

Supporting resilience of vulnerable youth in urban Côte d'Ivoire amidst the COVID-19 pandemic: Evidence from a Randomized Control Trial.



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Supporting Resilience of Vulnerable Youth in Urban Côte d'Ivoire Amidst the COVID-19 Pandemic: Evidence from a Randomized Control Trial¹

Abstract

In the context of the COVID-19 pandemic, state responses have included reactivating protective systems to mitigate the vulnerability of the poor. While the evidence for these systems in normal times is well established in the literature, there is paucity of evidence on their effects on households during the pandemic. This paper explores the impact of an improved post-COVID-19 adaptation and recovery scheme on marginalized youth. Specifically, we test whether the combination of cash transfers, business literacy, and soft skills (a replication of government intervention) leads to increased mitigation of the adverse effect the health shock and reshapes resilience. We use a randomized controlled trial of 265 at-risk youth, in which 130 are randomly assigned to the above-mentioned treatment and 135 others are in the control group. Our results suggest that a combination of business training for youth and unconditional cash transfers may increase the chances of adapting to unexpected situations. We found that food consumption increased by 38.6 percentage points and non-food expenditures by 38.9 percentage points. The program also improved the likelihood of being able to run a microbusiness by 18.5 percentage points. Further results show that the program can lead to a reduction in misperceptions about COVID-19. These results call for an integrated approach to address resilience of marginalized groups during an exogenous shock.

Keywords: health-related behaviors, labor supply, food and non-food consumption, COVID-19 pandemic, vulnerable youth

JEL: D10, D78, C93, I12, O55

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I. Introduction

In Sub-Saharan African, the health impacts of COVID-19 have been limited in comparison to other regions of the world, but the economic costs of the pandemic have been substantial (Amewu et al., 2020), especially for the poor (Teachout & Zipfel, 2020). In some countries, cash-transfer programs have been set up to offset the negative effects of mobility restrictions (lockdowns, sanitary cordon) on income-generating activities (IGA) of the most vulnerable populations (Gentilini et al., 2022).

On the one hand, extensive evidence exists that cash-transfer programs are effective in reducing short- and long-term poverty (Premand & Stoeffler, 2020; Dévereux, 2021; Pellerano et al., 2014; De Hoop, Groppo & Handa, 2020). Some studies have also pointed out significant effects of cash transfers in improving the well-being of vulnerable households during the pandemic (Banerjee et al., 2020; Asfaw et al., 2017; Londoño-Vélez & Quérubin, 2022). At the same time, integrated programs that address other structural limitations faced by the poor (cash transfers together with business support, for instance) show even greater impacts (e.g., IDinsight, 2022).

On the other hand, there is some evidence that cash transfers alone help improve resilience in the face of various shocks (Kaneda, Kubota & Tanaka, 2021; Asfaw et al., 2017). However, evidence on packages that address short-term needs and invest in resilience capacities is much more limited (Abay et al., 2023).

The caveats of these papers are twofold. First, even though the findings focused on poor households, evidence is lacking regarding the impact of transfers on at-risk youth—specifically, unqualified, out-of-school, and marginalized youth (i.e., youth who are not in employment, education, or training or who exhibited such antisocial attributes as crime, violence, or drug abuse. Alfars and Moussié (2020) nonetheless indicated that, out of 124 million unemployed youth in 2020 in Africa, 53.5 million were in employment, education, or training (hereafter, NEET). In particular, the World Bank estimated the share of NEET participants as a percentage age of the population aged 14-25 at 21.4% in Côte d'Ivoire. Second, the integrated programs assessed to date accounted only for a combination of cash transfers and business classes or a combination of classroom training and soft-skills training. Nevertheless, the profile of targeted youth calls for an overlapping approach that adopts cash transfers, business literacy, and soft-skills training under the mentoring of social workers.

