A Randomized Experimental Impact Assessment of Vulnerable Youth Training Program in Rio de Janeiro's Impoverished Communities

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Abstract

We conducted a randomized experimental impact assessment of the Programa Jovens Construtores (PJC) which provides training for vulnerable youth (ages 16-24) in two impoverished communities (Borel and Magueira) in Rio de Janeiro. The program focused on professional skills and community projects. The most notable effects were in labor market engagement with significant employment differences favoring the program participants. Results showed that 75% of participants were engaged in school or employment compared to 65.6% in the control group. Interest in vocational courses increased by 18.4 percentage points. While there were no significant impacts on education enrollment or socioemotional aspects, the program significantly improved satisfaction with personal and professional lives.

Keywords: Labor market training, Youth, Randomized controlled trial, Employment, YouthBuild Program.

JEL: J24, J68, I38

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1 Introduction

A critical public policy issue in both developed and developing countries is the transition of youth into adulthood and their integration into educational systems and the labor market. The disconnection of youth driven by school dropout and lack of job opportunities has severe consequences not only for individual future trajectories but also for broader social impacts. The youth who drop out of school face significant material and symbolic constraints due to limited job options and are more susceptible to involvement in crime.

To illustrate youth disengagement in Brazil, the Brazilian Institute of Geography and Statistics's 2016 Social Indicators Summary reported that 22.5% of youth aged 15 to 29 were neither studying nor working in 2015; this figure increased to 23.2% in the State of Rio de Janeiro. However, this phenomenon does not affect all areas within cities uniformly; it is more pronounced in the most economically and socially vulnerable communities. For instance, a study by Casa Fluminense (2014) revealed that the dropout rate among children and adolescents aged 6 to 14 was 3% in Rio de Janeiro city but in the six largest favelas it averaged 10.3%. Neri (2010) found that the unemployment rate in the five largest favelas in Rio was more than double compared to that in upscale neighborhoods.

Therefore, any public policy aimed at individual, social, and public security development must necessarily include initiatives that provide educational access and employment opportunities for youth residing in poorer communities. This is precisely the aim of the "Programa Jovens Construtores" (PJC), a replication of the YouthBuild program which has been implemented in the USA since 1978 and later expanded to 21 other countries including Brazil where it has trained over 182,000 youth. In Brazil, the development and implementation of this program have been managed by the Center for Health Promotion (CEDAPS), a civil society organization working on projects and processes in popular communities since 1993.

The PJC aims to achieve three objectives. The first is to strengthen low-income communities by engaging the youth, civil society organizations, family members, and community leaders in development activities that improve local infrastructure. The second goal focuses on promoting youth engagement with education and increasing employability. Finally, the project seeks to encourage the implementation of sustainable community development initiatives by mobilizing the leadership and energy of youth.

In 2016, the Inter-American Development Bank (IDB) financed seven complete YouthBuild program cohorts benefiting 210 youth aged 16 to 24 with limited resources for personal and professional development in the slums of Borel, Mangueira, and an additional 30 youths in Cidade de Deus, Rio de Janeiro[2].

In this paper, we present the results of an impact assessment conducted using a randomized controlled trial on these IDB-financed program cohorts of the PJC in Borel and Mangueira. This assessment focused on five dimensions: a) educational connection; b) employment connection; c) community participation; d) values, attitudes, and emotional aspects; and e) involvement in the criminal justice system.

The PJC provided 340 hours of formative and practical workshops emphasizing skills such as professional painting, construction, telecommunications, and electrical work. In the final month, participants developed and executed a project under instructor supervision to build or renovate physical assets for their families and communities, allowing them to apply and demonstrate their acquired knowledge. After completing the five-month course, each young person received individual support for an additional six months. During this period, they were encouraged to plan their life goals for the next five years, with joint efforts made to help them enter the job market.

This study contributes to the understanding of the potential benefits of targeted programs for vulnerable youth, particularly in Brazil. While previous evaluations of the YouthBuild program have been conducted in the United States and other countries, this paper provides the first impact evaluation of the PJC program in Brazil. The most comprehensive study on YouthBuild by Miller et al. (2016) utilized a randomized control and treatment group design across 75 YouthBuild programs in the U.S. This study documented significant positive impacts on educational and vocational engagement among participants. Additionally, cost-benefit analyses by Cohen and Piquero (2008) revealed substantial economic benefits.

