

No. 2205

August 2026

Brief yet effective: group counseling and college access for disadvantaged students

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Abstract

Large socioeconomic gaps in higher-education access and completion persist even among similarly talented students with access to generous funding, pointing to an important role for information frictions and unequal support. We evaluate whether a brief, scalable program combining a customized information package with four one-hour group counseling sessions delivered during the school day by external counselors can improve postsecondary trajectories when students face complex financial-aid and higher-education decisions. In a randomized controlled trial with 26,853 students in 229 Chilean high schools, we assign schools to three groups: control, information only, and information plus group counseling. Linking administrative records and survey data, we find that information alone improves some dimensions of knowledge but does not significantly change funding applications or enrolment. By contrast, information plus counseling increases applications, enrolment, persistence, and short-degree completion. The counseling arm also generates larger gains in financial-aid knowledge and shifts students toward more reliable information sources, consistent with uncertainty reduction and procedural guidance as key mechanisms. Treatment effects are largest for students with less family support and weaker initial informational endowments, suggesting that counseling partly substitutes for missing support at home. The results indicate that in high-stakes, high-complexity settings, policy-relevant barriers extend beyond lack of information to difficulties in processing and acting on information. Structured counseling interventions of this kind can mitigate counselor scarcity and improve higher-education trajectories.

Keywords: school counselling; school counselling; higher education access; financial aid; access barriers

JEL codes: 24; I26; I22

This paper was produced as part of the Education Programme. The Centre for Economic Performance is financed by the Economic and Social Research Council.

We thank Fundación Luksic for their support with the implementation of the school counseling program we evaluate in this study. We especially thank Fernanda Orellana and Pablo Guarda for their work coordinating the implementation team. For granting us access to the administrative data that we use in this project, we thank the Chilean Ministry of Education and DEMRE. We are grateful to Susan Dynarski, David Figlio, Joshua Goodman, Asim I. Khwaja, Isabela Munevar, Jorge Rodríguez, Ronni Pavan, Steve Pischke, Eric Taylor, and Marcus A. Winters for many useful comments. We also thank participants at conferences, seminars and workshops where this paper was presented for their feedback. Finally, we thank Josefina Muñoz and Sebastián Vargas for their excellent research assistance. Andrés Barrios-Fernández acknowledges partial support from ANID through FONDECYT grant 11230169. Fernanda Ramírez-Espinoza acknowledges partial support from ANID through FONDECYT grant 11251123. The RCT and pre-analysis plan were registered in the AEA RCT Registry in April 2021. RCT ID: AEARCTR-0007303. The RCT was approved by the Institutional Review Board of Aalto University on April 4th, 2021.

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Published by
Centre for Economic Performance
London School of Economic and Political Science
Houghton Street
London WC2A 2AE

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1 Introduction

Despite large policy efforts and generous funding, substantial gaps in higher education access and progression persist across socioeconomic groups, even among similarly talented students. These gaps reflect not only differences in preparation or credit constraints, but also informational and cognitive barriers that make higher education choices difficult to navigate (Carrell and Sacerdote, 2017; French and Oreopoulos, 2017; Hoxby and Avery, 2013). Disadvantaged students must compare programs, financing options, and application rules under tight deadlines, often with limited guidance and hard-to-interpret information. Given the large returns to higher education (Card, 1993; Zimmerman, 2014; Goodman et al., 2017), identifying scalable interventions that relax these barriers is central to fostering social mobility. School counseling is a natural candidate: existing evidence shows that counselors can improve postsecondary outcomes, yet effective counseling remains scarce—especially in the schools serving the students likely to benefit the most (Mulhern, 2023; Hyman, 2024; Gagnon and Mattingly, 2016; Clinedinst, 2019).

This paper asks whether brief, structured counseling can relax informational and support barriers that passive information alone does not overcome. To answer this question, we partnered with *Fundación Luksic* to design a light but interactive program that combines a customized information package with four one-hour group counseling sessions delivered during the school day by trained counselors. The information package highlighted funding opportunities, returns to higher education, and key details about applications, including deadlines, while directing students to official resources to compare programs and learn more about their options. The counseling sessions reinforced those messages and gave students guided support as they processed them. Because the intervention required only four hours of student time, it allows us to test whether structured support—rather than information by itself—can improve trajectories without relying on intensive advising that would be difficult to scale.

We evaluate the program using a randomized controlled trial involving 26,853 students in 229 high schools randomly assigned to control, information-only, or information-plus-counseling. The intervention was implemented in 2021, and we follow students through 2024, which corresponds to up to three years after high school completion —i.e., the first enrollment margin is observed in 2022. Within schools assigned to the counseling arm, bud-

get constraints limited us to offering the full program to four randomly selected students per classroom. This feature of the design also allows us to study spillovers onto untreated classmates. We find some evidence of spillovers on relatively simple tasks—registering for and taking the college admission exam—but no statistically significant effects on financial-aid applications, higher-education applications, or enrollment. Given the precision of our estimates, however, we cannot rule out economically meaningful spillovers in some of these margins.

Chile provides an ideal setting for this study. First, the country maintains unusually rich administrative records, which we link to our survey and experimental sample to provide a comprehensive assessment of treatment effects. Second, although Chile has several institutional features designed to reduce common barriers to higher education—including free applications, centralized university admissions, and generous public funding for low-income students—large socioeconomic gaps in access remain. Prior work suggests that information frictions and the complexity and uncertainty surrounding higher-education and financial-aid applications likely explain part of these gaps ([Bettinger et al., 2012](#); [Dynarski et al., 2021a](#); [Hastings et al., 2016](#); [Larroucau et al., 2025](#)). At the same time, support is unequally distributed: disadvantaged students often receive less guidance at home and at school, and less than half of high schools have at least one counselor; where counselors are available, caseloads are large and comparable to those observed in the United States. This combination of persistent gaps, complex and uncertain decisions, and large differences in support makes Chile a particularly informative setting for studying whether brief, structured counseling can improve higher education trajectories, and makes the evidence relevant for other countries facing similar challenges.

We focus on vocational-track high schools, which enroll roughly 40% of Chilean high school students and serve disproportionately disadvantaged populations. Unlike in many other settings, the educational track in Chile is not determined by academic performance, and regardless of the track chosen, students can pursue either technical or university degrees once they complete high school. Combining administrative and survey data collected before randomization, we show that students in the vocational track—despite reporting high aspirations and plans to pursue higher education—are significantly less likely to attend higher education, even after controlling for academic performance. Information frictions and limited support at home and at school appear to play an important role in

explaining these differences.

Our main result is that brief counseling—not information alone—changes educational trajectories. Students assigned to the full counseling program are 7 percentage points more likely to enroll in higher education by 2024, closing 44% of the baseline gap between vocational- and academic-track students. These gains persist over time: counseling increases continuous enrollment and graduation from short technical degrees, indicating that the intervention leads students into postsecondary pathways in which they make productive progress. The timing of the intervention does not yet allow us to fully observe graduation from longer university degrees, which typically take five to seven years to complete.

By contrast, information alone improves factual knowledge but does not meaningfully change enrollment. The counseling program, in turn, substantially improves students’ understanding of the financial-aid system and their confidence in that understanding. Its effects are largest for students with lower parental education, lower parental expectations, and more acute information frictions, suggesting that counseling partly substitutes for limited support at home. Consistent with this interpretation, students assigned to counseling also shift away from relying on relatives for information and toward official sources, indicating that guided support matters in addition to the content of the information itself.

Our findings contribute to several literatures. First, they add to the literature on school counseling and college advising. A growing body of work shows that access to counselors and advising support shapes students’ postsecondary trajectories, yet these resources are unevenly distributed and often scarcest in the schools serving the students likely to benefit the most (Mulhern, 2023; Gagnon and Mattingly, 2016; Clinedinst, 2019; Hyman, 2024; Renée, 2025). We add to this literature by showing that a brief, structured program delivered in school can generate large improvements in enrollment, persistence, and completion despite being far less intensive than most interventions studied to date. This contribution is especially relevant because we study vocational-track students, a large but comparatively understudied group that faces substantial barriers yet—as we confirm in our descriptive analyses—still aspires to higher education.

Relative to recent counseling studies, our results speak to a different margin of postsecondary choice. Barr and Castleman (2025) study low-income students who actively seek support and satisfy a minimum GPA threshold, and show that intensive advising

improves college match quality and raises four-year college enrollment and completion, largely through movement from two-year to four-year colleges. [Renée \(2025\)](#) examines a much longer sequence of career-guidance workshops in Canada and finds gains in college enrollment, graduation, and later-life income. [Hyman \(2024\)](#), in turn, evaluates a teacher-based advising curriculum and finds that enrollment rises among relatively strong students while falling among lower-performing students who might otherwise have enrolled and quickly dropped out. By contrast, our intervention focuses on students closer to the margin of attending any higher education at all and shows that even a much lighter program can expand enrollment and persistence.

Roughly 70% of the effects we document on enrollment and persistence are accounted for by enrollment in short technical degree programs. We do not interpret this as evidence that the intervention steers students toward lower-value options. In Chile, longer programs are not always associated with better outcomes. [Bucarey et al. \(2020\)](#), for instance, find that marginal students induced into university rather than technical higher education are less likely to graduate and do not improve their labor-market outcomes, likely because they sort into lower-quality institutions. In addition, [Aguirre \(2021\)](#) shows that low-income, low-performing students induced into technical higher education by financial-aid eligibility persist and likely complete their degrees, suggesting that even marginal students gain from attending technical higher education.

Second, our findings speak to a broader literature on interventions targeting informational and behavioral frictions in educational decisions (see [Lavecchia et al., 2016](#); [French and Oreopoulos, 2017](#); [Damgaard and Nielsen, 2018](#); [Dynarski et al., 2023](#), for comprehensive reviews). Consistent with this literature, we find that information alone is not enough to significantly change educational trajectories. Providing support and tackling uncertainty appears especially valuable when students face complex and high-stakes decisions such as college and funding applications. [Bettinger et al. \(2012\)](#) show that hands-on FAFSA assistance increased aid applications, enrollment, and persistence, while information alone had little effect. Similarly, [Dynarski et al. \(2021b\)](#) and [Burland et al. \(2023\)](#) show that reducing complexity and increasing certainty in college pricing substantially affect low-income students' choices. Our three-arm design sharpens this distinction in a new setting: information provision improves knowledge, but counseling moves students to act on that information. Together, these findings reinforce the view that the key barrier

is often not the absence of information per se, but the difficulty of processing and acting on it under uncertainty.

Third, because we observe rich baseline characteristics and can follow students across multiple postsecondary margins, we provide unusually detailed evidence on who benefits most. Gains are concentrated among students with lower parental education, lower parental expectations, and more acute information frictions, helping identify the populations for whom scalable counseling is likely to be most valuable. This pattern suggests that counseling primarily substitutes for limited support at home.

More broadly, our findings echo results from other policy domains where personalized support substantially outperforms passive information strategies. In housing search, [Bergman et al. \(2024\)](#) find that individualized assistance helps families navigate complex housing markets more effectively than informational resources alone. Similarly, [Finkelstein and Notowidigdo \(2019\)](#) document that targeted outreach increases take-up of nutritional assistance, while [Dhia et al. \(2022\)](#); [Card et al. \(2018\)](#); [Barr and Turner \(2018\)](#) show that personalized job search support outperforms standard informational interventions. [Bai and Massa \(2021\)](#) reach analogous conclusions for financial decisions. Across these contexts, including ours, complexity and uncertainty appear to create barriers that information alone cannot overcome—personalized guidance helps individuals process information, build confidence, and translate knowledge into action.

The rest of the paper is organized into six sections. Section 2 describes the Chilean education system, section 3 combines administrative and survey data to understand the aspirations and barriers that students in our sample face, while section 4 provides details on our counseling program. Then, section 5 describes our empirical approach and discusses its validity, and section 6 presents our results. Finally, section 7 concludes.

2 Institutions

This section describes Chile’s education system, focusing on secondary education—where our intervention takes place—and on higher education—where it aims to have an impact. In discussing higher education, we pay particular attention to admissions procedures across institution types and to the public financial aid system.

2.1 Secondary Education

Compulsory education in Chile lasts twelve years and is divided into primary education (grades 1–8) and secondary education (grades 9–12).¹ Both levels are offered by three types of schools: public, voucher, and private. Public and voucher schools cater for 93% of students nationwide and are state-funded through a voucher system.² Private schools, which enroll the remaining 7% of students, are financed exclusively through tuition.

At the end of grade 10, students choose between an academic and a vocational track. The curriculum is common through grade 10. In grades 11–12, however, academic-track students continue with a general curriculum designed to prepare them for university, while vocational-track students specialize in one of 34 vocational fields.³ Vocational-track students represent roughly 40% of the high school population and come disproportionately from disadvantaged backgrounds.

