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REVISING FINANCIAL AID TO IMPROVE THE OUTCOMES OF STUDENT PARENTS

How insufficient childcare and extra work hours leads to poorer college outcomes

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Key Takeaways:

Students with children are significantly less likely to persist in college, and accumulate fewer credits than non-parents, even after controlling for other factors.

Student parents, particularly women, have lower quantity and quality of time to devote to their studies, largely because of childcare responsibilities (and to a lesser extent because of the need to seek paid work).

The time poverty of student parents entirely explains their lower rates of credit completion, and explains a significant proportion of their lower college persistence rates.

Providing on-campus childcare for student parents, especially those with pre-school-aged children, is critical to improving educational outcomes for this group.

Revising federal financial formulas to better include the actual costs of childcare (and the living expenses of dependent children) is also critical to improving the outcomes of student parents.

Student parents are a significant and growing minority group in higher education and are at higher risk of college dropout than students without children. More than a quarter of U.S. undergraduates have dependent children, with higher proportions among low-income first-generation students (36%) and minorities (e.g. 39% for black undergraduates) (U.S. Department of Education, 2012). Even though on average student parents earn higher G.P.A.s, they are significantly more likely to drop out of college; data show that 52% of students with children leave college within six years of initial enrollment, compared to only 32% of non-parents (U.S. Department of Education, 2009). Moreover, the gap in dropout rates between parents and non-parents is larger for women than men, suggesting parenthood may increase dropout risk more strongly for women than men (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2009; 2012).

This research brief summarizes results presented in more detail in the following paper(s):
Wladis, C., Conway, K. M., and Hachey, A. C. *Student Parents: Too Time-Poor for College?* Manuscript submitted for publication.
Wladis, C., Conway, K. M., and Hachey, A. C. *Time Poverty and Parenthood: Who has Time for College?* Manuscript submitted for publication.

Parents are also more time-poor than non-parents, with mothers on average more time-poor than fathers, likely because mothers often provide a higher proportion of childcare and household work (Chatzitheochari & Arber, 2012; Kalenkoski et al., 2011; Pew Research Center, 2013; Reynolds & Banks, 2010; Venn, Arber, Meadows, & Hislop, 2008;). Parents may also have a lower quality of time available for their studies, for example at less useful times (e.g. late at night when children are asleep) or at times that require multi-tasking (e.g. childcare) (Fagan, 2001; Mattingly & Bianchi, 2003). Parents on average spend more hours on unpaid work and are less satisfied with their work/life balance (Pew Research Center, 2013).

Research shows that the quantity and quality of time available for academic work is directly related to college success (e.g. Astin, 1993; Michaels & Miethe, 1989; Svanum & Bigatti, 2006). Thus, it is likely that the time limitations that parents face lead directly to their lower rates of college persistence and completion (Choy, 2002; Horn & Carroll, 1996; U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2009). However, this link has never been rigorously explored in educational research.

Methods

This research used nationally representative data from the 2003-2013 American Time Use Surveys (ATUS) and the 2004-2009 Beginning Postsecondary Students Survey (BPS), as well as survey and institutional research data collected from the two- and four-year colleges at the City University of New York (CUNY). Analyzing all three datasets allows us to explore different aspects of the relationship between parenthood, time use and college outcomes, and also serves as a robustness check by exploring the extent to which trends from CUNY are reflected in nationally-representative datasets.

In this study we use the term *time poverty* to refer to both the quantity and quality of time that a student has to dedicate to their studies. Several measures were used across the ATUS and CUNY datasets to measure quantity of time: *Discretionary time* is defined to be the time available to be spent on education (or on other leisure activities) after all paid work, childcare, and household work has been accounted for; *education time* is defined to be the time actually spent on education activities, including attending class, studying, and attending to administrative duties related to college enrollment (e.g. visiting the financial aid office); and *free time* is defined to be the amount of discretionary time remaining after deducting education time.