In Brazil, Oliveira and Rios-Neto (2007) and Calero et al. (2017) are the only previous studies to have conducted randomized experimental impact evaluations of Active Labor Market Policies (ALMPs). Similarly, in other Latin American countries, the number of

[2]The first cohorts of the program cycle in Borel and Cidade de Deus were not included in this impact assessment. This is because the selection process for these cohorts did not involve random selection or include a broad control group

such evaluations is limited. Notable examples include studies by Card et al. (2011) and Ibarrarán et al. (2014) on the Dominican Republic's Juventud y Empleo, Attanasio et al. (2011) on Colombia's Jóvenes en Acción, and Alzua et al. (2015) on an NGO-run training program in Argentina.

Oliveira and Rios-Neto (2007) evaluated the employment impacts of the National Vocational Training Program (PLANFOR) implemented in Minas Gerais in 1996. PLANFOR was a large-scale federal public program targeting vulnerable populations but not specifically young individuals. Their study found overall positive effects on employment, although it did not significantly impact those who were unemployed at the start of the experiment.

The most comparable study to ours is by Calero et al. (2017), which conducted a randomized trial to assess the impacts of the Galpão Aplauso youth training program in Rio de Janeiro. This program uses arts- and theater-based pedagogical tools. Their findings indicate that the program had economically significant positive effects on youth employment and earnings in the medium term, specifically 11 to 13 months after program completion.

The duration of the Galpão Aplauso program is nearly identical to that of the PJC, offering 300 hours of vocational training compared to PJC's 340 hours, both spanning approximately six months with five hours of training per day. The primary difference between the two programs lies in the selection of participants. Galpão Aplauso selects higher-skilled youth, particularly those with higher socio-emotional skills, among low-income applicants aged 16 to 29. In contrast, the PJC specifically targets the most vulnerable youths among those pre-registered.

Additionally, there is a significant difference in educational attainment and age between the programs. The average age of Galpão Aplauso participants is 23 years, with over 85% holding a high school degree. In contrast, PJC participants have an average age of 20 years, with only approximately 51% having completed high school. This contrast in participant profiles is an important distinction between the two programs and may lead to differences in the types of impacts and outcomes observed for each intervention.

The next section describes the PJC program. In the third section, we present the methodology of the impact assessment, including experimental design and the sample strategy. Finally, in the fourth section, we present the results of the impact assessment,

followed by our conclusions.

2 Program Description

The implementation of the PJC by CEDAPS involved a partnership with vocational organizations and Community-Based Organizations (CBOs), which have legitimacy in their territories and ensure that the program reaches the most vulnerable participants. In this institutional arrangement, CEDAPS coordinates all planning and implementation, while also training the CBOs in every stage of the program.

The PJC adopts five strategies to achieve results:

1. Development of the program within the territories where the youth reside;

2. Implementation through an intensive training program with meetings and classes lasting four hours a day, five times a week over four months, in addition to the fifth month when the practical activity of construction or renovation of the family and community asset is developed.

3. Execution of the program based on partnerships with CBOs, co-managers of program editions, and also with a support network from the intervention territory;

4. Visibility of the result from the concrete transformation in community spaces of the participants' territory to generate value for youth - Family and Community Assets (AFC);

5. Follow-up of the young person for at least six months during the period after the completion of the training program in order to support insertion into the world of work and society.

During the training, the youths receive a monthly scholarship of R$200; a financial support of R$300.00 to buy materials for the execution of the project and an additional R$200.00 when it is completed.

The programmatic content of the program is distributed in seven modules, each composed of a set of workshops that will address themes involving the personal and professional growth of young participants, in addition to specific modules focused on professionalization and practical aspects. Among the topics covered are: the promotion of ethics,

integrity, and transparency; promotion of diversity in its different aspects; environmental education and actions aimed at recovering and preserving degraded areas; among others.

After five months of classes and workshops, the participants are accompanied for an additional six months, during which an attempt is made to place them in the job market. During this period, they receive individual mentoring and are encouraged to create their "Life Plan," which is a way to make them reflect on their aspirations and how to deal with personal and practical issues.

The Life Plan consists of five dimensions that guide the youth in setting short, medium, and long-term goals. The dimensions include education, work, personal development, family, health, and finances. In this process, the mentor helps the young person decide on the first step to take after participating in the program, exercising autonomy based on their dreams and desires. Essentially, at this moment, the idea is to consolidate the young person's view of themselves as an agent of change who can make entrepreneurial choices, even considering their economic and opportunity constraints.