Student guidance (*orientación*) is a mandatory curricular subject in Chile encompassing academic, social-emotional, and career development. School counselors (*orientadores*)—when present—are responsible for coordinating guidance activities across the school. However, counselors are scarce: in 2024, only 46% of high schools employed at least one counselor, and among those schools the average counselor was responsible for 318 students. In practice, guidance responsibilities are shared with *profesores jefes* (class teachers), who have pastoral, administrative, and academic monitoring duties similar to homeroom or advisory teachers in the United States. Each class is assigned a class teacher who, in addition to a standard teaching load, is expected to coordinate orientation activities and support students’ postsecondary planning. While class teachers play an important role in guidance regardless of counselor availability, the burden increases substantially in schools without dedicated counseling staff, and most class teachers receive limited specialized training in college and career counseling. As a result, the amount and quality of individualized postsecondary guidance available to students is limited.

¹Students typically begin primary school at age six and finish secondary school at age eighteen.

²Private voucher schools were permitted to charge tuition until 2016, but the amount of the voucher declined with the fees. By the time students in our sample entered high school, voucher schools were phasing out tuition, and most no longer charged fees.

³The full list of vocational programs is available at <https://www.tecnico profesional.mineduc.cl/wp-content/uploads/2016/03/Especialidades-Formacion-TP-2013.pdf>. High schools typically offer only a subset of the vocational fields. Hence, students’ options depend on the school they attend.

2.2 Higher Education

Chile’s higher education system comprises three types of institutions: *technical training centers*, *professional institutes*, and *universities*. Technical training centers offer two- to three-year technical programs. Professional institutes offer both short programs and longer four-year professional degrees that do not lead to bachelor’s degrees. Only universities can award bachelor’s degrees, with undergraduate programs lasting between nine and fourteen semesters. Some universities also offer shorter technical programs. Technical training centers and professional institutes are the closest Chilean analogues to two-year colleges in the United States, although the mapping is not exact, while universities are the closest equivalent to four-year colleges. Among first-time entrants in 2022—the first cohort for which students in our sample could enroll—16% attended a technical training center, 41% a professional institute, and 43% a university.

Admissions processes vary by institution type. Technical training centers and professional institutes use decentralized admissions: students apply directly to each institution. Universities, by contrast, use a fully centralized admissions system. Students register for the national admission exam in August–September, take the exam in December, and receive results in late December or early January. They then submit an ordered list of university-major preferences on a centralized online platform, which assigns seats using a deferred-acceptance algorithm. Registration for the exam and use of the centralized platform are free for students from government-subsidized schools—which includes all students in our sample. Admissions to technical training centers and professional institutes occur on a rolling basis between December and February.

Although all higher education institutions must be accredited to operate, program quality varies widely. Selectivity, completion rates, and labor market returns differ sharply across fields and institutions (see [Hastings et al. 2016](#)). This heterogeneity makes the choice of institution and major particularly consequential. Unlike in the United States, Chilean students apply directly to specific majors rather than institutions. Moreover, changing majors after enrollment is typically costly; for universities, it often requires retaking the national admission exam. To help students navigate this complex decision, the Ministry of Education maintains a publicly accessible website (www.mifuturo.cl) where students can compare programs and institutions across multiple dimensions—including retention rates, time to graduation, and labor market outcomes—similar to the US College Scorecard.

Tuition fees are high across all institution types, independent of whether institutions are public or private. In 2022, average annual tuition was CLP 1.8 million at technical training centers (range: CLP 0.5–2.6 million), CLP 1.9 million at professional institutes (CLP 1–3.2 million), and CLP 3.9 million at universities (CLP 1.4–8 million). For reference, the average monthly household income in 2022 was CLP 1.3 million (CASEN, 2022), meaning even the lowest annual tuition represents approximately five months of average household income, making financial aid essential for most students.

The government offers several forms of financial aid. The most generous—*Free Higher Education* (*Gratuidad*)—covers full tuition for students from households in the bottom 60% of the income distribution who enroll in participating institutions.⁴ Students outside this group may apply for scholarships—available to the bottom 70% of the income distribution, conditional on academic requirements—and subsidized income-contingent loans—available to all students, conditional on academic requirements. For university applicants, loans require scoring above the 40th percentile and scholarships above the 60th percentile on the admission exam; for technical training centers and professional institutes, eligibility for loans and scholarships depends on completing high school with a GPA of at least 5.0 and 5.3, respectively. In 2022, these GPAs approximately corresponded to the 40th and 60th percentiles of the GPA distribution. Loans are subsidized and repayments are capped at 10% of income. Students may also receive a food stipend and transportation subsidies.

Applications for public funding are centralized and occur in October of the high school senior year, prior to the admission exam. Students must fill an online form—FUAS—providing information on each household member and their income over the last two years. The Ministry of Education verifies this information by comparing it with administrative records—including tax and social security data—and offers students the most generous combination of benefits for which they are eligible. Students are also warned that providing false information may result in the loss of the benefits for which they are applying, which raises the stakes of completing the form correctly. One of the sources against which the Ministry of Education verifies the information provided by students is the *Registro Social de Hogares*, a system managed by the Ministry of Social Development to determine eligibility for social programs. This means that students must keep

⁴As of 2022, 37 of 58 universities, 9 of 32 professional institutes, and 22 of 50 technical training centers participate in *Gratuidad*. Disadvantaged students in institutions that are not part of this program can fund their studies through scholarships and loans.

their information updated in this register. The process can be burdensome, especially for students whose parents work in the informal sector or who come from households with less stable compositions. Since the form needs to be completed online, filling the form becomes more difficult if students lack a reliable internet connection or a computer at home. In these cases, students will fill the forms using smartphones, or will need to rely on schools or public facilities to complete the application. Eligibility results are released in late December, before university applications open, allowing students to incorporate funding information into their enrollment decisions.

In sum, Chile’s higher education system combines centralized university admissions, broad access to public financial aid, and income-contingent loans. Many barriers common elsewhere—such as fee-based admission exams, complex holistic applications, and high-interest private loans—are largely absent. Yet socioeconomic gaps in enrollment and completion remain large. One reason is that the transition to higher education still requires students to navigate a sequence of complex and uncertain decisions under tight deadlines: they must compare programs and institutions with heterogeneous returns, learn about academic requirements, prepare applications to technical institutions or prepare for the university admission exam, and apply for financial aid through an online platform that requires detailed information on household composition and income over the previous two years. The process can be especially burdensome for disadvantaged students, whose households are often less stable and who may have limited internet access or less support in completing these steps. In that sense, timely guidance and effective support remain highly valuable even in a system that has already removed many of the most visible financial barriers.

3 Understanding Inequality in Higher Educational Trajectories

This section summarizes the descriptive evidence that motivates the intervention design. We combine administrative records, standardized-test data, parent surveys, and a baseline survey applied to students in our study. These patterns are informative about potential mechanisms, but they are descriptive and should not be interpreted as causal. Online Appendix [B](#) provides a more detailed discussion.

Figure 1 shows large gaps in postsecondary trajectories between academic- and vocational-track students. Vocational-track students are substantially less likely to enroll in higher education (panel a), and this difference remains sizable across the achievement distribution. Even among high-performing students, vocational-track students enroll at lower rates than comparable students in the academic track (panel b). These patterns suggest that differences in postsecondary trajectories are not driven solely by academic preparation.

Socioeconomic differences are also important. Vocational-track students come from lower-income households (panel c) and from households with lower parental education and lower expectations of higher education (panels d and e). An Oaxaca–Blinder decomposition (panel f) indicates that test scores, income, parental education, and parental expectations explain a meaningful share of the enrollment gap, but not all of it. This leaves room for additional barriers that shape how students translate aspirations into concrete decisions.

Our baseline survey also points to strong information frictions. Students often misperceive funding eligibility rules and underestimate the generosity of the support available (panel g). They also tend to underestimate earnings associated with higher education (panel h). Around 50% report knowing funding opportunities and the higher education system well or very well, and this share is similar among students with low and high levels of actual knowledge, as measured by the share of correct answers. By contrast, only 37% report knowing the labor-market outcomes of higher education graduates well or very well (panel i). Yet these frictions coexist with strong interest in higher education. Students report high self-efficacy regarding admission, academic performance, and completion in higher education (panel j), substantial expectations of reaching higher education together with high rates of admission-exam registration (panel k), and strong stated plans to take the admission exam and enroll in higher education after high school (panel l). Taken together, these patterns suggest that the gap between expected and actual attendance is more consistent with barriers in information, navigation, and application complexity than with weak demand for higher education.

These findings motivate our intervention. It combines information provision with a counseling component designed to reduce complexity, correct misperceptions, and provide structured guidance in application and funding decisions. Section 4 describes the program in detail.

4 Counseling Program: Overcoming Information Frictions and Support Barriers

4.1 The counseling program

As described in Section 3, vocational-track students face substantial information frictions and limited family support when navigating complex and uncertain funding and higher education applications. High schools also have scarce counseling resources—especially in disadvantaged settings—which limits their ability to help students overcome barriers to higher education. We designed a concise, low-cost, and scalable support program with two components: an information package and a short counseling program delivered to small student groups. Both components conveyed the same core information and actionable guidance for key steps between high school and higher education; counseling added structured discussion, clarification, and support in turning that information into action.

Information package. We sent physical information packages to all students in treatment schools in August 2021, just before the admission-exam registration deadline. Packages were hand-delivered at schools to make higher education information salient and actionable. Each package contained three pieces—an A4 cardboard envelope, a brochure, and a customized letter—that highlighted funding options and returns to higher education and offered planning tools. The envelope front asked, “Do you know that you could go to higher education for free?” to capture attention; inside, a calendar marked key deadlines with space for students to add details, and a QR code linked to the government site www.accesomineduc.cl outlining enrollment steps. The brochure repeated the headline question and added that Chile offers multiple financial aid programs—free higher education, scholarships, and subsidized loans—and that applying to all of them only requires filling an online form at www.fuas.com. One side of the brochure displayed average earnings and employment by education level from the national household survey (e.g., CASEN), noting that on average attending higher education is attractive but that outcomes vary widely across programs and institutions. It listed dimensions to consider when choosing a program and institution—admission requirements, accreditation, retention, time-to-degree, and labor-market outcomes—and a QR code to www.mifuturo.cl—a website analogous to the U.S. College Scorecard—which allows students to retrieve these

statistics. The other side of the brochure provided a step-by-step application guide—e.g., register for the admission exam, apply for financial aid, research programs and institutions, apply and enroll—and a table for students to record their preferred programs and compare them along the dimensions mentioned above. The customized letter personalized these messages: it reiterated that tuition can be fully covered, explained why higher education may be valuable while acknowledging variation by program and institution, and reported relevant statistics—retention, duration, employment, and earnings—for the four fields most commonly chosen by alumni from the student’s own school. It also showed earnings ranges across these fields and included a fillable comparison table similar to the one in the brochure. Online Appendix A provides images and additional details of this material. The per-student cost of producing and distributing the information package was USD 2.27.

Group counseling program. To complement the information package, we designed a short group counseling program consisting of four one-hour sessions held monthly from August to November 2021 during the school day. Sessions were delivered to small groups of four students to encourage peer interaction and enable personalized guidance. The information package ensured that all students received consistent, standardized information; the counseling program reinforced and deepened this same content while adding structured reflection and guidance. Importantly, all sessions covered the same core information available in the package and the websites it referenced; the value added was interactive discussion, personalized clarification, and support in acting on that information. In the first session, conducted in August, students reflected on their postsecondary aspirations, identified barriers they anticipated facing, and set concrete goals—an exercise the information package could not facilitate. The remaining three sessions built directly on the package’s materials and the websites it referenced. In Session II, conducted in September, counselors and students discussed different types of higher education institutions and programs, practiced using the comparison tools on www.mifuturo.cl, and explored which dimensions mattered most for different career paths. Session III, conducted in October, covered funding opportunities and eligibility and discussed in detail the online funding application form (FUAS), allowing students to ask questions about how to use it. Finally, Session IV, conducted in November, guided students through the application

process for both universities’ centralized system and technical institutions’ decentralized systems. Throughout, sessions combined guided discussion with hands-on practice rather than passive instruction. Online Appendix [A](#) provides detailed session descriptions.

Our implementation partner recruited counselors from a pool of teachers, educational psychologists, and other education professionals with relevant backgrounds. After screening, counselors completed training that included role-playing exercises and mock sessions to ensure consistent delivery and quality. Each counselor received a detailed manual with session-by-session objectives, activities, and discussion guides. Importantly, counselors were external to the schools and assigned to work across multiple schools; they were present only during assigned session times and did not interact with non-participating students or school personnel about program content. The cost of the counseling program was USD 95.57 per student assigned to the program, reflecting counselor compensation, training, and materials.