Part-time enrollment is measured in all three datasets, and is a potential partial (although imperfect) proxy for the quantity of time available for college—this measure is much less precise than measuring discretionary or education time directly, but is much more widely available than these measures and therefore may in some cases be a useful proxy variable for targeting some groups of time-poor students, which is why it is explored here in addition to direct measures of discretionary time.

Measures of the quality of a student's time for their studies were used in the CUNY dataset and included a scale derived from Likert-scale questions rating the *quality* of time available for academic work; these scales were based on previously validated instruments and were validated with the CUNY population before data analysis (Wladis, Conway, & Hachey, n.d.a; Wladis, Conway, & Hachey, n.d.b).

College outcomes were measured as: *college persistence* (i.e. rates of re-

enrollment in college at one year [BPS], or in the subsequent spring semester [CUNY]) and *academic momentum* (i.e. number of credits earned by the end of the first year [BPS], or by the end of the fall semester [CUNY]), which has been shown to correlate with higher rates of college persistence and graduation (Attewell, Heil, & Reisel, 2012).

In the national datasets, control variables were: gender, race/ethnicity, age, citizenship, marital status, G.P.A, income, parental education, time spent on paid work, and time spent on housework (excluding childcare). In the CUNY dataset, control variables included: gender, race/ethnicity, age, presence of spouse or partner in the household, immigration status, ESL status, income, parental education, GPA, college level, first-time freshman status.

Results and Discussion

Student parents are time poor, and mothers are more time poor than fathers

Student parents were found to have significantly less discretionary and free time and to spend less time on education in both the ATUS and CUNY datasets, and to be significantly more likely to enroll part-time, with the impact of parenthood on time stronger when children are younger (see Figure 1).

Even after controlling for other variables, female students had significantly less discretionary time than men, regardless of their parental status or the age of their children. Discretionary time was highest for those without children under age 13 years, and lowest for parents with the youngest children, and this trend was significant. The gender gap in discretionary time was significantly larger for parents with pre-school-aged children than for students with no children under 13.

Men with children aged 1-12 years spent significantly less time on their education than men with no children under 13. In contrast, women spent significantly less time on their education when they had children under the age of one year, but with children age one year and older, they spent the same amount of time on their education as those without children (even though they had lower levels of discretionary time). The difference in trends between men and women was significant, and is not explained by differences in work hours or time spent on unpaid housework (excluding childcare) since these are controlled for in the model.

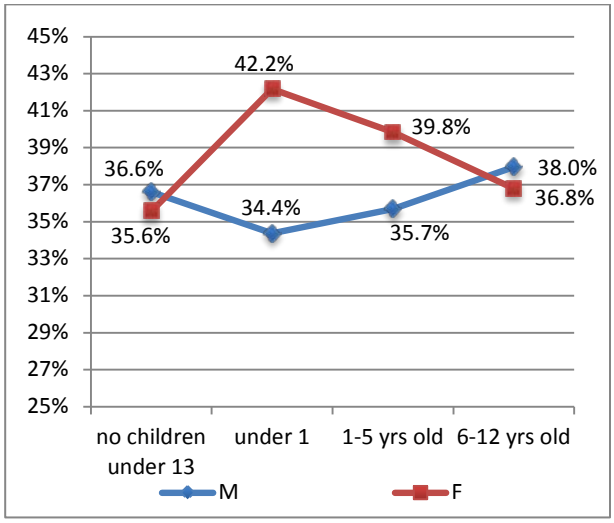

Figure 1. Predicted probability of part-time enrollment by age of youngest child and gender, while accounting for control variables (ATUS 03-13)

Women had significantly less free time left over after dedicating time to their studies. Both men and women with children under age one year had significantly less free time than others of their gender. However men with children over age one year had roughly the same free time as men without children. In contrast, women with children up to 12 years old still had less free time than women with older children or no children. These differences in these patterns by gender were significant.