The objective of this study is to assess an integrated cash-transfer program that addresses the contextual challenges of the COVID-19 shock and directly invests in the resilience capacities of disadvantaged youth in urban Côte d'Ivoire.

To reach that goal, we took advantage of ongoing research to implement an individual-level randomized controlled trial in Abidjan, the largest metropolis of Côte d'Ivoire and the epicenter of the pandemic. We used data from a public draw of 543 at-risk young men recruited in close collaboration with social workers and the national office of civic services. We randomly assigned 130 youth to the treatment group and 135 to the control group. The experiment was launched in May 2022, at which point more than 60% of COVID-19 cases in the second wave (omicron variant) proved to be young people who were thirty years old or under as of December 31, 2021. The treatment consisted of a tailored COVID-19-related information campaign led by social workers and classroom business-literacy training, including soft-skills (self-efficacy). Receiving a cash transfer was conditional upon attending the training sessions, but use of the money was left to the at-risk youth who received this benefit.

Our trial logically included three treatments at once: tailored information campaign, a conditional cash transfer, and classroom business training (including soft-skills training). The intervention did not allow us to gauge the effect of each treatment separately but rather the combined effect of the three, which has yet to be highlighted in the literature. Three family outcomes were measured: health-guideline compliances, labor-market outcomes, and living-standard outcomes (income variation and food and non-food consumption).

Our hypothesis was that a combination of conditional cash transfers, classroom-based business training, and soft-skills training would accelerate post-pandemic adjustment among vulnerable youth.

Results from our estimates indicated that treatment led to an increase in the probability that subjects would manage a microenterprise. On average, the intervention increased the likelihood that youth would run a small business (self-employed) by 18.5 percentage points and the propensity to become an entrepreneur in the future by almost 30 percentage points. This implies that participation in the program promoted entrepreneurship among marginalized youth. We also found a positive effect on food consumption and non-food expenditures. The intervention increased food consumption by 38.6 percentage points

and non-food consumption by nearly 38.9 percentage points. These results suggest that cash transfers, combined with business-literacy and soft-skills training, tended to support youth resilience during an unexpected shock.

While some literature has examined the effects of business training and cash transfers, our research contributes by investigating their combination for vulnerable youth in a post-crisis context. Our study offers insight into how to promote post-crisis resilience in a vulnerable youth population. In addition, because the literature that has studied cash transfers has been almost entirely focused on poor households, it has been unable to provide information on vulnerable youth. Finally, we found that our intervention promoted the creation of microenterprises. This is surprising because the literature on business training indicates that the effect of training on business start-ups is not significant (McKenzie & Woodruff, 2014; 2017). We added non-technical skills to our experiment, thus advancing the literature by showing that a fully integrated package (an alternative model of business training, in combination with cash transfers and soft-skills training) can support vulnerable groups in starting a small business and produce significant results in a post-crisis context.

The remaining of the paper is organized as follows: Section 2 presents the theory of change based on a survey of related literature, Section 3 describes the context of the policy being replicated, Section 4 presents the research design, Section 5 highlights our key findings, Section 6 discusses our results based on recent evidence, and Section 7 concludes with policy implications.

II. Theory of Change

Since the COVID-19 outbreak, two main issues have emerged in the economic literature: how to enforce containment measures (lockdowns and social distancing) to curb the spread of the disease and how to provide social protections for citizens coping with the adverse socioeconomic impacts of the outbreak. Despite the proliferation of studies on these two issues, studies on the social protection of marginalized youth seem to have gained little

attention. The extent to which youth respond to the pandemic, however, may be helpful in designing more inclusive policies during unexpected shocks.

We used two strands of the COVID-19 related literature to build the theory of change that is supported by our research. While the first strand refers to the rationale behind restriction and compliance from underprivileged groups, the second accounts for the mechanism by which resilience is fostered.