4.2 Experimental design and implementation

We evaluate the intervention using a three-arm design: control, information-only, and information-plus-counseling. The two treatment arms vary the components delivered to separate the role of salient, actionable information from the added value of guided support. The information package, delivered by teachers in schools, targets information frictions and may suffice if lack of accessible information is the binding constraint. If students require help processing or trusting information or overcoming behavioral barriers, brief counseling can provide structure, accountability, and encouragement ([Carrell and Sacerdote, 2017](#)). This design tests the full intervention while also assessing whether the low-cost package alone improves outcomes.⁵

Schools were invited to participate in a study of aspirations and barriers affecting disadvantaged students’ transition to higher education. To participate, schools agreed to administer student surveys at the beginning and end of the academic year; in return, we promised a detailed post-year report describing their students’ aspirations and the main challenges they reported to face when thinking of pursuing higher education. This report—which also benchmarked each school against others in the study sample—was

⁵[Nguyen \(2008\)](#) finds that individuals process information differently depending on who delivers it. This might be another reason why the counseling program could have an impact beyond the information package.

delivered after the academic year had concluded, and therefore after our intervention. When schools agreed to participate, they were not aware that some would later be offered additional support during the year; participation was therefore unrelated to the possibility of receiving information packages or the counseling program.

In Chile, many schools belong to school networks. To limit cross-school spillovers, we randomized at the school-network level using a computer lottery.⁶ The entry survey was administered in March–April, prior to any randomization. In May, school networks were randomized into the three experimental groups. All schools that were offered additional support—information packages or group counseling—accepted it. Within schools assigned to the information-plus-counseling arm, a second randomization selected four students per classroom to be invited to the group counseling program. Students were selected based on their list numbers—a unique number within a class that depends on last name initials. Since we did not know students’ last names, we gave counselors a list of four numbers that we randomly chose for each classroom-school combination. Before the first session, counselors would explain to the whole class that we were trying a new counseling approach and that four students chosen completely at random would have the opportunity to participate in it. We chose these students randomly because *ex ante* we could not anticipate which students would benefit most and we wished to study heterogeneous impacts. If a selected student was absent at the time of a session, the seat remained open and the student could join a later session; no replacements were made. Students not selected for counseling still received the information package and had classmates in counseling. We decided to treat a few groups in many schools rather than many groups in fewer schools to increase the number of treated clusters and increase power. In a potential scale-up of this program, economies of scale would be realized as a counselor could serve many students within the same school and transportation logistics would be reduced. Note that this design further allows us to study spillovers onto untreated classmates of counseled students. We planned a more detailed analysis of spillovers across friendship networks, but unfortunately less than 20% of students reported close friends in the entry survey, limiting power for those analyses.

We invited all 470 vocational high schools in Santiago, Valparaíso, and O’Higgins—

⁶55.46% of schools in our sample did not belong to any network. Another 18.34% were part of a two-school network, and 11.79% were part of a three-school network. Only 14.41% belonged to a network with more than three schools.

three neighboring regions in the center of Chile that together concentrate about 60% of the population—to participate in our study; 229 schools accepted our invitation. Table 2 indicates that schools in our sample closely resemble other vocational high schools and all high schools in the country in terms of their students’ demographics. Both female shares—48.8% in our sample versus 48.4% in the universe of vocational schools and 50.6% in all schools—and the age at which students reach grade 12—17.7 years in our sample vs. 17.7 in the universe of vocational schools and 17.5 in all schools—are similar across these groups of schools. Sector and location reflect our central-region focus: the public and the rural shares are lower than in the universe of vocational schools. The public share in the whole sample of high schools is even lower, while the rural share is slightly higher than in our sample. Socioeconomic and academic characteristics align with the vocational sector but clearly indicate that vocational high schools cater for more disadvantaged students than the average school in the country. Both the vocational schools in our sample and the universe of vocational schools are more likely to be classified as very-low-SES and low-SES. Their students are more likely to come from low-income households and to have mothers who have not completed high school. They also have lower standardized test scores. Overall, schools in our sample resemble other vocational high schools on demographics, SES, and achievement; the regional focus makes public and rural schools underrepresented, and compared to all Chilean high schools—including academic-track high schools—they serve more disadvantaged students.

5 Data and Empirical Strategy

5.1 Data

To study the effects of our interventions on students’ educational trajectories, we link administrative records from the Ministry of Education, the agency in charge of the university admission process (DEMRE), and the Education Quality Agency to baseline and endline surveys that we administered to students in our sample. A consistent individual identifier lets us follow all 12th-grade students in study schools over time and match their pre-intervention characteristics to higher education outcomes.

First, using Ministry of Education enrollment datasets, we identify the universe of

12th-grade students in our sample schools in the intervention year. Using the individual identifier, we recover their complete K–12 trajectories and, after high school, observe key milestones for their transition to higher education: funding applications, initial enrollment, year-to-year retention, and, for shorter programs, graduation. Information on the university admission process—exam registration and performance, applications through the centralized platform, and admissions—comes from DEMRE. Higher education records report the exact program and institution in which students are enrolled each academic year, which lets us characterize postsecondary trajectories at a fine level of detail.

Second, we use administrative data from the Education Quality Agency to measure pre-intervention academic performance and household background. Standardized test scores taken during K–12 education and the parent questionnaires collected alongside those exams—including information on parental education and expectations—serve as predetermined variables for balance checks, to describe the sample, and in heterogeneity analyses that inform our discussion of mechanisms.

Third, we administered surveys at the beginning (baseline) and end (endline) of the academic year to students in the experimental sample. These surveys document aspirations, perceived barriers, and knowledge of various dimensions of the higher education system. We use these survey data to provide descriptive evidence on potential barriers and to study changes in knowledge and understanding attributable to the interventions. We also use these data in additional heterogeneity analyses to discuss mechanisms.

An advantage of the administrative data is that they cover the full universe of students in treated and control schools, so there is no attrition when studying educational trajectories. We follow students for three years after the intervention—through 2024—to study not only enrollment but also progression, continuous enrollment, and graduation from short technical degrees. By contrast, survey response is partial: approximately 35% of the experimental sample responded to the baseline survey and roughly 31% to the endline survey. Respondents—in both cases—are positively selected, and endline response rates range from about 30% in the control group to 34% among students assigned to the full counseling program. This modest differential response warrants caution when interpreting survey-based outcomes. At the same time, because respondents are positively selected overall, the additional respondents in the counseling arm are likely less positively selected than respondents in the other arms. Thus, this pattern would tend to attenuate

rather than exaggerate estimated treatment effects. We therefore present the survey-based estimates transparently and interpret them with this caveat in mind.

5.2 Empirical Approach

Specification : We identify the effects of our group counseling intervention using a randomized controlled trial (RCT). Conditional on randomization working as intended—we discuss this below—treatment assignment is independent of potential outcomes, and average treatment effects can be estimated by comparing outcomes between treated and control students. As discussed in Section 4, the experiment has three main arms at the school level: control, information-only, and information-plus-counseling. Within schools assigned to the information-plus-counseling arm, however, a second randomization created two distinct student groups: students who were not selected to participate in counseling but were exposed to classmates who were (the information-plus-peers-with-counseling group), and students who were selected to receive counseling (the full counseling group). We therefore compare three non-control groups to the control group of students in schools not assigned to any intervention using specification (1):

$$Y_{is} = \alpha_0 + \alpha_1 T_{1is} + \alpha_2 T_{2is} + \alpha_3 T_{3is} + \Phi X_s + \epsilon_{is} \quad (1)$$

where Y_{is} is the outcome of student i from school s ; T_{1is} equals one if student i is in a school assigned to the information-only treatment (treatment 1); T_{2is} equals one if student i is in a school assigned to the information-plus-counseling program but was not selected for counseling—that is, the information-plus-peers-with-counseling group (treatment 2); and T_{3is} equals one if student i was selected to receive the full counseling program (treatment 3). For precision, we control for $\mathbf{X}$, a vector of predetermined individual- and school-level variables.⁷ Since randomization was conducted at the school-network level, we cluster standard errors at that level.

The estimates of interest are α_1 —which measures the effect of assignment to the information-only treatment—, α_2 —which measures the effect of assignment to the information-

⁷Under treatment randomization, controls are not required for unbiasedness. We include them to increase precision. Online Appendix E presents results without controls. The coefficients are remarkably similar to the ones discussed in the main body of the paper. The controls in our main specification are: school SES level; an indicator for whether the school is in a rural area; an indicator for whether the school is a voucher school; the school’s average 10th-grade SIMCE score in 2018; the share of female students in the school; and class size.

plus-peers-with-counseling group—, and α_3 —which measures the effect of assignment to the full counseling program.

Depending on whether the outcome variable was collected from administrative or survey data, we estimate specification 1 either on the whole sample of students enrolled in 12th grade in control and treated schools at the beginning of the academic year, or on the sample of students who answered the endline survey. Below we discuss balancing and threats related to selective attrition in the survey data.

Validity A key requirement for the validity of our analyses is that the allocation of students to treatments was random and that, as a result, there are no systematic differences in potential confounders between treatment and control groups. We test this by comparing groups across a rich set of predetermined characteristics from administrative data and the baseline survey. To do so, we estimate simple OLS regressions of each predetermined characteristic on treatment group indicators. We report differences for three comparisons relative to the control group: (i) students in information-only schools; (ii) students in information-plus-counseling schools who were not selected for counseling—the information-plus-peers-with-counseling group; and (iii) students selected for counseling within information-plus-counseling schools. Figure 2 summarizes the results of these balancing tests. The randomization yielded groups that are balanced in demographic and socioeconomic characteristics, prior academic performance, baseline aspirations, perceived and actual knowledge of higher education, and survey response rates. The only small difference we find is in school sector: schools assigned to any treatment are around 2 percentage points (3%) more likely to be public than voucher schools. Because public schools typically serve more disadvantaged students, this difference likely biases against detecting positive effects. Importantly, all metrics of socioeconomic disadvantage are balanced, suggesting that this sector difference does not translate into meaningful differences in predictors of higher education attendance. To confirm this, we estimate a predictive index of higher education enrollment using the cohort graduating one year before our sample and apply it to our sample. The dark bar at the bottom of each panel shows no difference in this predicted index between treated and control groups.

A second key requirement—relevant for analyses of endline survey outcomes—is the absence of severe selective attrition in survey responses. Table 3 shows an overall endline

response rate of roughly 31%, with rates ranging from about 30% in the control group to 34% among students assigned to the full counseling program. This 4 percentage-point difference is modest, but it nonetheless means that survey-based outcomes should be interpreted with some caution. As in the baseline survey, respondents are positively selected. To the extent that the marginal respondents in the counseling arm are less positively selected than respondents in the other arms, this pattern would tend to attenuate, rather than mechanically inflate, estimated improvements in perceived or actual knowledge. This and the size of the effects we find when comparing students assigned to the full counseling program with students in the control group suggest that the treatment effects we document are not solely driven by differential response rates. We present the survey-based estimates transparently and interpret them with this caveat in mind.

Interpretation Participation in both the information-only and counseling components was voluntary. All randomized schools accepted the support, but student-level compliance was imperfect. Table 3 reports take-up. To assess exposure to the information material, the endline survey showed respondents a picture of the leaflet and asked whether they had seen it. Among respondents, 46% in information-only schools and 48% in information-plus-counseling schools reported having seen it, versus less than 2% in control schools. This indicates that the material reached a substantial share—but not all—students in treated schools, reflecting both imperfect delivery and imperfect recall. For counseling, attendance records show that 57% of selected students attended at least one session and 22% completed all four sessions. These figures are consistent with high levels of post-pandemic absenteeism; in 2022, for instance, 53% of students were absent more than 10% of the time (Ministerio de Educación de Chile, 2024).⁸

Our main estimates are intent-to-treat estimates that capture the effect of assignment to each treatment regardless of take-up. With imperfect compliance, these estimates likely understate the effect of actually receiving the information materials or counseling, but they are relevant policy parameters. We do not scale to treatment-on-the-treated because appropriate scaling is ambiguous. For the information-only treatment, dividing by the share reporting exposure would conflate recall error and omit peer spillovers. For counseling, dividing by the share attending at least one session ignores variation in intensity and po-

⁸The same report from the Ministry of Education indicates that chronic absenteeism rates remained above 41% in 2024 and were even higher among disadvantaged students.

tential interactions between students assigned to the treatment. We therefore report ITT estimates throughout and use complementary evidence to discuss mechanisms.

