age of their youngest child?
4. Are student parents more likely to enroll part-time in college than non-parents?
   1. How does this vary based on the number of children that they have?
   2. How does this vary based on the age of their youngest child?
   3. If we only compare student parents with the same amount of discretionary time available for college as non-parents, are they still more likely to enroll PT?
      1. How does this vary based on the number of children or the age of their youngest child?

**Results**

**These models include only the regression coefficients (not the intercepts) for each model including only the variables listed here. So, for example, -60 is the coefficient for a model in which having a child is a binary independent variable and discretionary time is the continuous dependent variable. For the purposes of this exercise, the standard error can be ignored, because the p-values have been provided for each coefficient. What can you say about each of these coefficients? Try to write your results in a way that an intelligent non-expert could understand, even if you also include more formal statistical language to describe some of the trends (e.g., when talking about statistical significance). Copy this table into your google document and then put your discussion of the results below it.**

|  |  |  |
| --- | --- | --- |
| Table 1. Linear regression model coefficients showing the relationship between parenthood and discretionary time, education time, free time, and enrollment intensity, by gender, base models include only those variables listed here (ATUS 2003-2019) | | |
|  | discretionary time | free |
| time |
|  | coeff. | coeff. |
|  | SE | SE |
| has a child | -60.0\*\*\* | -30.5\*\*\* |
| (6.2) | (5.1) |
| number of children | -28.6\*\*\* | -16.4\*\*\* |
| (2.8) | (2.3) |
| age of youngest child (*ref gp: no child under 13*) | |  |
| under 1 year | -147.1\*\*\* | -90.3\*\*\* |
|  | (13.1) | (11.1) |
| 1-5 yrs. | -112.2\*\*\* | -70.0\*\*\* |
|  | (7.7) | (6.0) |
| 6-12 yrs. old | -67.2\*\*\* | -34.9\*\* |
|  | (8.6) | (7.1) |
| **·** p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001 | | |
| Standard errors calculated using successive difference replication with 160 replicates, weight used is TUFNWGTP. Only college students in the ATUS sample were used for analysis (*n*=11,195). | | |
| *Source:* U.S. Department of Labor, Bureau of Labor Statistics, ATUS 2003-2019. | | |

**In this table, models were run twice, once without discretionary time, and once with discretionary time added as an independent variable. So, for example, -29.5 is the coefficient for a model in which having a child is a binary independent variable and education time is the continuous dependent variable; once discretionary time is added as an independent variable to the model, this coefficient changes to -0.49. For the purposes of this exercise, the standard error can be ignored, because the p-values have been provided for each coefficient. What can you say about each of these coefficients? Try to write your results in a way that an intelligent non-expert could understand, even if you also include more formal statistical language to describe some of the trends (e.g., when talking about statistical significance). Copy this table into your google document and then put your discussion of the results below it.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 2. Discretionary time as a mediator of the relationship between parenthood and time spent on education: linear regression and linear probability (for PT enrollment) models of education time and part-time enrollment intensity, with and without controlling for discretionary time, base models including only those variables listed here (ATUS 03-19) | | | | | | | | | |
|  | education time  no disc time control | | education time disc time control | | PT enrollment  no disc time control | | | PT enrollment  disc time control | |
|  | coeff  (SE) | sig. | coeff  (SE) | sig. | coeff  (SE) | sig. | coeff  (SE) | | sig. |
| have children | -29.5  (5.4) | \*\*\* | -0.49  (4.13) |  | 0.07  (0.01) | \*\*\* | 0.05  (0.01) | | \*\*\* |
| disc. time  (min/day) |  |  | 0.48  (0.01) | \*\*\* |  |  | -0.0005  (0.00002) | | \*\*\* |
| number of children | -12.2  (2.4) | \*\*\* | 1.68  (1.79) |  | 0.04  (0.05) | \*\*\* | 0.03  (0.05) | | \*\*\* |
| disc. time (min/day) |  |  | 0.48  (0.01) | \*\*\* |  |  | -0.0005  (0.00002) | | \*\*\* |
| age of youngest child *(ref gp: no child under 13)* | | | | | | | | |  |
| under 1 | -56.8  (11.1) | \*\*\* | 14.8  (8.9) | **·** | 0.18  (0.03) | \*\*\* | 0.12  (0.03) | | \*\*\* |
| 1-5 yrs old | -42.1  (6.5) | \*\*\* | 12.5  (4.8) | \*\* | 0.17  (0.02) | \*\*\* | 0.12  (0.02) | | \*\*\* |
| 6-12 yrs old | -32.3  (7.1) | \*\*\* | 0.4  (5.5) |  | 0.11  (0.02) | \*\*\* | 0.08  (0.02) | | \*\*\* |
| disc. time |  |  | 0.49 | \*\*\* |  |  | -0.0004 | | \*\*\* |
| (min/day) |  |  | (0.01) |  |  |  | (0.00003) | |  |
| · p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001  Standard errors calculated using successive difference replication with 160 replicates, weight used is TUFNWGTP. College students in the ATUS sample were used to calculate models (*n*=11,195).  *Source:* U.S. Department of Labor, Bureau of Labor Statistics, ATUS 2003-2019 | | | | | | | | | |