2.1 COVID-19 Restrictions and Compliance

Our intervention was a form of social protection with three arms: a cash transfer, an information campaign on COVID-19, and training in entrepreneurial literacy. We expected to see improved engagement in social distancing and increased capacity to manage health shocks. The logic behind the results chain is as follows: it is likely that the economic and social conditions of vulnerable youth would worsen because of COVID-19 restrictions. Indeed, data have shown that the most vulnerable individuals are less likely than their non-vulnerable counterparts to comply with health guidelines and, in particular, with adherence to shelter-in-place protocols, even when exposed to an information campaign (Wright et al., 2020).

In addition, while communication about COVID-19 can promote safer behaviors, it can also be ineffective. This is usually the case when the knowledge disclosed runs counter to social norms, though social norms are not the only contextual factors that can inhibit the impact of transfers and awareness campaigns on pandemic spread. In fact, where living conditions are precarious, adherence to public health protocols, particularly social-isolation measures, very often brings specific challenges. For example, crowded living conditions (World Health Organization, 2010), housing type, and poor neighborhoods can limit the implementation of distancing measures as a result of the proximity in which people live (Hermans et al., 2017).

Evidence of the effectiveness of cash transfers in normal times on dimensions of well-being is well established in the literature (Premand & Stoeffler, 2020; Dévereux, 2021; Pellerano et al., 2014; De Hoop, Groppo & Handa, 2020). Such evidence during the pandemic is rare (Abay et al., 2023). However, the few studies that have examined the migration effects

have detected important improvements in the well-being of vulnerable households during the pandemic.

Londoño-Vélez and Quérubin (2022), using a randomized controlled trial, found that cash transfers promoted social cooperation among households in the fight against the pandemic. Bird, Frisancho, and Lavado (2020), showed that transfers helped households cope with the increased burden of care and family responsibilities during COVID-19 in Peru. Kaneda, Kubota, and Tanaka (2021), in their natural-experiment framework, showed that households exhibited immediate and nontrivial positive responses in consumption spending as the result of delays in COVID-19-related unconditional cash transfers delays in Japan.

Brooks et al. (2022) explored the experimental impact of a one-time cash transfer equivalent to one month's net profit during the pandemic on a sample of 800 women entrepreneurs in Dandora, a slum in Kenya and found that, compared to the control group, beneficiary businesswomen recovered one-third of their initial decline in profit and increased food expenditures. Banerjee et al. (2020) examined the effects of universal basic income during the COVID-19 pandemic using a large-scale experiment in rural Kenya; they detected significant improvements in well-being during the pandemic in terms of reduced hunger, sickness, and depression. There was also a positive but modest effect on food security and physical health, and transfers appeared to reduce mobility during the pandemic. The Uganda-based GiveDirectly organization (IDinsight, 2022) explored the impact of unconditional cash transfers in a refugee camp in Uganda and showed that recipients of a lump sum transfer of USD \$1,000 per month were not only less affected by food insecurity, despite its sharp increase during the lockdown measures, but also exhibited desired health behavior to curb the spread of the pandemic.

A close examination of these studies indicates that, although they focused on poor households, they provided no evidence on the impact of transfers on at-risk youth.

The economic and social conditions of vulnerable youth are likely to worsen because of COVID-19. Where living conditions are precarious, adherence to public health protocols very often comes with specific challenges (Hermans et al., 2017). It has been shown that incentivized citizens can develop feelings of belonging and competence according to self-efficacy theory (Bandura 1982; Bandura & Adams, 1977). Moreover, by providing a stable and

predictable source of income, transfers can help individuals maintain their consumption while reducing income variation.

2.2 Support Mechanisms

We postulate that, when transfers are combined with an intervention such as entrepreneurial literacy and soft skills, they can promote income smoothing even in the short term through the acquisition of productive assets or the implementation of income-generating activities, which in turn build resilience in marginalized groups.

