

Abstract Title Page
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Title: How Need-Based Financial Aid Reduces College Attrition among Low-Income Public University Students: The Role of Time Use

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Abstract Body

Limit 5 pages single spaced.

Background / Context:

Description of prior research and its intellectual context.

Efforts to enhance the college completion rates of low-income undergraduates are central to the current federal agenda aimed at growing the nation's economy by enhancing its stock of college-educated labor. Barely 40 percent of poor students entering four-year colleges complete a college degree within eight years of high school graduation, compared to more than three-quarters of comparable students from high-income backgrounds (Bowen, Chingos, and McPherson 2009). Policymakers seeking to reduce attrition and promote degree completion are particularly concerned with the efficacy of need-based financial aid, one of the most expensive, popular, and longstanding interventions used by federal and state governments. Prior research on aid suggests that grant aid reduces attrition for low-income students (Goldrick-Rab, Harris, and Trostel 2009). In particular, as part of the larger study related to this proposal, we conducted a randomized trial of financial aid and found that the offer of a \$1,750 per semester grant reduced attrition by three percentage points ($p=0.11$) over four semesters (Goldrick-Rab and Harris 2010). However, the mechanisms through which aid exerts this impact are not well-established, though theory and prior non-experimental evidence do suggest avenues for research. Our focus on time use is also consistent with this year's SREE conference theme of "mechanisms."

Purpose / Objective / Research Question / Focus of Study:

Description of the focus of the research.

In this study we test the hypothesis that financial aid changes students' calculations about how they allocate their time. Specifically, we examine whether a need-based financial grant distribution *at random* to 1,500 Wisconsin Pell Grant recipients attending 13 public universities had an impact on how they allocated their time devoted to (a) working, (b) studying, (c) sleeping, and (d) socializing. To test whether time use mediates the relationship between aid and college persistence, we also conduct a quasi-experimental inquiry into the effect of time use on attrition.

Setting:

Description of the research location.

The study takes place in Wisconsin. All students began college in 2008 attending the 13 public universities in the state, including both selective and non-selective institutions.

Population / Participants / Subjects:

Description of the participants in the study: who, how many, key features or characteristics.

The study includes 1,500 college students who first enrolled in college in fall 2008, less than three years after graduating from a public high school. They all received the federal Pell Grant, a proxy for being from a low-income family. All are Wisconsin residents, and all initially enrolled in college full-time.

Intervention / Program / Practice:

Description of the intervention, program or practice, including details of administration and duration.

We examine a private scholarship program that utilizes random assignment to assign aid to students. With support from a \$175 million endowment, the Fund for Wisconsin Scholars began distributing grants to Wisconsin college students in the fall of 2008. The program provides four-year university students with a \$1,750 grant per semester for up to 10 semesters. Both forms of the grant are transferable among all public colleges and universities in Wisconsin, and the grant amount increases or decreases if a student changes sectors (e.g., transfers from a 2-year to a 4-year institution).

Students are selected for the grant and notified after they have chosen to attend college and enrolled in their first term. Students do not apply to receive the grant; instead, they are identified by financial aid officers at each college, using administrative records. The names of all eligible students are sent to a state agency that oversees the distribution of several grant and loan programs. That agency's staff coordinates the process of random assignment. In its first year, FFWS selected 600 university recipients from a pool of 3,157 students. The research team then drew a stratified random sample of 900 non-selected students for inclusion in the control group.

After random assignment, the FFWS immediately notified all students selected for treatment. That notification consisted of a mailing informing students that they had been chosen for the aid, provided the terms of the grant, and required them to reply and accept the award and submit a verification form, confirming their eligibility. After mailing and verification, 91 percent of the students assigned to treatment received the grant by the start of their second semester of college.

Research Design:

Description of research design (e.g., qualitative case study, quasi-experimental design, secondary analysis, analytic essay, randomized field trial).

In prior work we utilized the experimental design to estimate causal impacts of the grant on attrition by comparing the attrition rates of Pell grant recipients randomly assigned to receive the additional grant to Pell grant recipients randomly assigned to receive their financial aid package as usual (the control group) (Goldrick-Rab and Harris 2010). In this study we capitalize on the experimental design to estimate the causal impacts of the grant on student's time use (both the intent-to-treat and the treatment-on-treated). We are also exploring several quasi-experiments to estimate the impact of time use on college outcomes.

Data Collection and Analysis:

Description of the methods for collecting and analyzing data.

Measures of the primary dependent variable in the experimental analysis—student time use—come from a survey of students conducted one year after the intervention occurred. As that survey was not explicitly linked to the grant, participation rates are orthogonal to treatment (specifically, 63.5% of the treatment group and 60% percent of the control group responded; regressing participation on treatment yields a coefficient of 0.03, $p=0.237$).

The survey measured time use with both closed and open-ended questions. For example, students were asked “were you employed in the last week?” and were also asked “Please write in how many hours out of the last 7 days you worked on-campus?” For some aspects of time we have multiple measures of both the quantity and quality of time spent; for example we asked both about the amount of time spent with family members, and also about how that amount of time compared with the amount they would like to spend (given fewer commitments). We have information on the incidence and amount of work of various types, as well as the time(s) of day worked.

In the first stage of the analysis we will estimate the impact of the treatment on time use. Each of these measures will be included in regressions estimating the treatment impact, with appropriate attention paid to standard errors and concerns about multiple comparisons. In the second part of the analysis, we will seek to link those measures of time use found to be impacted by the grant to measures of student persistence. Those measures come from data from the National Student Clearinghouse and assess whether the student is enrolled in college at any participating institution.

Our covariates will come from a survey conducted at the time treatment was initiated (e.g. when students were sent the letter but had not yet received the grant money); the survey includes pre-treatment measures of time use. Participation in that survey was also orthogonal to the monetary treatment (regressing participation on treatment yields a coefficient of 0.03, $p=0.144$).

Findings / Results:

Description of the main findings with specific details.

Preliminary results indicate that while assignment to receive the FFWS grant did not change the incidence of work amount university students, it did reduce the number of hours worked and altered the time of day students work. Specifically, students randomly assigned to receive the grant who worked in the last week reported working 1.66 fewer hours (the control group worked 15.09 hours, $p=.07$). Students were less likely to work the “graveyard shift” between 2 am and 8 am if randomly assigned to receive the grant: 7.3 percent of the treatment group did so, compared to 12.0 percent of the control group ($p=.076$). Among those who worked, those assigned to treatment were also 10.8 percentage points less likely to work between 8 am and 12 pm, which are popular starting times for classes (the control group worked those hours at a rate of 53.3%, $p=.015$).

Conclusions:

Description of conclusions, recommendations, and limitations based on findings.

The extent to which need-based financial aid changes students’ decisions about how they spend their time is an important policy consideration. Recent studies (e.g. by Babcock) indicate growth in the incidence of work, and decreases in the amount of studying undertaken by university students. Establishing the contribution of aid to these trends, and estimating the implications for student persistence will produce information useful to many audiences.

Appendices

Not included in page count.

Appendix A. References

References are to be in APA version 6 format.

Bowen, W., Chingos, M. & McPherson, M. 2009. *Crossing the Finish Line*. Princeton University Press.

Goldrick-Rab, S., Harris, D., & Trostel, P. 2009. "How and Why Financial Aid Does (or Doesn't) Matter for College Success. *Higher Education Handbook of Theory and Research*.

Goldrick-Rab, S. & Harris, D. 2010. "Can Need-Based Aid Increase College Persistence? Evidence from a Randomized Trial." Presentation at APPAM, Boston.