

Need-based grants (for high school students and graduates) Higher Education

Literature review updated December 2017.

As part of WSIPP's research approach to identifying evidence-based programs and policies, WSIPP determines "what works" (and what does not work) to improve outcomes using an approach called meta-analysis. For detail on our methods, see our [Technical Documentation](#). At this time, WSIPP has not yet calculated benefits and costs for this topic.

Program Description: Need-based grants provide means-tested financial assistance to low-income students. Need-based grants can come from many sources and in various forms. In this meta-analysis, we focus on need-based federal and state grants with minimal eligibility requirements. Example programs in this review include the Federal Pell Grant Program and state grant programs similar to Washington's State Need Grant. Grants funded by private entities may also be included if their implementation is similar to that of federal and state need-based grants. We exclude institutional need-based aid, as well as other grant programs that have conditions for aid receipt other than income (such as work study programs or merit-based aid). The studies in this meta-analysis evaluate the effects of need-based grants for students who are still attending high school or have recently graduated high school and have not yet enrolled in college.

Meta-Analysis of Program Effects

Outcomes measured	No. of effect sizes	Treatment N	Adjusted effect size and standard error			Unadjusted effect size (random effects model)	
			ES	SE	Age	ES	p-value
Graduate with 4-year degree	2	4875	0.169	0.028	24	0.169	0.001
Enroll in 4-year college	1	3485	0.097	0.033	19	0.097	0.003
Enroll in 2-year college	1	3776	0.003	0.029	19	0.003	0.927
Enroll in any college	7	33407	0.131	0.049	21	0.131	0.008
Graduate with 2-year degree	1	4423	0.004	0.028	21	0.004	0.881
Persistence into 2nd year	2	3967	0.199	0.146	19	0.199	0.174

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our [Technical Documentation](#).

Citations Used in the Meta-Analysis

- Carruthers, C.K., & Welch, J.G. (2015). *Not whether, but where? Pell grants and college choices*. Knoxville, TN: University of Tennessee.
- Castleman, B.L. & Long, B.T. (2013). *Looking beyond enrollment: The causal effect of need-based grants on college access, persistence, and graduation*. Cambridge, Mass: National Bureau of Economic Research.
- Castleman, B.L., Long, B.T., & Mabel, Z. (2018). Can Financial aid help to address the growing need for STEM education? The effects of need-based grants on the completion of science, technology, engineering, and math courses and degrees. *Journal of Policy Analysis and Management*, 37(1), 136-166.
- Dynarski, S.M. (2003). Does aid matter? Measuring the effect of student aid on college attendance and completion. *American Economic Review*, 93(1), 279-288.
- Kane, T.J. (1994). College entry by blacks since 1970: The role of college costs, family background, and the returns to education. *Journal of Political Economy*, 102(5), 878-911.
- Seftor, N.S., & Turner, S.E. (2002). Back to school: Federal student aid policy and adult college enrollment. *The Journal of Human Resources*, 37(2), 336-352.

For further information, contact:
(360) 664-9800, institute@wsipp.wa.gov

Printed on 03-29-2024



Washington State Institute for Public Policy

The Washington State Legislature created the Washington State Institute for Public Policy in 1983. A Board of Directors-representing the legislature, the governor, and public universities-governs WSIPP and guides the development of all activities. WSIPP's mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.