Less time for education

Discretionary time was a highly significant predictor of time spent on education. After controlling for discretionary time, women with children of all ages spent

significantly *more* time on education than comparable men. Moreover, after controlling for discretionary time, parents of young children spent significantly *more* time on education than their peers with older children or no children—the relationship between the age of the youngest child and the amount of time spent on education was reversed. Thus, the lower rates of time spent on education by parents with young children was entirely accounted for by their lower rates of discretionary time.

Parents with children under one spent almost half an hour less per day on their college education, and parents with children 1-5 years old spend about 15 minutes less per day, compared to students without children under 13—but this relationship was almost exactly reversed after controlling for available discretionary time. (For parents with children 6-12 years old, the relationship was similar, but the differences were smaller and not significant.)

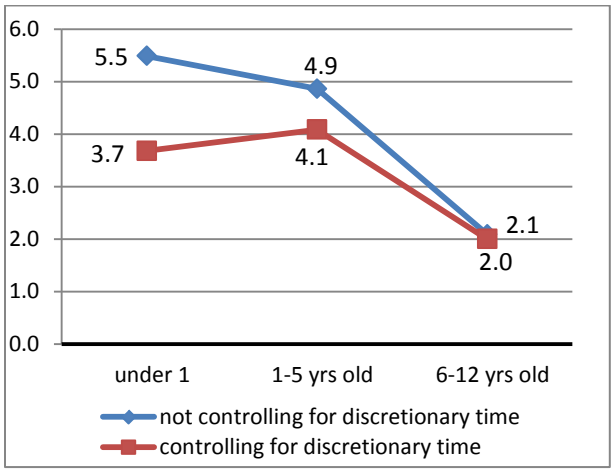

Figure 2. Predicted relative difference in part-time enrollment (in percentage points) by age of youngest child, compared to students with no children under 13, with and without controls for discretionary time (ATUS 03-13)

Controlling for discretionary time also reduced the strength of the relationship between having children under age 13 years and enrolling part-time, indicating that discretionary time explains part of the difference (but perhaps not all) in the part-time enrollment rates of parents versus non-parents (see Figure 4). Overall, total available discretionary time was found to strongly and significantly mediate the relationship of parental status with both time spent on education and part-time enrollment.

Childcare explains the time poverty of parents

Similar to the results found with the ATUS dataset, in the CUNY dataset, student parents with pre-school-aged children had significantly less discretionary time and rated the quality of time they had for their studies as significantly lower than non-parents.

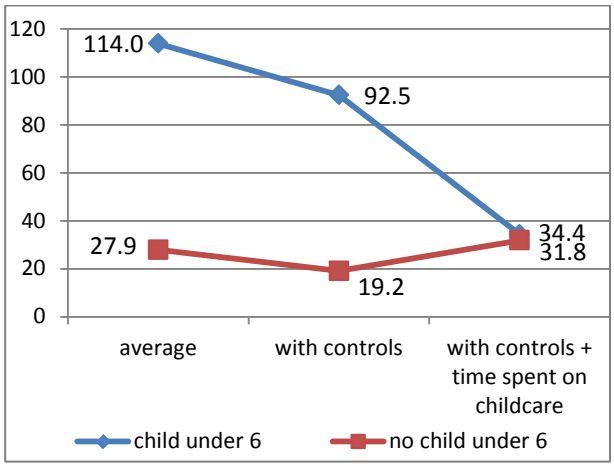

Figure 3. Predicted total non-discretionary time (hr/wk) by parental status, controlling for time spent on childcare, for reference groups (ATUS 03-13)

Differences in discretionary time were entirely explained by the time that students with pre-school-aged children spent on childcare, with time spent on paid work explaining some (although much less) of this difference as well (see Figure 3).