In addition to this personal counseling process, the mentors at CEDAPS actively seek job opportunities and job interviews for the youth during this period, while also helping them obtain all necessary documentation for professional development.

3 Methodology

3.1 Experimental Design and the Random Assignment Process

To select participants for the program, CEDAPS partnered with the local residents' association to conduct an extensive awareness and mobilization campaign. This campaign aimed to encourage young residents of the communities to sign up for the PJC selection process. As part of this process, the youths were required to fill out a pre-registration form that included socioeconomic information.

Among those enrolled, individuals who did not meet the program's eligibility criteria were excluded. The criteria were: a) being between 16 and 24 years old, b) residing in Borel or Mangueira, and c) having a profile of social vulnerability.

To measure the effect of the program, we conducted a survey four to ten months after the job placement phase, which corresponds to 13 to 19 months after the program's start, as detailed in Table 1. Insights gathered from individual interviews and focus groups were

used to create an initial version of the survey questionnaire. This version underwent a pilot test with participants from the first group in Borel who were not part of the subsequent evaluation. The final version of the questionnaire consists of five blocks of questions for the youth, with an additional block for them to share their subjective perceptions of the PJC (evaluated non-experimentally).

The first block focuses on personal characteristics, such as the participant's place of residence, the level of their mother, and other background information. These serve to verify that the control and treatment groups are identical or to perform analysis of the results controlling for these characteristics.

The second block addresses the participant's educational experiences, including regular education, participation in job training programs, and expectations of continuing studies. The third block examines issues related to the labor market, including employment status and job training. The fourth block asks about the youth's emotional and social development and values, while the last block deals with possible involvement in violent or criminal activities.

Table 1 - Schedule of Evaluated Cohorts for PJC

Cohorts	Number of Youths	Training phase		Job placement phase		Month of Evaluation Survey	Time elapsed after the end of the program (in months)	Time elapsed since the start of the program (in months)
		Start	End	Start	End			
Borel 2th	30	01/08/2016	16/12/2016	01/01/2017	30/06/2017	mai/18	10	19
Borel 3th	33	01/08/2016	16/12/2016	01/01/2017	30/06/2017	mai/18	10	19
Borel 4th	29	03/05/2017	04/10/2017	05/10/2017	05/04/2018	nov/18	7	16
Mangueira 1st	29	10/07/2017	01/12/2017	01/12/2017	01/06/2018	dez/18	6	14
Mangueira 2nd	32	25/09/2017	23/02/2018	01/03/2018	01/09/2018	dez/18	4	13
Total	153							

3.2 Sample and impact analysis methodology

Our methodology for estimating the program's impact is based on a randomized control and treatment group design. This approach involves randomly assigning eligible participants to either the treatment group, who receive the program, or the control group, who

do not. By comparing the differences in mean outcomes between these two groups, we can accurately measure the program's impact. The control group consists of individuals who were enrolled but not randomly selected to participate in the program, providing a baseline for comparison against those who did receive the program.

After conducting the lotteries for Borel and Mangueira, the samples were distributed as detailed in Table 2. The total sample comprised 455 individuals, with 302 in the control group and 153 in the treatment group.

However, by the end of 2018, sudden changes in the public security situation in Rio de Janeiro, particularly in the areas where the PJC was implemented, prevented the response rate from being higher than initially planned. At that time, local gang leaders were arrested, causing significant instability, distrust, and fear among community residents. New leaders from other communities, who had no ties to the local residents, assumed control of the criminal factions. As a result, after 16 visits to the areas by the interview team, we were unable to contact any more youth as they refrained from speaking.

Considering that the youth interviewed were mobilized more than three years after filling out the pre-registration form, and that 176 of the control group (58%) and 135 (88%) were interviewed, the success of the follow-up strategy is evident. Considering the high response rate, we do not believe there was any sample selection bias, especially since the changes in local security conditions affected both groups equally. The higher response rate in the treatment group (88%) compared to the control group can be attributed to the more frequent and continuous contact the youth had with the PJC team.