Several authors, such as Bloom et al. (2010) and Bruhn, Karlan, and Schoar (2010), have provided a theoretical framework to exhibit the linkage among physical capital, external financing, and business skills as an important lever for the growth of small and microenterprises. An extensive review of findings by McKenzie and Woodruff (2014, 2017) showed that classroom training improved business practices but produced very little impact on performance indicators. More recent research, in contrast, provides evidence that alternative business-training models that focus on soft skills lead to successful outcomes among small- and micro-business owners.

Campos et al. (2018) investigated the impact of psychology-based personal-initiative training on microenterprise owners in Togo. They conducted a randomized controlled trial on a sample of 1,500 microenterprises in Lomé and assessed the differential effects between conventional business training and an intervention that combined business training with self-help training. While business training had no effect, self-help training increased benefits by 30%. The Campos group showed that the program had a remarkable effect on women: their profits increased by 40% compared to 5% for traditional businesses. In the same vein, Dimitriadis and Koning (2022) examined the impact of a short soft-skills training module on entrepreneurial behavior during the pandemic in Togo. Using a field experiment that involved 326 entrepreneurs in Lomé, they found that training provided many benefits. In addition, they noted that the enhanced managerial skills that resulted from the intervention, beneficiary entrepreneurs were able to improve business-to-business interaction by 50%. They also found that training increased entrepreneurs' monthly profit by about 20%. Brooks, Donovan, and Johnson (2018) analyzed the impact of mentoring on 372 inexperienced

women micro-entrepreneurs living in a Kenyan slum. Using an individual randomized control trial, they observed that pairing inexperienced entrepreneurs with their peers increased benefits by an average of 20%.

Although the literature highlights the positive impacts of soft-skills training on microenterprises, there is a lack of evidence on the effects of such an intervention in the context of business training for at-risk youth during a pandemic context. Our paper innovates in these two aspects of the literature focusing on both social protection during a pandemic and the effect of a well-tailored business literacy intervention as a means of building strength for at-risk youth.

III. Context and Intervention

3.1 Context

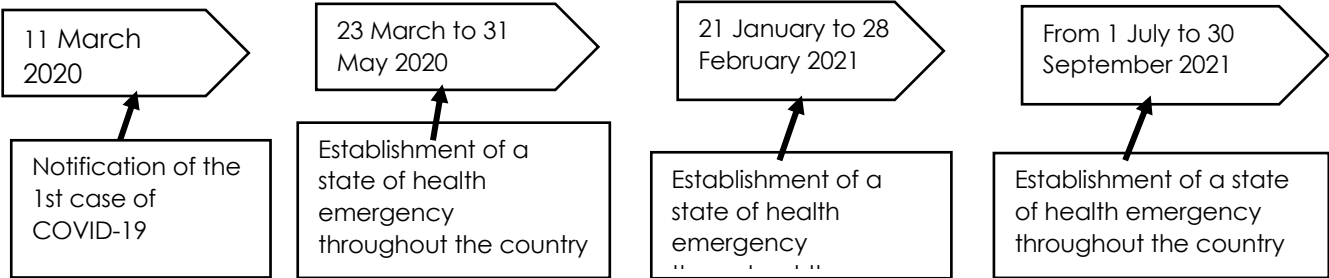
On March 11, 2020, Côte d'Ivoire experienced its first case of COVID-19. Through the National Security Council, the government declared a state of emergency from March 23 to May 31, 2020, that included such measures as the isolation and lockdown of the greater Abidjan area; restrictions on economic activities (shutdown of restaurants, etc.); restrictions on public gatherings (curfew, closure of entertainment venues, etc.); the closure of primary, secondary and higher education facilities; and the closure of air, sea, and land borders. In early June 2020, the government relaxed these measures but required strict compliance with social distancing, including the use of face masks, proof of full vaccination for participants at large events, and an obligation that travelers to Côte d'Ivoire present proof of a negative COVID-19 test or of full vaccination.