The difference in rated quality of time between parents of pre-school-aged children and students with older or no children was also significantly reduced after controlling for time spent on childcare; however, a gap still remained, suggesting that parents also have lower quality of time available for their studies even when they have the same

amount of time. This may be because parents are more likely to be interrupted or to have trouble finding larger unbroken blocks of time to dedicate to their studies than non-parents—further studies are needed to explore in more detail how parenthood impacts the quality of a student's time for college work.

The time poverty of student parents explains their poorer college outcomes

Students with pre-school-aged children accumulated significantly fewer credits by the end of the fall semester and were significantly less likely to re-enroll in college in the spring. Both measures of time quality and total non-discretionary time were individually significant predictors of both these credit accumulation and persistence patterns, and adding these factors to the model substantially reduced the strength of the relationship between parental status and college outcomes (see Figure 4).

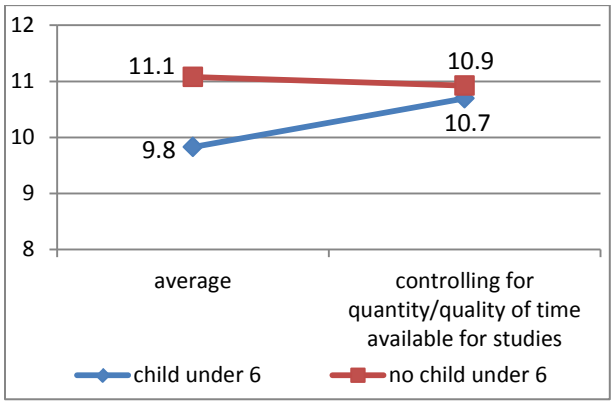

Figure 4. Predicted credits earned that semester by parental status, controlling for time spent on childcare, for reference groups (CUNY)

Both quality of time and total non-discretionary time had a significant direct effect on college persistence and credit accumulation, with the effect particularly strong for credit accumulation. In combination, they mediate this relationship so that the direct effect of parental status on persistence and credit accumulation is no longer significant ($\alpha = 0.05$).

The quantity and quality of time available for college explained 65% of the differences in college persistence and 85% of the differences in credit accumulation between students with children under six years old and those with older or no children. This suggests that the differences in persistence between parents of young children and students with older or no children can largely be explained by the lower quantity/quality of time that student parents have for their studies (although other factors likely also contribute to some of the differences in college persistence). Differences in credit accumulation could be entirely explained by the time poverty faced by student parents.

Similar to results found in the ATUS and CUNY datasets, in the BPS dataset parents were significantly more likely to dropout and to accrue fewer credits by the end of their first-year (this pattern persisted even when controlling for demographic factors, SES, enrollment intensity, work hours, and G.P.A.). In addition, parenthood was a significant predictor of part-time enrollment and further, part-time enrollment significantly mediated the relationship between parenthood and both first-year persistence and total credit accumulation. While results from the BPS dataset cannot link time use directly to college outcomes, these patterns observed in the BPS dataset reinforce those found with both ATUS and CUNY data, suggesting that the results from CUNY data may be generalizable to a wider national population (although further research is needed to confirm this more rigorously).

In fact, the trends observed with CUNY data likely *underestimate* the patterns in other parts of the U.S. for several reasons: for example, New York City expanded universal pre-kindergarten in the fall in which this data was collected, possibly reducing the strength of the relationship

between parental status, time poverty, and college outcomes for parents with children in the four-to-five-year-old age group. In addition, New York state provides a higher proportion of on-campus childcare than 47 other U.S. states (Eckerson et al., 2016), and New York City also spends more on public benefits than any other U. S. municipality. Thus the relationship between parental status and time poverty (and thus its impact on college outcomes) is likely larger on average at other colleges in other cities and states.

Implications

Results from this study suggest that student parents, particularly those with preschool-aged children, dropped out of college at higher rates and accumulated credits at slower rates than students without pre-school-aged children, largely because they had less time (and lower quality of time) to devote to their studies. These higher rates of time poverty among student parents could largely be explained by time spent on childcare, although time spent on paid work explained some of the difference as well.