We tested the observable characteristics of the control and treatment groups using various hypothesis tests to confirm that there were no statistical differences in their observable characteristics. A common challenge in impact evaluations using experimental designs is the issue of potential contagion. This occurs when individuals in the control group inadvertently migrate to the treatment group and vice versa. Additionally, individuals initially assigned to the treatment group may become untraceable later on. These complications can significantly affect the reliability and validity of the study results.

Fortunately, no such issues arose during this evaluation. CEDAPS maintained strict control over the participants, adhering closely to the random selection process. They also made a notable effort to maintain telephone contact with both the treatment and control groups, ensuring comprehensive follow-up.

Because the assignment of the young individuals subject to treatment and control are made randomly, the information collected from the survey was sufficient for us to estimate the possible impacts of the program, to isolate potential omitted variables that could distort or bias the results. To improve the precision of the estimates, impact analyses and hypothesis tests were carried out based on regressions, following the approach of Mitchel et al. (2003), where we considered the place of residence, age, gender, race, educational level, living arrangements, and whether they have children as controls.

Furthermore, since the fourth block of the survey questionnaire included seventeen questions about the youth's values and socio-emotional characteristics (rated on Likert scales), we used a factorial analysis model to identify latent variables and compare potential differences between the treatment and control groups.

Table 2: Samples of control and treatment groups

		Total Random Selected	**Interviewed**	**Not interviewed**	**Unwilling/Cannot participate**
Borel	Control	106	73 (69%)	24 (23%)	9 (8%)
	Treatment	92	84 (91%)	7 (8%)	1 (1%)
	Total	**200**	**157 (79%)**	**31 (16%)**	**10 (5%)**
Mangueira	Control	196	103 (53%)	90 (46%)	3 (2%)
	Treatment	61	51 (84%)	8 (13%)	2 (3%)
	Total	**256**	**154 (60%)**	**98 (38%)**	**5 (2%)**
Total	Control	302	176 (58%)	114 (38%)	12 (4%)
	Treatment	153	135 (88%)	16 (10%)	3 (2%)
	Total	**455**	**311 (68%)**	**129 (28%)**	**15 (3%)**

4 Impact Assessment Results

4.1 The characteristics of the youths in the treatment and control groups

Table 3 displays the characteristics of youths in the treatment and control groups. Both groups consist of 50% males and almost 80% self-declared as black (47.5% in the treatment group and 51.5% in the control group) or "pardo" (36.0% in the treatment group and 34.9% in the control group). Despite being on average 20 years old, around 30% of the youth have children, with the youngest child being on average 2 years old. In both groups,

over 90% of respondents have a living mother, with over 65% living with their mother and only a minority living with their father (26.0% in the treatment group and 34.3% in the control group). Almost half of their mothers did not complete primary education (44.2% in the treatment group and 52.0% in the control group).

Table 3: Personal Characteristics of the Interviewed Youths

Characteristics	**Treat-ment**	**Control**	**Diff.**	**p-value**
Place of residence (%)				
Borel	63.31	37.28	-	-
Mangueira	36.69	62.72	-	-
Color/race (%)				
White	8.63	8.28	0.00	0.793
Black	47.48	51.48	-0.04	0.625
Yellow	4.32	2.96	0.01	0.651
Pardo	35.97	34.91	-0.01	0.783
Indian	3.60	2.37	0.01	0.643
Masculine (%)	51.80	47.02	0.05	0.564
Age (%)				
15 years or less	0.74	0.59	0.00	0.788
16 to 18 years old	22.79	22.19	0.00	0.430
19 to 21 years old	47.79	42.01	0.07	0.106
23 years or older	28.68	28.99	0.00	0.796
Average age	20.30	20.40	-0.01	0.664
Has a living mother (%)	99.28	93.49	0.06	0.027
Mean age of living mother	43.35	44.70	-0.01	0.080
Lives with: (%)				
Mother without father	45.65	34.94	0.11	0.131
Mother and father	22.46	30.12	-0.08	0.258
Father without mother	3.62	4.22	-0.01	0.770

Table 3: Personal Characteristics of the Interviewed Youths (cont.)