6 Results

This section presents the main results of the paper. We begin with the effects of the information package and the full counseling program on higher education trajectories—the outcomes we ultimately aim to impact. We then examine changes in students’ understanding of the higher education system and heterogeneous effects that inform mechanisms. We conclude with a brief cost–benefit analysis.

6.1 Effects on Higher Education Trajectories

This section shows that while the information package on its own did not meaningfully change students’ trajectories after high school, assignment to the full counseling program increased applications, enrollment, continuous enrollment, and graduation from short technical degrees. For these analyses, we rely on rich administrative data that allow us to track students at every step of the transition to higher education—registration and performance on the university admission exam, funding applications, and enrollment. These data also allow us to track students in higher education, which we exploit to study whether changes in enrollment translate into persistence and progression. Because all analyses in this subsection use administrative data, selective attrition is not a concern.

Table 4 summarizes the results on the educational outcomes specified in the pre-analysis plan. In addition to the relevant estimates and their standard errors, the table reports q-values following the procedure proposed by (Simes, 1986) to account for multiple hypothesis testing. As shown in the first row, the information package alone does not appear to have changed students’ trajectories. Relative to the control group, we find no significant effects on registration or performance in the university admission exam, while point estimates for funding applications and higher education enrollment are negative and imprecise. Figure 3 shows the same pattern for earlier post-high-school outcomes observed in 2022 and 2023. The lack of significant effects of the information package on students’

trajectories is consistent with a broad literature showing that information alone is typically not enough to change behavior (Gurantz et al., 2019; Bird et al., 2019; Hyman, 2019). For students in the information-plus-peers-with-counseling group, we observe a marginally significant increase in exam registration and exam taking, but these effects do not translate into significant changes in applications or enrollment. For exam registration and exam taking, the spillover estimates are large. They represent about 40% and 30% of the direct effects of the information-plus-counseling group. Using an average class size of 30 and four treated students per class, these effects imply about 1.53 additional students registering for the admission exam and 1.02 additional students taking it. Given the precision of the spillover estimates on application and enrollment, these results should be interpreted as an absence of evidence of spillovers rather than evidence of zero spillovers. For instance, the 95% confidence interval of the spillover estimate on enrollment ranges from -3.8 to 3.4 percentage points, which means that we cannot rule out economically meaningful spillovers in this margin. With these caveats in mind, the pattern we find is consistent with spillovers being more relevant for simpler actions—i.e., registering for the university admission exam is relatively easy—than for more complex decisions such as funding applications or enrollment—a decision that heavily depends on having some funding support.

In contrast, assignment to the full counseling program generated large and significant changes in trajectories. It increased the probability of registering for the university admission exam by 13 percentage points (20%) and the probability of actually taking it by 11 percentage points (23%). It also increased the probability of applying for funding by 7 percentage points (10%), the probability of applying to university by 5 percentage points (24%), and the probability of enrolling in higher education by 7 percentage points (13%). The estimated effect on higher education enrollment is large: it accounts for 44% of the 16 percentage-point gap between academic- and vocational-track students described in Section 3. The effects are similar for male and female students, with both groups experiencing comparable increases in higher education enrollment (see Online Appendix G for details).

Figure 3 illustrates the estimates in the table and extends the analysis to outcomes that, although not part of the pre-analysis plan, help interpret the effects of the program. The bars on each panel represent ITT estimates for the information-only (left), information-plus-peers-with-counseling (middle), and full counseling program (right) groups. In addi-

tion to the estimates and their 95% confidence intervals, the figure reports the control-group mean in the top-left corner of each panel. Panels (e) to (h) show that roughly 70% of the total effect on higher education enrollment is driven by increased enrollment in short technical degrees—that is, programs lasting less than 2.5 years. The counseling program increases enrollment in technical degrees by 4.8 percentage points and enrollment in bachelor’s degrees by 2.3 percentage points. This composition is important for interpretation. In Chile, short technical degrees are often a sensible match for students from disadvantaged backgrounds: they involve lower direct and opportunity costs and can deliver solid labor-market returns. Consistent with this interpretation, [Aguirre \(2021\)](#) shows that low-income, low-performing students induced into technical higher education persist and likely complete their degrees, whereas [Bucarey et al. \(2020\)](#) finds that marginal students induced into university rather than technical higher education are less likely to graduate and do not improve their labor-market outcomes, likely because they sort into lower-quality institutions. We therefore interpret the strong increase in short technical enrollment as evidence of improved matching into viable higher education options rather than movement into inferior programs. In terms of fields, panel (l) documents increases in enrollment in health (3 percentage points), services (1.5 percentage points), STEM (1.1 percentage points), education (0.9 percentage points), and business and law (0.8 percentage points) degrees. The field composition is similar in the control and full counseling groups, with health and services slightly overrepresented among students in the full counseling program.

A critical question is whether the enrollment gains we document translate into continuous enrollment and degree completion. Since the intervention was implemented in 2021 and students graduated from high school in late 2021, the earliest they could have enrolled in higher education is 2022. [Figure 3](#) tracks students through their first two years after high school to assess whether the effects persist beyond initial enrollment. Because longer university degrees typically last five to seven years, the completion margin we can observe by 2024 primarily reflects graduation from short technical degrees.

We begin by examining one-year re-enrollment, defined as enrolling in higher education in 2022 and re-enrolling in 2023, or enrolling for the first time in 2023 and re-enrolling in 2024. Panel (a) shows that by 2023, assignment to the full counseling program increased enrollment by 6.5 percentage points—slightly below the 7 percentage-point effect observed by 2024. Panel (b) demonstrates that this effect persists: students assigned to counseling

are 6.6 percentage points (16%) more likely to both enroll and re-enroll one year later.

To assess longer-term persistence, we examine two-year outcomes. For this analysis, we define persistence as enrolling in 2022 and either remaining enrolled in 2024 or having already graduated, thereby accounting for students who complete short technical degrees. Panel (c) shows that assignment to the full counseling program increased the probability of enrolling immediately after high school completion in 2022 by 4.8 percentage points (14%)—roughly 70% of the total enrollment effect by 2024, indicating that most enrollment occurs shortly after graduation. Panels (d) and (e) reveal continued gains: assignment to counseling increases the probability of enrolling in 2022 and re-enrolling in 2023 by 5 percentage points (18%), and increases the probability of enrolling in 2022 and persisting or graduating by 2024 by 4.7 percentage points (20%).

These patterns demonstrate that counseling not only increases initial enrollment but also supports persistence and completion. Remarkably, panel (f) shows that roughly half of the persistence effect by 2024—2.8 percentage points—comes from students who enrolled in 2022 and completed a short technical degree by 2024. Combined with the evidence in [Aguirre \(2021\)](#) and [Bucarey et al. \(2020\)](#), this pattern suggests that the new matches created by counseling are not merely transitory. In contrast, neither the information-only treatment nor the information-plus-peers-with-counseling group seems to generate significant changes in any of these outcomes. For the information-only group, point estimates are negative for funding applications and enrollment. These estimates, however, are imprecise, so we cannot reject a null effect.

Finally, to verify that the enrollment effects discussed in this section operate through actual participation in the counseling program, we examine heterogeneity by school attendance in grade 12. Online Appendix [G](#) shows that attendance is balanced across treatment groups, and that when students are assigned to the full counseling program, it predicts the number of sessions they actually attend. We split the sample into three groups based on school attendance—i.e., less than 85%, between 85% and 95%, and at least 95%—and find that the effects are driven by students in the latter group. Indeed, students with at least 95% attendance participate in 2 sessions on average (vs. 1.3 sessions among students in the low-attendance group) and, as a result, are 13.5 percentage points more likely to enroll in higher education. We find no significant effects for students with lower levels of school attendance.

6.2 Effects on Understanding of the Higher Education System

This section discusses how the information package and the full counseling program affected students' understanding of the higher education system. This evidence sheds some light on the mechanisms behind the results in Section 6.1 and helps interpret why information alone may not have shifted behavior. The analyses rely on the endline survey administered at the end of the 2021 school year. As noted in Section 5, response rates were modestly higher among students assigned to counseling (34% versus 30% in the control group). Because survey respondents are positively selected on socioeconomic background and prior achievement, this difference may, if anything, make it somewhat harder to detect positive effects in the counseling arm. Table 3 reports these response-rate differences and participation patterns, which are consistent with the discussion in this section.

Table 5 and panels (a)–(f) of Figure 5 report effects on actual and perceived understanding, outcomes that were specified in the pre-analysis plan. In addition to the estimates and their standard errors, the table presents q-values computed following [Simes \(1986\)](#) to address multiple testing. We first study changes in actual knowledge. The exit survey tested students' knowledge on different dimensions of the higher education system, including funding opportunities and labor-market trajectories of higher education graduates. To reduce dimensionality, we build three knowledge indices—an overall knowledge index, a financial-aid index, and a labor-market index—using the first principal component of the corresponding question sets (Online Appendix F presents item-level results). Assignment to the information-only or information-plus-peers-with-counseling groups yields marginally significant improvements in the overall knowledge index—about 0.09σ . The q-values associated with these estimates, however, are well above 0.1. In contrast, the full counseling program increases overall knowledge by 0.28σ , a coefficient that remains significant even after adjusting for multiple hypothesis testing. When we examine the topic-specific indices, we find that while students in the three treatment groups experienced broadly similar gains in their understanding of labor-market trajectories, only students assigned to the full counseling program experienced significant gains in their understanding of the financial-aid system. Indeed, students assigned to the full counseling program improved their financial-aid knowledge by 0.30σ , while students in

the information-only and information-plus-peers-with-counseling groups experienced non-statistically significant gains of 0.035σ and 0.075σ , respectively. Assignment to the full counseling program uniquely increased financial-aid knowledge; given the importance of funding in our setting, this is likely one of the reasons why trajectories changed for students assigned to counseling and not for students in the other two treatment arms.

Next, to assess changes in perceived understanding of the system, we asked students how well they knew financial aid opportunities, application procedures, and labor-market returns, and defined outcomes as indicators for them reporting well or very well. Correcting biases without improving students' trust in their knowledge might not be enough to change their behavior. Indeed, the results of [Dynarski et al. \(2021b\)](#) indicate that providing information on funding availability must be coupled with measures that reduce student uncertainty to meaningfully affect applications and enrollment decisions. In the setting we study, only students assigned to the full counseling program exhibit sizable gains in perceived knowledge. Consistent with larger gains in actual learning about funding, the share of students assigned to the counseling program reporting that they understand financial aid well or very well rises by 21 percentage points (45%). We also find significant increases in the share of these students reporting that they understand application procedures—11 percentage points (21%)—and labor-market returns—11 percentage points (28%). Notably, despite similar actual-knowledge gains on labor-market trajectories across the three treatment arms, perceived understanding in this dimension rises only for students assigned to counseling, which suggests that the differences in the effects we find on perceived understanding are not just a mechanical consequence of differences in actual learning.

We complement these analyses with the results in panels (g)–(l), which illustrate changes in the sources students rely on to learn about higher education. The endline survey asked students to select their most important information sources; options included relatives, teachers, classmates, neighbors, official websites, and private websites (Online Appendix C reports the full set of results). From these responses, we constructed indicator variables equal to one if a source was selected among a student's most important sources.

Panel (g) shows that students in all treatment arms are less likely than the control group to report relatives as an important source; the reduction is largest for students assigned to the full counseling program—i.e., 10 percentage points (16%). Panel (h) shows that students in the information-only and information-plus-peers-with-counseling

arms report classmates as an important source at similar rates to the control group, whereas students assigned to counseling are 10 percentage points (20%) less likely to do so. Panel (i) shows no material change in reliance on teachers across arms. Panel (j) shows low baseline reliance on neighbors—8% in the control group—but still significant declines of about 1.5 percentage points in the information-only and information-plus-peers-with-counseling arms, and a decline of nearly 4 percentage points in the counseling arm. Panel (k) shows that reliance on official websites significantly increases only for students assigned to counseling—10 percentage points (19%). Finally, panel (l) shows no significant changes in reliance on private websites in any of the treatment arms. These patterns suggest that assignment to counseling not only improves knowledge through the direct information the program provides to students but also by connecting and encouraging them to use more reliable sources of information.

Overall, counseling meaningfully improves both actual and perceived understanding of the higher education system—especially of financial aid—and shifts students toward trustworthy information sources. In a context where few parents have higher-education experience, reducing reliance on informal networks and strengthening informed guidance addresses key barriers to enrollment. For the information-only group, survey evidence does not suggest that students were made worse off. If anything, students in this group appear to have learned about the higher education system and labor-market outcomes. One possible interpretation for the negative—although imprecise—estimates in funding applications and enrollment discussed in Section 6.1 is that learning about heterogeneous returns without additional guidance may lead some students to forgo enrollment. Hyman (2024), for instance, finds that a similar intervention reduced higher-education attendance among students whose academic preparation makes it less likely for them to gain from attending higher education. This, however, is something we cannot directly test in our setting, and as noted earlier we cannot rule out either that these effects are equal to zero.