This points towards two major policy recommendations:

1) Increasing the availability of affordable and convenient childcare for student parents, and;
2) Modifying the federal financial aid process to better reflect the needs of student parents.

Providing affordable and convenient childcare for student parents

Time spent on childcare significantly predicts the college persistence and credit accumulation of student parents. However, only 39% of student parents in the CUNY sample agreed or strongly agreed that the childcare available to them provided them with the time they needed for their schoolwork. Nationally, between 30-37% of community college students report spending significant time on dependent care, and a similar percentage (29%) cite caring for dependents as a potential reason for not reenrolling (Center for Community College Students Engagement, 2014).

As the number of student parents has grown over the last 15 years, the amount of available childcare on campus in the U.S. has actually shrunk (Gault, Reichlin, Reynolds, & Froehner, 2014). In 2015, only 20.7% of all two- and four-year colleges (U.S. Department of Education, 2016) offered on-campus childcare, and even those colleges that offer on-campus daycare centers often have far too few slots to meet student demand. As a result, current on-campus childcare offerings at two- and four-year colleges in the U.S. meet only about 5% of student need (Miller Gault & Thorman, 2011).

In addition, current financial aid procedures and calculations put students with young children at a particularly strong disadvantage because they do not consistently provide sufficient support for the actual cost of childcare, and they do not account for the additional time poverty of student parents that occurs when they must work extra hours to pay for the living expenses of their dependents (which are not covered by federal financial aid).

Overhauling financial aid to meet the needs of student parents

Costs associated with attending college are included in a student's *cost of attendance* (COA); this number is crucial in financial aid calculations as it determines the maximum amount of aid for which a student can qualify. Costs for childcare are intended to be included in the COA for students who have children; however, there is currently no requirement that these costs be automatically included, or that they be sufficiently high to reflect actual or reasonable costs for dependent care in the locality. In addition, living costs included in

the COA are for the student only, and not their dependents; this is problematic because it fails to recognize the time poverty caused when student parents have to work additional hours to pay for their children's living expenses which are not covered by financial aid.

The only large-scale research on college calculations of COAs has investigated how institutions calculate living expenses; this research revealed widespread inconsistencies in calculation methods and significant incidence of underestimation of actual costs (Kelchen, Goldrick-Rab, & Hosch, 2017), so it is likely that college calculations of dependent care costs are inconsistent and underestimated as well.

Anecdotal evidence suggests that many colleges do not systematically add dependent care costs to the COAs of student parents, but instead require students to file special forms to request that childcare be added as a special exception to their COA, something that is at the discretion of the financial aid officer and which cannot be appealed (Federal Student Aid, 2017; Kelchen et al., 2017). This adds an extra burden on student parents and likely stems from the fact that the FAFSA does not ask students any questions about the ages or number of their dependent children and therefore colleges are not automatically provided with the information necessary to calculate child care expenses.

Furthermore, federal guidance on how childcare expenses should be calculated for the COA does not require that these expenses reflect actual or reasonable costs for the very specific age of the child, number of children, standard academic expectations of time commitment in college, or local market rates for licensed care. While the guidelines state that the age and number of children should be used to calculate this cost (Federal Student Aid, 2017), how this should be done is not specified—for example, many colleges only distinguish broad age groups (e.g. whether the student has a child under 13 or not) even though the hourly cost of childcare for an infant can be many times higher than for a school-aged child. For example, in the New York City metro area where CUNY is located, the hourly cost of care of a pre-school-aged child in a licensed daycare center is roughly double that of a school-aged child (New York State Office of Children and Family Services, 2016); after accounting for the 31.7 hrs/wk that a school-aged child is provided free care in public school in New York, the total weekly cost of 40 total hours of childcare is almost nine times higher for a pre-school-aged child than a child in school (i.e. $655/wk versus $75/wk).