Characteristics	**Treatment**	**Control**	**Diff.**	**p-value**
Grandparents without parents	4.35	7.23	-0.03	0.455
Your mother's level of education (%)				
She did not study	4.35	1.78	0.03	0.330
Incomplete elementary	39.86	50.30	-0.10	0.150
Completed elementary	9.42	6.51	0.03	0.264
Incomplete high school	15.22	10.06	0.05	0.314
High school diploma	13.77	14.79	-0.01	0.772
Higher education	3.62	4.14	-0.01	0.776
I don't know	13.77	11.83	0.02	0.702
Have children (%)	33.09	30.36	0.03	0.699
Among those with children				
Average number of children	1.43	1.25	0.18	0.269
Average age of youngest child	2.18	2.33	-0.15	0.776
Have you ever attended daycare (%)				
Yes	82.73	78.70	0.04	0.537
No	15.83	13.61	0.02	0.686
I don't know	1.44	7.69	-0.06	0.032
Is enrolled in school (%)	42.45	41.32	0.01	0.782
School grade if enrolled in school (%)				
Elementary School	16.07	11.94	0.04	0.641
High school	83.93	88.06	-0.04	0.641
Reason for not being enrolled in school (maximum 3 options) (%)				

Table 3: Personal Characteristics of the Interviewed Youths (cont.)

Characteristics	**Treatment**	**Control**	**Diff.**	**p-value**
Finished high school/desired level of study	39.24	38.78	0.00	0.796
I need to take care of the house, the child or other people	17.72	18.37	-0.01	0.793
I am already working	11.39	6.12	0.05	0.365
I have a health problem or a disability that makes it impossible for me to study	0.00	1.02	-0.01	0.532
School is boring, I am not interested or not interested in studying	5.06	1.02	0.04	0.217
I got tired of school	7.59	0.51	0.07	0.063
I have been a victim of discrimination or violence in the school environment	2.53	3.06	-0.01	0.798
I don't have time due to work	10.13	4.08	0.06	0.061
I was unable to enroll	20.25	21.43	-0.01	0.783
Among those not enrolled in school, last degree attended (%)				
Elementary School	44.16	23.40	0.21	0.013
High school	54.55	69.15	-0.15	0.046
Higher education	1.29	7.45	-0.06	0.013
Have you ever repeated a year at school (%)	81.62	78.53	0.03	0.640
Average number of times, among those who have already repeated	1.62	1.58	0.04	0.515

Table 3: Personal Characteristics of the Interviewed Youths (cont.)

Characteristics	**Treatment**	**Control**	**Diff.**	**p-value**
Did you take a vocational course, outside of regular education, before completing the registration to participate in the PJC program (%)	33.58	43.45	-0.10	0.174

Regarding education, 42.4% of the youth in the program and 41.3% in the control group were enrolled in school, with 80% of those attending high school. Among those not enrolled, the majority had completed elementary school. The primary reasons cited for not continuing their education included: "I don't have time due to work", "I was unable to enroll", and "I need to take care of the house, the child, or other people."

Moreover, almost 80% of the youth in both groups have repeated a year at least once (81.6% in the treatment group and 78.5% in the control group). Only 33.6% of the youth in the program had previously taken a professional course, while this rate was 10 percentage points higher in the control group.

In general, the characteristics of the youth in the treatment and control groups were similar as we expected, and there were no significant statistical differences. However, there were two exceptions. First, there was a difference in whether the mother was alive and her age. Second, regarding the highest level of education attained by the youth who were not currently enrolled in school, those in the treatment group had fewer years of education, as evidenced by a higher proportion having only elementary education—43.1% compared to 24.4% in the control group.

4.2 Evaluation (non-experimental) of the program according to program participants

Table 4 presents the responses of the youth who participated in the program on how they evaluate PJC. We can see that there was a great adherence to the activities by the youths, since 53% of those enrolled participated in more than 90% of the activities; and

84% participated in more than 75% of the activities. Only 4% reported participating in less than 50% of the activities.

There was a great commitment of the youths with the project, indicating that 93% of them remained in the project until its conclusion. This is a much higher rate than that found in similar YouthBuild programs developed in the USA. For instance, Miller et al. (2016) found that 50% of the participants completed the program.

After completing the course, almost half of the youths stated that they still maintained frequent or very frequent contact with the program's team until the time of the interviews, and only 4.3% of the participants no longer had contact with the PJC team.

Regarding the insertion of the youth in the labor market, 36% of participants attest that the program helped them to get a job. These even reported having stayed in this job for an average of 6 months.

Finally, participants were asked to evaluate the program by giving a score from 0 to 10 for an overall evaluation of the PJC; for the job search carried out by the team; and the program's impact on the lives of participants. We can see that the participants evaluated all the aspects asked extremely positively: the general evaluation obtained an average of 9.3, while the job search obtained an average of 7.7, and the impact on life obtained an average of 9.0.