6.3 Heterogeneous Effects

This section examines heterogeneous effects to shed light on the mechanisms behind the large enrollment gains documented in Section 6.1. We focus exclusively on students assigned to the full counseling program, as it is the only treatment arm that significantly altered educational trajectories. By studying how three key outcomes—enrollment in

higher education, actual knowledge (measured by the knowledge index), and perceived knowledge of financial aid—vary across student subgroups, we aim to understand which students benefit most from counseling and why.

We investigate heterogeneity along four predetermined dimensions: parental education, parental expectations, baseline knowledge, and baseline perceived knowledge. The first two dimensions use data from surveys parents answered when their children took the fourth-grade standardized exam. We rely on fourth-grade data rather than eighth- or tenth-grade exams because our cohort was not tested in those grades; the tenth-grade exam, scheduled for 2019, was canceled due to social unrest. Since the fourth-grade exam is administered to every cohort, we combine responses across multiple cohort administrations to handle grade repeaters. The latter two dimensions draw on the baseline survey administered at the start of the 2021 school year. As discussed in Section 3, only 35% of invited students completed the baseline survey, and respondents were positively selected on socioeconomic background and prior achievement. The endline survey exhibited similar response rates and selection patterns. Consequently, treatment effects on survey-based outcomes are smaller among respondents than in the full sample. Nevertheless, the heterogeneity patterns we document remain informative about mechanisms.

Importantly, we find no significant differences in take-up rates across subgroups. Online Appendix G shows that all student types had similar probabilities of attending at least one counseling session and of completing all four sessions. This rules out differential participation as an explanation for the heterogeneous effects we observe.

Figure 6 presents the main results. Each row corresponds to one dimension of heterogeneity, and each column shows effects on a different outcome. For each dimension, we split the sample into students with low versus high levels of the characteristic and estimate our main specification separately for each subgroup. The bars display treatment effects for students with low (left) and high (right) levels of the characteristic, with 95% confidence intervals and control-group means at the top of each bar.

Parental Education. Panel A shows that students whose mothers did not complete high school experienced substantially larger enrollment gains than students whose mothers completed at least high school. The enrollment effect for the low-education group is 11 percentage points (20% relative to the control mean), compared to 3 percentage points (5%) for the high-education group. This pattern suggests that counseling nearly closed the

enrollment gap between these two groups. Effects on actual knowledge (middle panel) follow a similar pattern, though the confidence intervals overlap. Students from households with less-educated mothers gained 0.35σ in knowledge, versus 0.18σ for students with more-educated mothers. In contrast, gains in perceived knowledge (right panel) are comparable across groups—both around 20 percentage points—indicating that the program improved confidence in understanding financial aid regardless of parental background.

Parental Expectations. Panel B reveals a similar pattern. Students whose parents did not expect them to attend higher education experienced enrollment gains of 12 percentage points (23%), compared to 4 percentage points (7%) for students whose parents held higher expectations. This 8 percentage-point difference is substantial and suggests that counseling was especially valuable for families where higher education was not part of the original plan. The pattern for actual knowledge mirrors that for enrollment, with larger gains for students from families with lower expectations. Once again, perceived knowledge gains are similar across groups, suggesting that the program successfully boosted confidence for all participants.

Baseline Knowledge. Panel C examines heterogeneity by students' baseline knowledge of the higher education system. We define high knowledge as scoring above the third quintile on the baseline knowledge index. Students with low baseline knowledge experienced enrollment gains of 9 percentage points (17%), compared to 5 percentage points (9%) for those with high baseline knowledge. Interestingly, when we examine changes in knowledge itself, the pattern reverses: students who started with higher knowledge appear to have learned more, though the estimates are imprecise and we cannot reject equality across groups. This may reflect ceiling effects for low-knowledge students on our knowledge measure, or it may indicate that students with some foundational knowledge were better positioned to absorb the information provided during counseling. Despite differential gains in actual knowledge, perceived knowledge increased similarly for both groups, with both experiencing gains of approximately 20 percentage points.

Baseline Perceived Knowledge. Panel D splits the sample by whether students reported knowing the funding system well or very well at baseline. Students who lacked confidence in their knowledge at baseline saw enrollment gains of 10 percentage points (19%), versus 6 percentage points (10%) for students who were already confident. This suggests that counseling was particularly effective at converting uncertainty into action. The pattern

for actual knowledge follows a similar trajectory, with larger (though imprecise) gains for students who started with lower confidence. Perceived knowledge increased substantially for both groups—around 20–25 percentage points—though the increase was mechanically larger for students who did not report high confidence at baseline.

Across all four dimensions, a consistent pattern emerges: counseling generated the largest enrollment gains for students from backgrounds where support is likely weaker and where obtaining reliable information is more difficult. The intervention essentially closed enrollment gaps between students from lower and higher socioeconomic backgrounds, between students whose parents had lower versus higher expectations, and between students with less versus more baseline knowledge and confidence. In terms of mechanisms, these results suggest that counseling filled critical gaps in both information and guidance that disadvantaged students could not easily access through family networks or other sources. Even when gains in actual knowledge were similar across groups, enrollment effects remained concentrated among the most disadvantaged, suggesting that counseling provided more than just information—it also offered encouragement, clarification, and actionable support tailored to students’ specific circumstances.

The patterns for perceived knowledge are particularly revealing. Unlike actual knowledge and enrollment, gains in confidence about understanding financial aid were broadly distributed. Nearly all students, regardless of background, reported substantially higher confidence after participating in counseling. This suggests that while counseling had the largest behavioral impacts on disadvantaged students, it successfully improved psychological barriers—such as uncertainty and lack of confidence—for a wide range of participants. Combined with the patterns in actual knowledge, these results underscore that counseling addressed multiple barriers simultaneously: it provided accurate information to those who lacked it, reduced uncertainty for those who were confused, and built confidence for those who doubted their understanding.

Consistent with the patterns described in this section, Online Appendix [G](#) also presents results on heterogeneity by students’ prior academic performance, showing that the effects on enrollment are concentrated on students in the bottom and mid 33% of the distribution and that they become small and not statistically significant for students at the top 33%.

6.4 Cost–Benefit Analysis

We conduct a cost-benefit analysis of the full counseling intervention—information package plus group counseling—relative to the control group. Our approach projects lifetime earnings for each student based on observed educational outcomes and estimates the present value of costs and benefits over the working life. Here we summarize the key assumptions and results, with detailed technical documentation in Online Appendix [H](#).

Costs. We distinguish between two cost components. First, intervention costs include the per-student expense of delivering the information package (\$2.27) and group counseling (\$95.57). Second, tuition costs capture expected higher education expenses. We calculate expected tuition as annual tuition times expected years enrolled, accounting for program duration and treatment-group-specific dropout probabilities from administrative follow-up through 2024. For the control group, 23% dropout in year 1 and 11% in year 2. For the full counseling group, these rates are 20% and 10%, respectively.

A useful benchmark for implementation costs in other settings comes from scaling our intervention costs to U.S. prices. In Chile, producing and delivering the information package cost roughly USD 2 per student, while a similar U.S. intervention cost about USD 10 per student ([Dynarski et al., 2021b](#)). For the counseling component, counselor compensation is the main cost driver. In our setting, school counselors were paid about USD 1,100 per month, whereas in the United States the median wage for educational, guidance, and career counselors is about USD 5,361 per month ([O*NET OnLine, 2026](#)). This implies that the counseling-plus-information cost per student would rise from roughly USD 80 in Chile to about USD 360–390 in the United States.

Benefits. To estimate lifetime earnings, we employ Mincer-type earnings equations estimated on Chile’s 2024 National Socioeconomic Survey (CASEN). For each student, we predict age-specific earnings by seven education levels—never-enrolled, dropout, or degree completion in vocational training centers, professional institutes, and universities—and gender using flexible education-age interactions. We adjust earnings for employment rates associated with each educational level using CASEN data.

We project earnings from age 19 to retirement (65 for men, 60 for women), applying a 2% real wage growth rate and a 5.5% discount rate in the baseline specification. We account for treatment-group-specific differences in entry timing: 35% of the control group enrolled in higher education by 2022 versus 39.8% in the full counseling group; these figures

reach 59% and 66% by 2024, respectively. We assume students with delayed entry earn high-school wages in years before higher education entry.

Results. Table 6 reports baseline and sensitivity results across five scenarios. The baseline scenario yields an incremental earnings gain of \$6,160 per student. From a social perspective—including tuition as a government cost—the incremental NPV is \$5,689 per student with a benefit-cost ratio of 13.16. From an individual perspective—excluding government-financed tuition—the NPV is \$6,058 per student with a benefit-cost ratio of 63.21.

Importantly, returns remain strongly positive across all sensitivity scenarios varying wage growth (1%–3%) and discount rates (4%–7%), with benefit-cost ratios above 9 even under conservative assumptions. The economic case is robust: the intervention generates substantial private returns and significant social surplus relative to modest implementation costs.

Assumptions. Our analysis relies on several important assumptions. First, we project lifetime earnings using cross-sectional age-earnings profiles from CASEN 2024, which provides a snapshot of the earnings distribution at a point in time but cannot directly reveal the earnings path of specific individuals. Within a few years, we will be able to observe the actual earnings of program participants through administrative tax records, allowing us to directly evaluate the program’s effect on realized earnings. Second, our analysis assumes that expansion of higher education access does not substantially depress returns to education through general equilibrium effects. However, several considerations mitigate this concern: the Chilean higher education system, particularly in the vocational sector, is not at full capacity and the dramatic drop in fertility rates experienced in recent years suggests that it is unlikely to become saturated. In addition, to the extent that increased access translates to improved worker productivity, positive returns should persist. Third, we assume stable labor market conditions and returns to education, though future changes in economic structure could alter the returns to the educational investments we project. Despite these limitations, the sensitivity analysis shows that our conclusions are robust to substantial variation in underlying assumptions.

7 Conclusion

Socioeconomic gaps in higher education access remain substantial despite rising returns to education and significant policy efforts to expand access. These gaps persist even among talented students with access to financial aid, pointing to the presence of information frictions and behavioral barriers constraining higher-education decisions. This paper uses a randomized controlled trial with over 26,000 students across 229 Chilean high schools to evaluate a structured, group-based higher education counseling program designed to be both effective and scalable.

Our analysis first provides detailed evidence on the aspirations and barriers of vocational-track students—a large and disadvantaged group that has received comparatively little attention in the literature. Despite reporting high aspirations for higher education, these students face substantial information frictions and limited support when navigating applications and funding decisions. Consistent with that descriptive evidence, the information-only treatment increased students’ understanding of the higher education system but did not alter enrollment decisions, in line with the broader literature showing that passive information provision alone typically fails to change behavior. In contrast, assignment to the full counseling program increased admission-exam registration by 13 percentage points, exam taking by 11 percentage points, financial-aid applications by 7 percentage points, and higher education enrollment by 7 percentage points. These gains persist through continuous enrollment and graduation from short technical degrees—margins we can already observe.

Importantly, the program effects are concentrated among the most disadvantaged students: those with less-educated parents, lower household educational expectations, and limited baseline knowledge. This pattern suggests that counseling substitutes for the lack of support available at home for these students. Notably, these effects contrast sharply with recent work on teacher-based college counseling that finds negative effects for lower-performing students, underscoring that the design and delivery of counseling programs matter substantially for determining who benefits.

Our enrollment effect represents approximately 44% of the 16 percentage-point gap in higher education enrollment between academic- and vocational-track students—a distinction that largely reflects socioeconomic differences in Chile. The magnitude is comparable

to the most effective interventions of this type, yet achieved through a more scalable model: group rather than individual counseling provided in only four hours at the school. Importantly, roughly 70% of the effects on enrollment and progression are driven by short technical degrees. To interpret this pattern, it is important to note that in Chile, longer programs are not always associated with better outcomes. [Bucarey et al. \(2020\)](#), for instance, find that marginal students induced into university rather than technical higher education are less likely to graduate and do not improve their labor-market outcomes, likely because they sort into lower-quality institutions. Together with the persistence gains we document, this suggests that the program improves matching into viable postsecondary pathways rather than simply pushing students toward longer programs. A conservative cost-benefit analysis accounting for both intervention costs and increased tuition expenditures yields substantial positive returns, suggesting the program is cost-effective.