In addition, federal guidelines state that childcare costs "should not exceed reasonable cost in the community for the type of care provided", but there is no requirement that these calculations be *sufficient* to cover reasonable costs, and no specific guidance is provided on how to ensure that these calculations are sufficient. Looking informally at the financial aid practices of several large public universities reveals that the hourly rate used to calculate the cost of childcare can be far below the market rate for care in a licensed childcare center in the locality, or that the number of hours of childcare included in the calculation can dramatically underestimate the time needed for college academic work. But whatever the reasons, research suggests that current COA calculations do not provide adequate estimates of the childcare needs of student parents. For example, at CUNY 61% of student parents did not agree with the statement that the childcare available to them provided them adequate time for their studies, and across both the CUNY and the national datasets, student parents systematically had significantly less time for their studies than non-parents. Thus, clearer and more specific federal guidance

is needed in order to ensure that colleges correctly account for actual or reasonable childcare costs in the given locality, especially for students with pre-school-aged children.

In addition, other parts of the COA inaccurately reflect the needs of student parents—for example, the calculations for room and board include only the student; however, student parents (especially single parents, who make up the majority of student parents) have to pay for lodgings that accommodate their families. The added expenses of feeding, housing, and providing health care for dependents is not considered a cost associated with a student's education in current federal aid formulas; however, the time that a student spends working to support their family directly supplants time that could be spent on their studies, and thus negatively impacts their college outcomes. At CUNY, parents reported spending 9 hours more on paid work per week than non-parents (this difference was highly significant); at the same time, roughly 78% of CUNY students who work do so to pay living expenses (CUNY, 2014). If additional financial aid were provided to cover the living expenses of their dependent children, student parents could work less and reallocate this time to their studies.

Thus, several specific changes need to be made to the federal financial aid process if financial aid is to fairly and adequately address the needs of student parents. Specifically, the following changes could address the issues outlined above:

1) The Free Application for Federal Student Aid (FAFSA) should be modified to include questions about the number and ages of a student's dependent children, to provide colleges with sufficient information to made automatic determinations about child care expenses in their calculation of the COA for each individual student. The current FAFSA application is skewed towards traditional college-age students who are dependents of their parents: for example, the FAFSA asks students who are dependents of their parents about the number of family members currently attending college, but asks no questions about the number of pre-school-aged children a student has, even though average childcare costs exceed the costs of in-state college tuition nationwide (Chandler, 2016).
2) Colleges should be mandated to automatically include costs for dependent care for all students with dependent children below a certain age, and should not be permitted to require student parents to file special paperwork in order to have these costs included (unless the student needs to request an exception for unusually high dependent care costs).
3) The way in which child care costs are included in the COA should explicitly require that a) the hourly rates used reflect actual market rates in the locality for care at an accredited child care center corresponding to the actual age of the child(ren); and b) the number of hours of childcare used in this calculation accurately reflects the actual academic time demands of college (e.g. 2-3 hours of studying for each credit hour in which the student is enrolled, plus time for commuting to and from class, any other academic requirements such as internships, and any administrative demand such as visits to academic advisors or the financial aid office).
4) Living expenses for student parents should be adjusted to include not just the cost of food, lodging and healthcare for the student, but for their dependents as well, since every hour that a student

must spend working in order to provide for their children is one less hour that they can dedicate to their studies.

The college outcomes of student parents are particularly critical because they can have a significant impact on students' families, by improving their economic situation as well as the educational outcomes of their children. Obtaining a bachelor's degree in the U.S. increases earnings by 68% and roughly halves the unemployment rate (U. S. Bureau of Labor Statistics, 2015). And there is substantial evidence that parental education strongly and significantly predicts the educational outcomes of their children (Adelman, 2006; Jones-DeWeever & Gault, 2008; Pascarella, & Terenzini, 2005; Wilsey, 2013). Thus improving the education outcomes of student parents by making the policy changes proposed here has the potential to pay off across the generations.

Acknowledgments

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