We emphasize that the median of the interviewees gave the maximum score for the general evaluation and impact on their lives items, reinforcing the great satisfaction of the participants with the project as previously mentioned. The median job search score was also quite high, with 9 points. Therefore, we noticed the extreme satisfaction of the project participants.

Table 4: Assessment (non-experimental) made by the youth who participated in the PJC

Questions	**Answers (%)**
You were present at the course location or planned activities at PJC in ...	
Less than half of the activities	3.62
Between 50% and 75% of activities	11.59
Between 75% and 90% of activities	30.43
More than 90% of the activities	52.90
I don't know	1.45
Did you stay on the program until completion?	
Yes	93.48
No	6.52
How often did you have contact with someone from the young builder program team after your participation in the program ended?	
I didn't get back in touch	4.35
Rarely	15.94
Sometimes	31.88
Often	22.46
Very often	25.36
Did the Young Builder Program help you get a job either during your participation in the Program or afterwards?	
Yes	36.23
No	63.77
If yes, how many months did you stay in the job(s) that the Young Builder Program sought for you?	
Average of months	6.02
From a score of 0 to 10, according to your EVALUATION that you make of the job search that the Young Builder Program made for you	7.75
From a score of 0 to 10, according to your GENERAL EVALUATION of the Young Builder Program	9.32
From a score of 0 to 10, according to the IMPACT that the program had in your life	8.97

4.3 Impacts of the Programa Jovens Construtores (PJC)

We assessed the impact of the program by estimating the differences in mean outcomes between the treatment and control groups. We conducted regression analysis to statistically test whether we could reject the null hypothesis that these differences between the treatment and control group outcomes are equal to zero at a significance level of 5%.[3] The p-value considered pertains to the estimated coefficient of the indicator variable for program participation.

Our analysis focused on five key dimensions: a) educational engagement; b) employment status; c) community participation; d) values, attitudes, and emotional well-being; and e) experiences with violence and involvement with the criminal justice system.

Regarding the dimension "values, attitudes, and emotional aspects," instead of using some ad hoc aggregation metric for the 17 questions of the questionnaire related to this theme, we adopted a factorial analysis method. This approach enables the statistical model itself to identify potential latent variables that reflect the youth's visions, values, and attitudes. Based on this model, four latent variables were revealed which we call: a) self-esteem; b) satisfaction with personal and professional life; c) satisfaction with image and health; and d) belief in competence. Then, based on the latent variables and the weights as each item composes the variable, we calculated for each individual a score associated with each of these latent variables that were in a second moment used in the linear regression in order to estimate the impact of the program.[4]

[3]We included the following variables as controls in the regression: place of residence, age, sex, race/ethnicity, level of education, whether the individual lives with their parents, and whether they have children.

[4]As these four constructed latent variables are continuous, instead of the logistic regression model, we used a linear regression model to calculate the p-value of the test, with the control variables remaining the same.

Table 5: Impacts of the Programa Jovens Construtores (PJC)

Results	Treatment (%)	Control (%)	Diff.	p-value
Education				
Are you currently enrolled in a school or college?	42.45	41.32	1.13	0.423
Are you considering going to college?	80.15	85.03	-4.88	0.542
Did you take any professional course outside of regular education after completing the registration form to participate in this program? program	35.77	17.37	18.40	6.57E-05
Chances of enrolling in a vocational course in the next 24 months (if already enrolled or answered likely or very likely)	75.00	74.38	0.62	0.542
Work				
Are you working or studying?	75.00	65.62	9.38	0.032
Were you working in any paid activity last week?	61.86	52.59	9.28	0.006
Have you ever worked in any paid activity?	84.89	68.64	16.25	0.003
Violence and involvement in criminal justice				
Since filling out the registration form for the program, have you ever been taken to the police station accused of something or involved in a physical fight?	11.36	12.68	-1.32	0.597
Comunity participation				
Do you participate in activities or projects in the community or in any other group (e.g., Student Council, Student Movement, Church, Religious Center, etc.)?	11.36	12.68	-1.32	0.409
Personal and professional satisfaction				
Self-esteem (average)	6.17	5.99	0.18	0.259
Satisfaction with personal and professional life (average)	5.46	5.13	0.33	0.031
Satisfaction with self image and health (average)	8.27	8.04	0.23	0.381
Belief in competence (average)	6.37	6.14	0.23	0.259

5 Results

Table 5 displays the main estimates of the program's impact concerning the five different dimensions as previously mentioned. In terms of education, 42.4% of the young builders were enrolled in basic education compared to 41.3% for the control group, representing a non-significant difference of 1.1 percentage points. Similarly, no significant differences were found between the groups in terms of their expectations and interest in attending a university. On the other hand, the program appears to have sparked an interest among the "young builders" in enrolling in other vocational and professional courses. We observed statistically significant differences compared to the control group, amounting to 18.4 percentage points.