The short, structured nature of our intervention offers promise for scalability, yet important challenges remain. Our implementation relied on hired and trained counselors with higher-education expertise. Scaling the program would require either ensuring resources to hire and train external personnel while maintaining quality through proper supervision and logistics, or successfully adapting the curriculum for delivery by existing school counselors and staff. [Hyman \(2024\)](#) shows that teacher-based college advising generates smaller effects, suggesting that proper training and support are essential for maintaining program quality during scale-up.

Despite these implementation challenges, our findings suggest that well-designed, structured group counseling during high school can generate persistent effects on educational trajectories for disadvantaged students. The intervention addresses critical information gaps while building the confidence and motivation necessary for students to translate knowledge into action. This combination of effectiveness, cost-effectiveness, and potential scalability points to group-based counseling as a promising approach for narrowing socioeconomic gaps in higher education access.

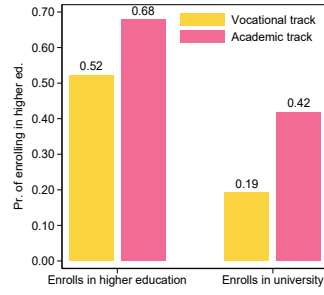
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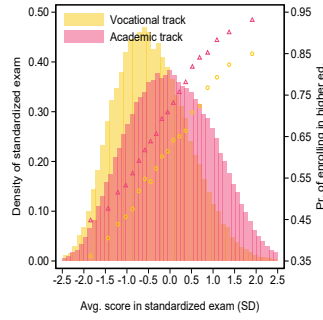
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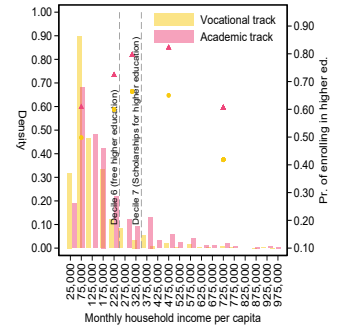
Figure 1: Understanding Inequality in Higher Educational Trajectories



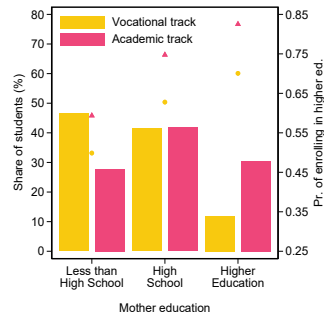
(a) Gap in higher ed enrollment



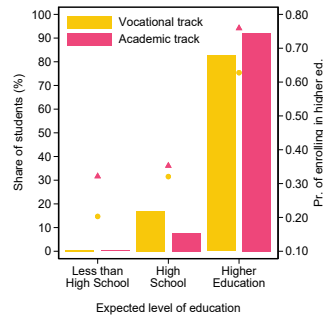
(b) Gap by test scores



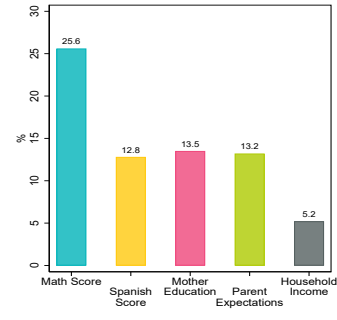
(c) Gap by hh income



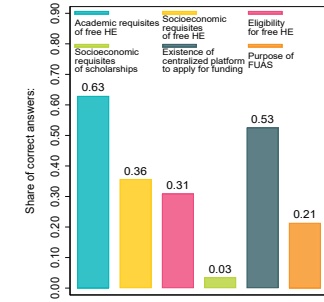
(d) Gap by mother ed



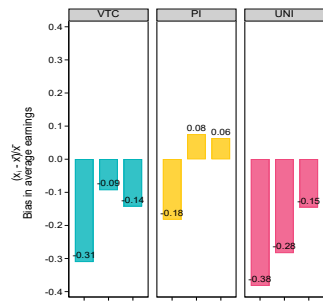
(e) Gap by parental exp



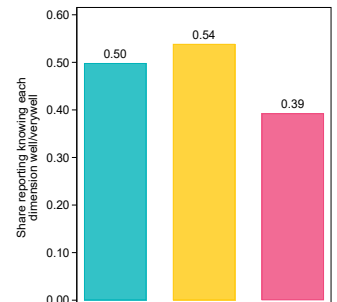
(f) Decomposition of the gap



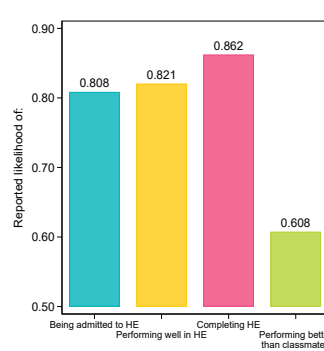
(g) Knowledge on financial aid



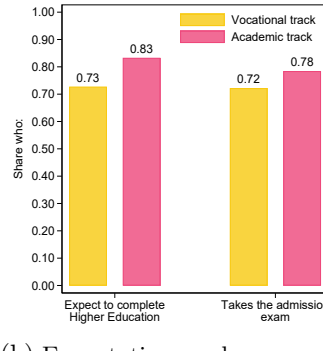
(h) Knowledge on labor market



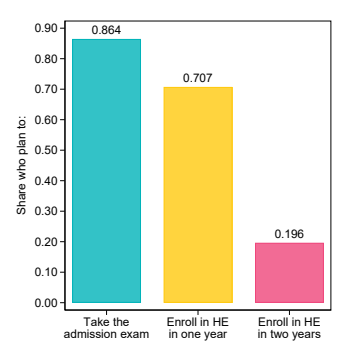
(i) Perceived knowledge level



(j) Self-efficacy



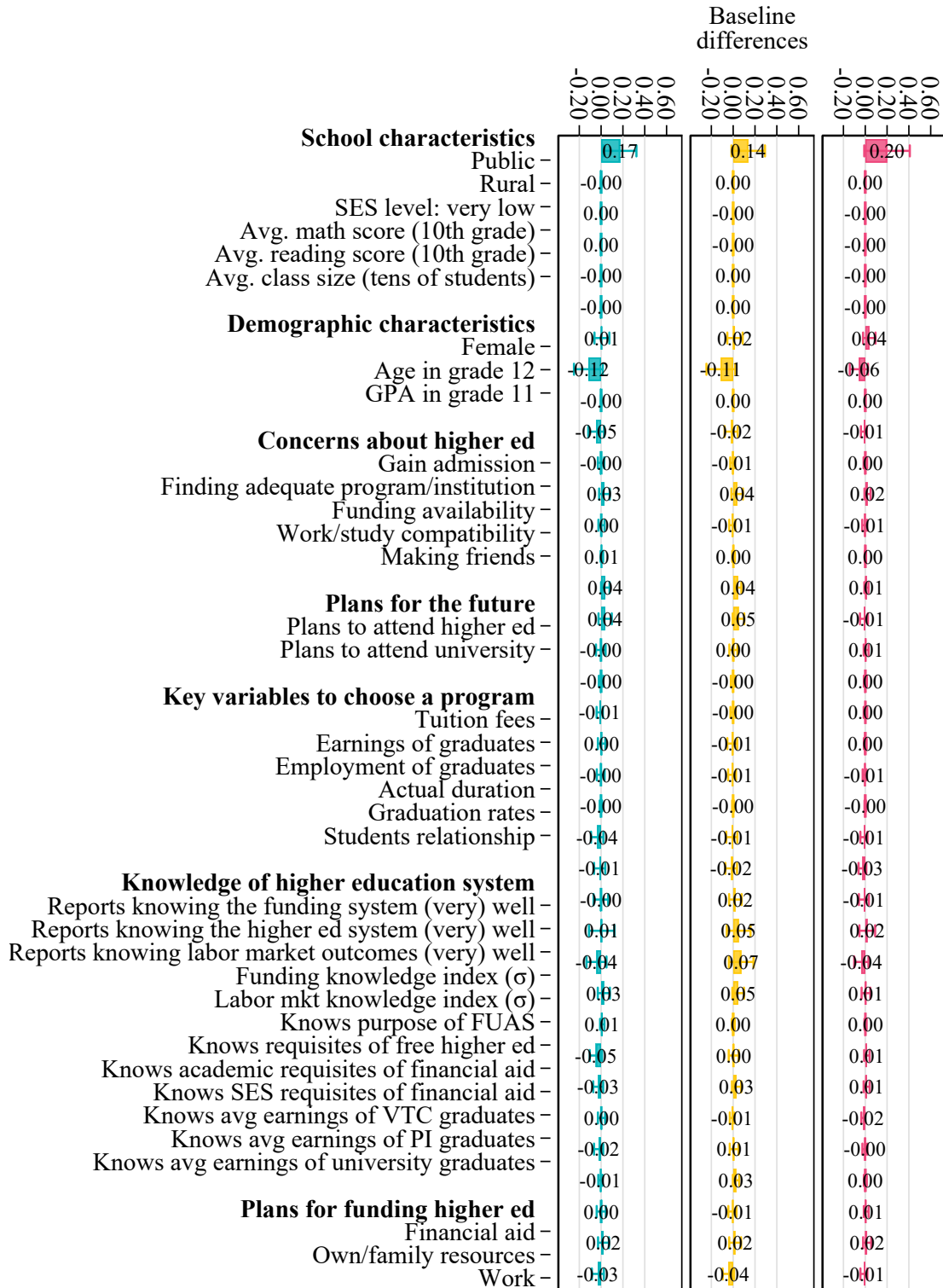
(k) Expectations and exam registration



(l) Plans for future education

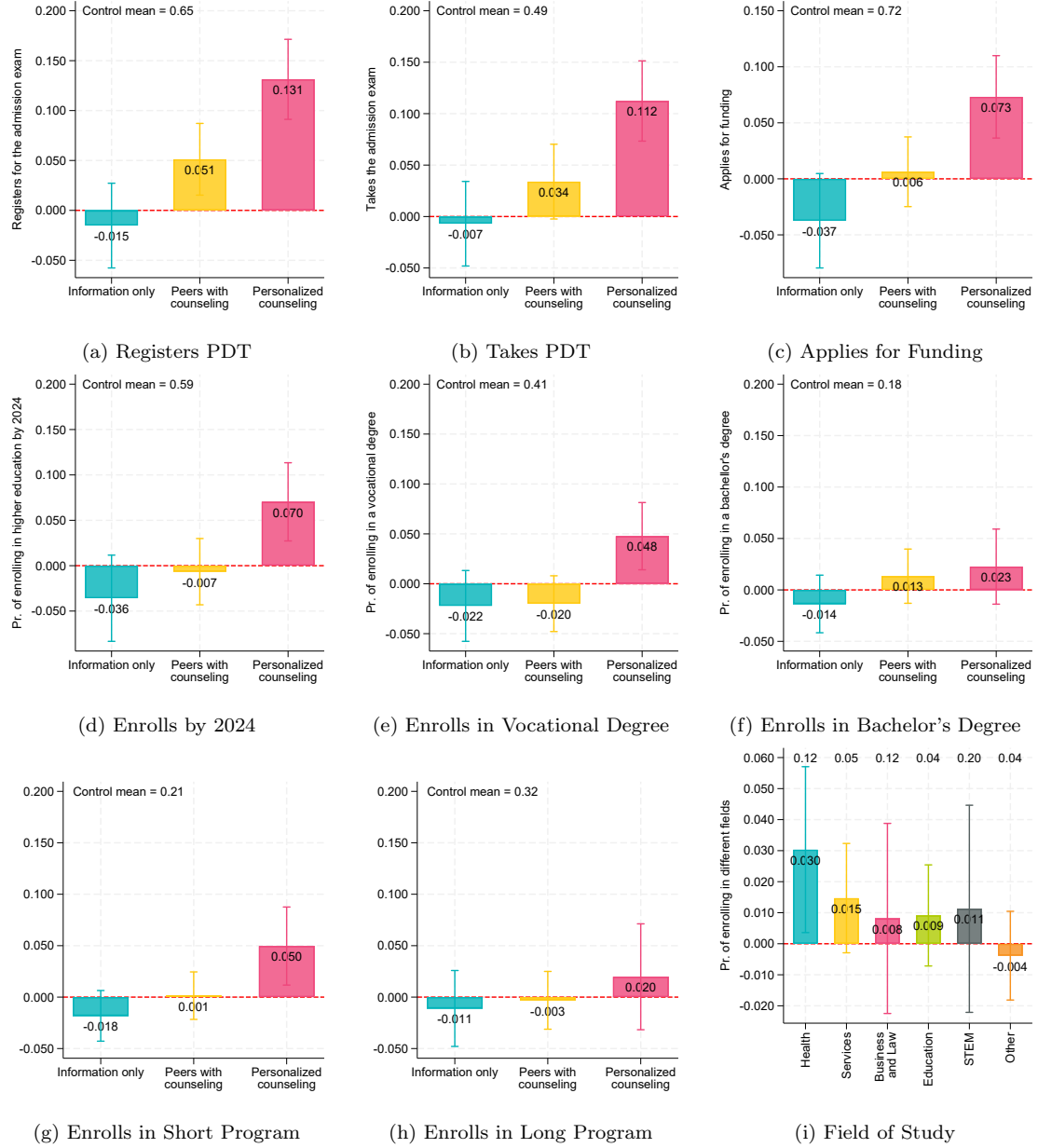
Notes: This figure examines drivers of higher education inequality between vocational (yellow) and academic (pink) track students. Panels (a)-(b) show enrollment rates and the gap by test scores. Panels (c)-(e) show the gap by household income, mother's education, and expected educational attainment. Panel (f) presents an Oaxaca-Blinder decomposition. Panels (g)-(i) show knowledge on funding, labor market earnings, and self-reported knowledge. Panels (j)-(l) show self-efficacy, higher-education expectations and exam registration, and postsecondary plans.