The most notable impact of the PJC program was its effectiveness in connecting the youth to the labor market. A statistically significant difference was observed between the treatment and control groups at a 5% significance level regarding whether participants were engaged in education or employment. Specifically, 75% of the participants in the program were linked to school or work compared to 65.6% in the control group. The PJC's role in facilitating the youth's access to the labor market was a significant factor in this outcome. As shown in Table 5, 61.9% of PJC participants were employed in the week before the interview, which was 9.3 percentage points higher than the control group. This difference is statistically significant at the 1% level. Given the high turnover in the youth's employment, we not only asked whether they had worked in the week prior to the interview, but also if they had ever engaged in any paid activity. We found that 84.5% of the program participants had this experience at some point, while the rate was 16.2 percentage points lower in the control group, a difference that was statistically significant. As highlighted in the introduction, overcoming the barrier to the first job is one of the most significant challenges in linking the youth to the labor market. On the other hand, we found that nearly all the youth in both the treatment and control groups earned low incomes, approximately equivalent to one minimum wage.[5] This uniformity in earnings precluded any analysis of potential differences in remuneration.

Regarding violence and involvement with the criminal justice system, we found no significant impact on the likelihood of the youth experiencing physical aggression or being

[5]On average, these youth received, on average, 0.94 and 0.87 minimum wages.

taken to a police station. Given the statistical rarity of criminal participation and deviant behavior, it was anticipated that no statistically significant differences would be observed, similar to the findings of Miller et al. (2016). Their study, which involved a much larger sample of 2,845 youth, also reported no significant differences in these areas.

In terms of community participation, no statistical differences were identified between the treatment and control groups. Similarly, regarding values, attitudes, and emotional aspects, we found no statistically significant differences in self-esteem, satisfaction with body image and health, or beliefs in one's own competence. However, a significant and positive impact was noted in the satisfaction with the personal and professional lives of the youth, as indicated in Table 5. This result may be linked to improvements in the educational and professional integration of the young builders according to our findings.

6 Conclusions

The most substantial positive effects of the Programa Jovens Construtores (PJC) were observed in linking youth to the labor market, with 75% of participants engaged in school or employment compared to 65.6% in the control group. This is particularly significant given that 23% of young Brazilians, especially in Rio de Janeiro's favelas, are neither studying nor working. Additionally, 61.9% of participants were employed at the time of the interviews compared to 52.6% in the control group, with a significant positive impact also seen in previous work experience. It is worth to note that they are align with the results of the other two experimental impact evaluations of Active Labor Market Policies in Brazil: Oliveira and Rios-Neto (2007) and Calero et al. (2017).

In terms of education, the program significantly increased interest in vocational and professional courses, with an 18.4 percentage point difference compared to the control group. No significant differences were observed in basic education enrollment or aspirations for higher education.

We found no significant impact of the PJC program on the likelihood of the youth experiencing violence or involvement with the criminal justice system. Given the sample size and the statistical rarity of criminal participation and deviant behavior, this outcome was anticipated as the power of the hypothesis test was limited in detecting such rare events.

Similarly, no significant differences were observed in community participation or in values, attitudes, and emotional aspects. These findings align with those of Calero et al. (2017), which also did not find significant program impacts on socioemotional development. However, we found a significant positive impact on satisfaction with personal and professional lives, highlighting the program's effectiveness in improving overall well-being.

In conclusion, the Programa Jovens Construtores (PJC) has demonstrated success in integrating the youth into the labor market and enhancing their satisfaction with personal and professional lives. These results highlight the importance of targeted interventions in addressing youth unemployment and improving life outcomes. Future programs could build on these findings to further refine and expand their reach, ensuring that more young individuals benefit from such impactful initiatives.

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