Figure 2: Balance between control and treatment groups



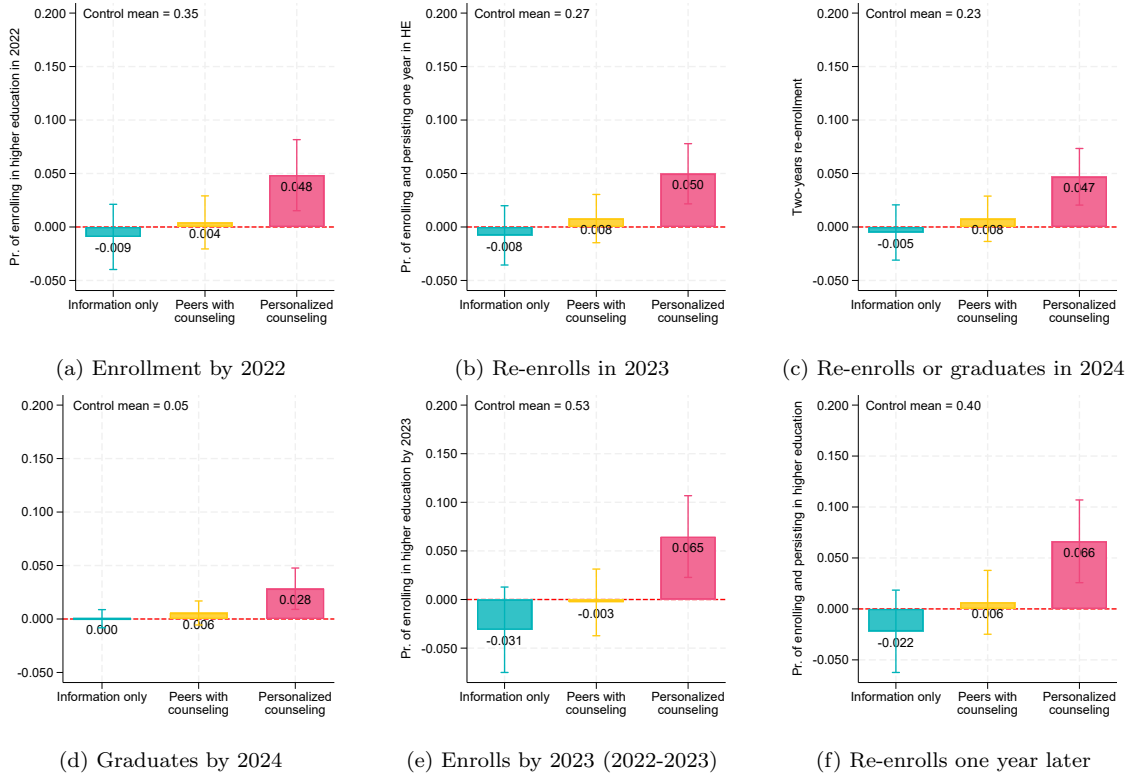
Notes: The figure illustrates balance between control and treatment groups in a rich vector of pre-determined characteristics measured in either administrative or survey data. Each bar represents an estimate coming from an independent specification in which we regress the variable on the right of the figure on a dummy variable that indicates the treatment group to which a student was assigned. Green bars illustrate the difference between students in the control group and in a school assigned to the information only treatment group; yellow bars illustrate the difference between students in the control group and in schools assigned to the information plus counseling group; and pink bars illustrate the difference between students in the control group and assigned to the full counseling program. Confidence intervals at the 95% level are presented for each estimate.

Figure 3: Counseling Effects on Higher Education Trajectories



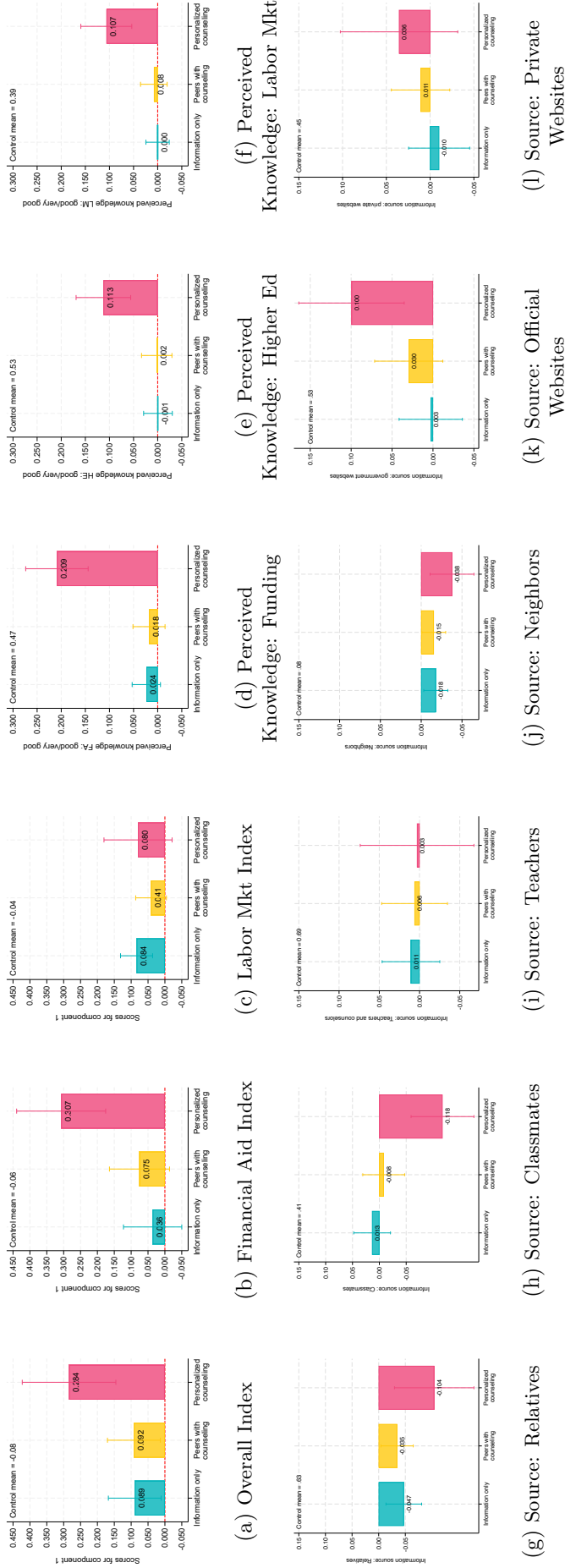
Notes: This figure illustrates the effects of assignment to any of the three treatment arms we study: information only (green bars), information plus peers with counseling (yellow bars), and information plus personalized counseling (pink bars). The bars represent estimates of the parameters α_1 , α_2 , and α_3 from specification (1); the vertical lines on top of the bars illustrate 95% confidence intervals. Control means are reported at the top of each panel. Panel (a) shows the effect on the probability of registering for the university admission exam, panel (b) on actually taking the exam, panel (c) on applying for financial aid through the FUAS form, panel (d) on enrolling in any higher education program by 2024, panel (e) on enrolling in any vocational degree program by 2024, panel (f) on enrolling in a bachelor's degree program by 2024, panel (g) on enrolling in a short higher education program (less than 2.5 years) by 2024, panel (h) on enrolling in a long higher education program (4 years or more) by 2024, and panel (i) on enrolling in different fields of study.

Figure 4: Re-enrollment and Graduation



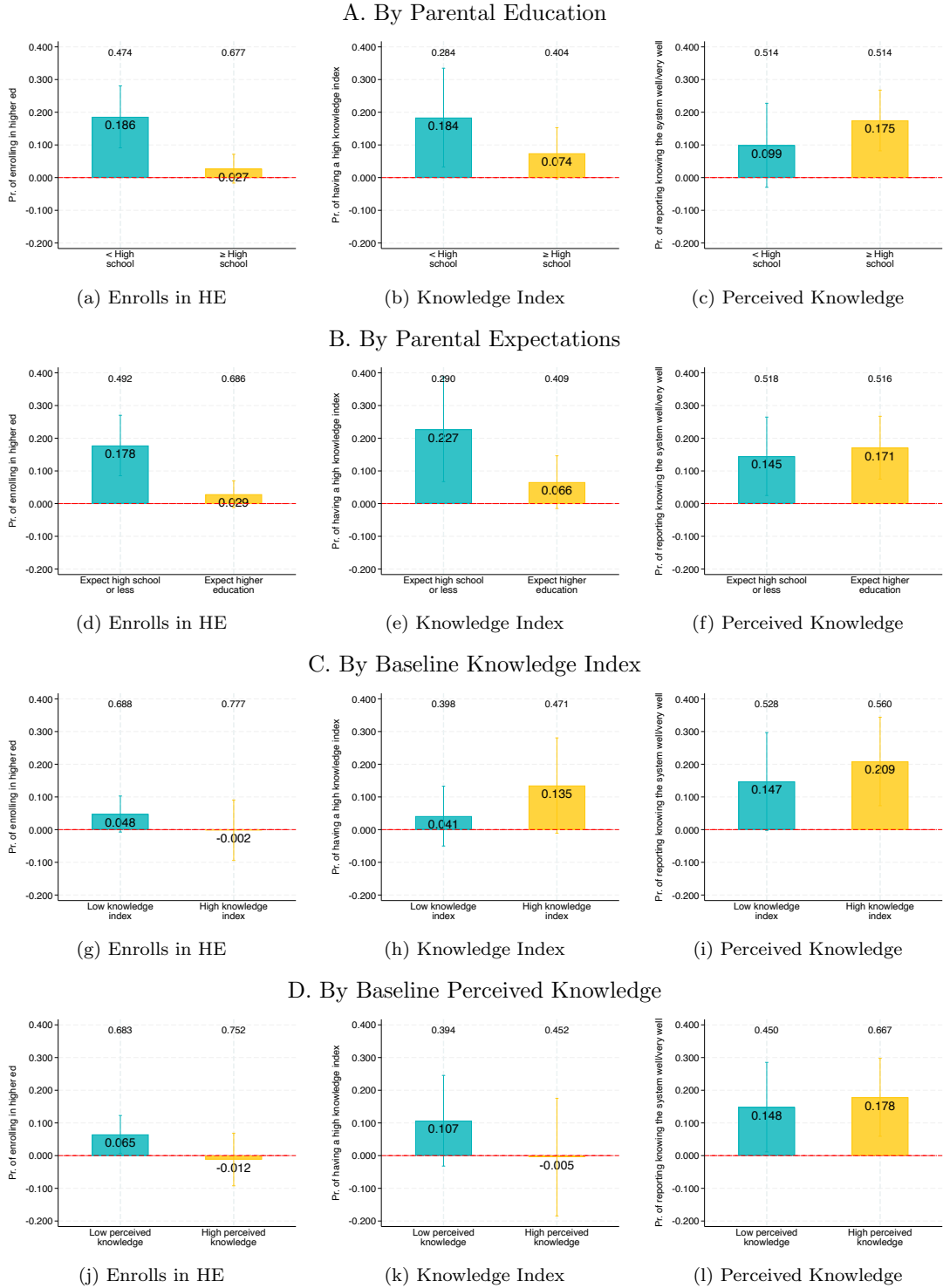
Notes: This figure shows the effects of the three treatment arms we defined: information only (green bars), information plus peers with counseling (yellow bars), and information plus counseling (pink bars). Bars represent estimates of α_1 , α_2 , and α_3 from specification (1). The vertical lines on top of the bars illustrate 95% confidence intervals. Panel (a) shows enrollment in higher education by 2022. Panel (b) shows re-enrollment in 2023. Panel (c) shows re-enrollment or graduation by 2024. Panel (d) shows graduation by 2024. Panel (e) shows enrollment by 2023 (either 2022 or 2023). Panel (f) shows re-enrollment one year after initial enrollment. One-year re-enrollment is defined by a dummy variable that takes value one if a student enrolls in year t and re-enrolls in year $t + 1$. Two-year re-enrollment is defined by a dummy variable that takes value one if a student enrolls in year t and re-enrolls in years $t + 1$ and $t + 2$. Since some students enroll in short programs, when studying two-year re-enrollment we also define as one students who enroll in t , re-enroll in $t + 1$ and appear as having completed their degree by $t + 2$. Control means are reported at the top of each panel.

Figure 5: Counseling Effects on Students' Understanding of the System



Notes: This figure shows the effects of the three treatment arms we defined—information only (green bars), information plus peers in counseling (yellow bars), and information plus counseling (pink bars)—on students' understanding of the higher education system. Bars represent estimates of the parameters α_1 , α_2 , and α_3 in specification (1). The vertical lines on top of the bars illustrate 95% confidence intervals. Panels (a) to (c) show effects on actual knowledge measured by indexes that we built using the first component of a principal component analysis of a vector containing questions included in the exit survey to measure students' understanding of different dimensions of the higher education system. Panels (d) to (f) show effects on perceived knowledge. In the exit survey, students were asked how well they believed they knew three dimensions of the higher education system: funding opportunities, application procedures, and labor market outcomes of graduates. The outcomes used in these panels correspond to dummy variables that take value one if students reported knowing these dimensions well or very well (the other two options that students could choose were poorly or very poorly). Panels (g) to (l) show effects on the sources from which students reported obtaining information about higher education. The outcomes used in these panels correspond to dummy variables that take value one if students reported using each of the indicated sources to obtain information about higher education. Control means are reported at the top of each panel.

Figure 6: Heterogeneous Effects of Assignment to Information plus Counseling



Note: The figures present ITT estimates of being assigned to the full counseling program for students with low and high levels of parental education (incomplete vs. complete high school), parental expectations (expect student would complete high school vs. higher education), actual knowledge at baseline (bottom two vs top two quintiles), and perceived knowledge at baseline (reported knowing the system poorly or very poorly vs. well or very well). Information on parental education and expectations comes from surveys that parents answer when their kids take standardized exams in grade four—the only grade in which we observe the cohort of students we study taking the exam—while baseline knowledge and perceived knowledge are measured in the entry survey we applied at the beginning of the academic year. Each bar represents the treatment effect of being assigned to information plus counseling for each subgroup of students, and the lines on top represent the corresponding 95% confidence intervals. Numbers at the top of each bar show control group means. The outcomes we study include enrollment in higher education by 2024, knowledge index at the end of the year—i.e., whether students score in the top two quintiles of the index—and perceived understanding of financial aid at the end of the year—i.e., whether students report knowing the financial aid system well or very well.

Table 1: Characteristics of Baseline and Exit Survey Respondents

	<i>Students who did not answer the baseline survey</i> (1)	<i>Students who answer the baseline survey</i> (2)	<i>Students who did not answer the endline survey</i> (3)	<i>Students who answer the endline survey</i> (4)
A. Demographic characteristics				
Female = 1	0.477	0.008 (0.017)	0.484	-0.020 (0.016)
Age in grade 12th	17.674	-0.220*** (0.051)	17.645	-0.167*** (0.040)
B. Socioeconomic characteristics				
Mother education: Some higher ed.	0.368	0.077*** (0.015)	0.373	0.077*** (0.012)
School type: Voucher	0.387	0.106** (0.044)	0.397	0.091** (0.044)
School SES: Low	0.608	0.011 (0.039)	0.603	0.034 (0.043)
School SES: Very Low	0.392	-0.011 (0.039)	0.397	-0.034 (0.043)
C. Previous academic performance				
Standardized test score (grade 4)	245.505	2.897** (1.407)	245.566	3.396*** (1.139)
Attendance (grade 11)	90.095	0.420 (0.732)	89.918	1.210* (0.706)
D. Future treatment status				
Control school	0.365	-0.003 (0.049)	0.369	-0.019 (0.055)
Information only school	0.319	-0.007 (0.043)	0.315	0.009 (0.049)
Information plus counseling school	0.315	0.010 (0.045)	0.316	0.011 (0.037)
Observations			27,619	

Note: This table compares students who answered and did not answer the baseline and endline surveys administered at the beginning of the academic year, before any interventions began and after the intervention, respectively. Column (1) reports the average of each variable for students who did not answer the baseline survey. Column (2) reports the difference between respondents and non-respondents relative to that average. Column (3) reports the average of each variable for students who did answer the endline survey. Column (4) reports the difference between respondents and non-respondents relative to that average. Standard errors clustered at the school-network level are shown in parentheses below the differences. Schools are classified annually into five groups based on the socioeconomic characteristics of their students: group 1 schools are the most disadvantaged and group 5 the least. All schools in our sample belong to groups 1 (very disadvantaged) or 2 (disadvantaged). Panel E reports the results of a specification that studies differences in response rates in the entry and exit survey depending on treatment status.

Table 2: Comparison between schools in the study and other schools in the country

	Schools in the Intervention (1)	All Vocational Schools in the Country (2)	All Schools in the Country (3)
A. Demographic characteristics			
Female = 1	0.488	0.484	0.506
Age in grade 12th	17.674	17.691	17.470
B. Socioeconomic characteristics			
Mother Education: Less than High School	0.462	0.497	0.288
Mother Education: Complete High School	0.387	0.367	0.345
Mother Education: Some Higher Education	0.137	0.122	0.355
School type: Public	0.419	0.514	0.290
School type: Voucher	0.581	0.486	0.561
School location: Rural	0.031	0.100	0.054
School SES: Low	0.568	0.405	0.506
School SES: Very Low	0.432	0.595	0.248
C. Average performance in standardized exams			
SIMCE Math Score	231.607	231.881	263.511
SIMCE Reading Score	230.376	231.392	249.998
D. Parental Expectations			
Less than High School	0.004	0.006	0.004
Complete High School	0.387	0.367	0.345
Some Higher Education	0.137	0.122	0.355

Note: This table compares the schools that participated of our study with all the vocational high schools and with all the high schools in the country. It describes them in terms of type, location, students' demographic characteristics, students' SES, and students' performance in standardized tests (SIMCE). The SES measure corresponds to an index generated by the Ministry of Education. It takes values from one to five, where one indicates students of very low-SES background and five indicates students of very high-SES background.

Table 3: Program Take-Up and Implementation

<i>Panel A: Information Treatment Implementation</i>			
	N. of Students Allocated (1)	Sh. Answering exit Survey (2)	Sh. Receiving the letter (3)
Control schools	10067	0.302	0.000
Information only schools	8755	0.315	0.205
Information plus counseling schools	8797	0.370	0.357
Information plus counseling students	814	0.340	0.671
<i>Panel B: Counseling Program Participation</i>			
	Total students assigned to the program (1)	Share participating in at least one session (2)	Share participating in all four sessions (3)
Information plus counseling students	814	0.628	0.220

Notes: The table describes the implementation and take-up of our interventions. Panel A describes the implementation of the information package in each treatment arm. It describes the share of students in each group answering the survey and reporting to have received the information package. Panel B describes the implementation of the group counseling program and reports the share of students attending at least one counseling session and the share attending all four counseling sessions.

Table 4: Counseling Effects on Higher Education Trajectories

	Pr. Registers for PDT (1)	Pr. Takes the PDT (2)	Pr. of applying for funding (3)	Pr. of university application (4)	Pr. of enrolling in higher ed. (5)
<i>Information</i>	-0.015 (0.026) [0.694]	-0.007 (0.025) [0.836]	-0.037 (0.026) [0.274]	-0.011 (0.015) [0.635]	-0.029 (0.023) [0.297]
<i>Information plus peers with counseling</i>	0.051** (0.022) [0.061]	0.034 (0.022) [0.271]	0.006 (0.019) [0.836]	0.018 (0.014) [0.297]	-0.002 (0.018) [0.923]
<i>Information plus counseling</i>	0.131*** (0.024) [0.000]	0.112*** (0.024) [0.000]	0.073*** (0.022) [0.005]	0.049** (0.022) [0.074]	0.069*** (0.021) [0.005]
Observations	27619	27619	27619	27619	27619
Control mean	0.647	0.487	0.720	0.201	0.532

The table presents results of specification (1) using administrative records from the Ministry of Education and the agency in charge of the university admission system, which prevent issues related to attrition. All specifications control for school characteristics including the share of female students in the cohort, whether the school is a private voucher school, whether the school is located in a rural area, and academic performance of students from the previous year measured by high school GPA and tenth grade standardized exam scores in mathematics and Spanish. These controls are not needed for identification, but allow us to gain statistical power. Standard errors clustered at the school network level—the level at which we randomized the treatments—are presented in parentheses. In addition, Q-values computed according to (Simes, 1986) to account for multiple hypothesis testing are presented in square brackets. Columns (1) and (2) study the effect of our interventions on the probability of registering and taking the university admission exam by 2024. Column (3) focuses on the probability of applying to financial aid through the FUAS form by 2024; column (4) on the probability of applying to university by 2024; and column (5) on the probability of enrolling in higher education by 2024. * p-value < .1, ** p-value < .05, *** p-value < .01

Table 5: Counseling Effects on Students' Understanding of the System

	Overall Knowledge Index (1)	Financial Aid Knowledge Index (2)	Labor Markets Knowledge Index (3)	Financial Aid Perceived Knowledge (4)	Applications Perceived Knowledge (5)	Labor Market Perceived Knowledge (6)
<i>Information</i>	0.089* (0.048) [0.141]	0.036 (0.053) [0.630]	0.084*** (0.029) [0.013]	0.024 (0.018) [0.294]	-0.001 (0.018) [0.988]	0.000 (0.015) [0.988]
<i>Information plus peers with counseling</i>	0.092* (0.048) [0.141]	0.075 (0.054) [0.294]	0.041 (0.028) [0.281]	0.018 (0.020) [0.520]	0.002 (0.019) [0.988]	0.008 (0.017) [0.764]
<i>Information plus counseling</i>	0.284*** (0.084) [0.005]	0.307*** (0.080) [0.002]	0.080 (0.061) [0.294]	0.209*** (0.039) [0.000]	0.113*** (0.034) [0.005]	0.107*** (0.032) [0.005]
Observations	7394	7424	7726	8746	8746	8746
Control mean	-0.079	-0.064	-0.039	0.468	0.529	0.389

Note: The table presents results of specification (1) estimated in the subsample of students who answered the exit survey. All specifications control for school characteristics including the share of female students in the cohort, whether the school is a private voucher school, whether the school is located in a rural area, and academic performance of students from the previous year measured by high school GPA and tenth grade standardized exam scores in mathematics and Spanish. These controls are not needed for identification, but allow us to gain statistical power. Standard errors clustered at the school network level—the level at which we randomized the treatments—are presented in parentheses. In addition, Q-values computed according to (Simes, 1986) to account for multiple hypothesis testing are presented in square brackets. Columns (1) to (3) study the effect of our interventions on actual knowledge measured by indexes that we built using the first component of a principal component analysis of a vector containing questions included in the exit survey to measure students' understanding of different dimensions of the higher education system. Columns (4) to (6) study the effect of our interventions on perceived knowledge. In the exit survey, students were asked how well they believed they knew three dimensions of the higher education system: funding opportunities, application procedures, and labor market outcomes of graduates. The outcomes used in these columns correspond to dummy variables that take value one if students reported knowing these dimensions well or very well (the other two options that students could choose were poorly or very poorly). * p-value < .1, ** p-value < .05, *** p-value < .01

Table 6: Cost-Benefit Analysis: Full Counseling vs. Control (Five Scenarios, 2021 USD)

Scenario	Wage Growth	Discount Rate	Social Perspective		Individual Perspective	
			NPV Gain	B/C Ratio	NPV Gain	B/C Ratio
Baseline	2%	5.5%	5,689	13.16	6,058	63.21
Scenario 1	2%	4.0%	8,601	19.38	8,972	93.06
Scenario 2	2%	7.0%	3,797	9.12	4,169	43.78
Scenario 3	1%	5.5%	4,340	10.27	4,711	49.34
Scenario 4	3%	5.5%	7,457	16.93	7,828	81.33

Notes: All values in 2021 USD per student, converted from 2021 CLP using the average 2021 exchange rate (1 USD = 759.06 CLP). Earnings are based on Mincer predictions from CASEN 2024, adjusted for population employment rates. Total costs per student: \$468 (intervention \$98 + tuition \$370). B/C Ratio = Earnings Gain / Cost.