Beside health measures, the government created a social insurance fund of 170 billion CFA francs or USD \$28,000,000 (Ordinance No. 2020-382 of April 15, 2020). The fund was intended to finance government COVID-19 interventions for those individuals and families made vulnerable by the effects of COVID-19, including youth-at-risk, the target population for our study. One of the interventions was a cash-transfer program that was intended to

provide monthly financial assistance of 25,000 CFA francs (nearly \$50.00 USD) to vulnerable households over a three-month period. Baseline evidence from our study, however, indicated that only 7.95% of youth-at-risk interviewed received pandemic-related transfer payments, indicating low transfer coverage (Stoeffler, Mills & del Ninno, 2016).

Meanwhile, the government organized a public communication scheme that included advertisements on state media to sensitize the population regarding anti-COVID measures and mobilized local governments, NGOs, and community leaders to relay information to the population (Oura, 2022). The Ministry of Youth even designed a specific communication campaign aimed at young people. However, as Oura (2022) pointed out, the Ivorian government’s communication strategies for youth were not specific enough in their targeting and included no specific provisions for reach marginalized individuals, even though public media outlets broadcast awareness messages daily.

Timeline of COVID-19 Related Public Health Policy



3.2 Intervention

Our research was initially intended to implement a randomized control trial of the Civic Action for Employment and Development Program (hereafter, SCAED, in the French acronym), whose purpose was primarily to improve the social inclusion of at-risk youths between 16 and 35 years of age. The implementation of the RCT was altered by the COVID-19 pandemic, though we then found an opportunity to include a COVID-19 mitigation package in the experiment.

The intervention was a combination of three simultaneous treatments: unconditional cash transfers, a COVID-19-related health training, and business-literacy training. A soft-skills module was included in the intervention to adhere to the philosophy of the SCAED program,

except the youth were not living in the centers where the training sessions were hosted.

Social workers administered the training sessions. Five members of the staffs of social centers and SCAED in the greater Abidjan area served as training facilitators and mentors for the young people selected as beneficiaries. To ensure a smooth and efficient implementation of the experimental protocol and minimize the risk of "Incomplete Compliance," we organized several preparatory work sessions as follows. First, we organized workshops for the training of social workers in order not only to equip them with pedagogical skills but also to enable them to have a good command of each of the training components. Second, for each of the training components, we developed detailed manuals with social workers so that the training content could be delivered via a pre-established approach. Third, we equipped the centers with some didactic and COVID-19 materials and invited the young people selected as beneficiaries to go to the centers that were assigned to them (in their neighborhoods). For the various training and mentoring sessions, youth were assigned to the nearest partnering social center to reduce transportation costs and possible discouragement.

The training consisted of twelve sessions (see Appendix A1) including three modules on life skills (soft skills), four on COVID-19 awareness, and five on entrepreneurship. The life-skills sessions were aimed at stabilizing participants emotionally, developing their civic behavior and self-esteem, and providing them with confidence in the future, perseverance, etc. Several randomized controlled trial studies have found that interventions of this kind produce satisfactory results for microenterprises (Chatterji et al., 2019; Mensmann & Frese, 2019). Business training was intended to transfer managerial skills and to increase entrepreneurship among youth.

The training activities began on 24 May 2022 and ended on 7 July 2022. The twelve weeks of training (one two-hour session per week in each social center) also provided participants with a small transportation allowance (2,000 francs at the end of each session) and a monthly allowance (20,000 francs) based on regular attendance. Most importantly, the training was free of charge and the decision to participate was voluntary.

IV. Research Design and Data

4.1 Research Design

We drew our sample from a population of vulnerable youth serviced by social workers in the city of Abidjan. These social workers are employed by the Department of Family Affairs (Ministère de la Femme, de la Famille et de l'Enfant). These social workers work closely with community leaders to identify vulnerable youth. The selection of study participants was done in two stages: 1) an invitation to register voluntarily for a study with potential benefits explained through community outreach and 2) profiling based on an assessment of mental and physical health by the social workers.

We collected two rounds of data over this sample (baseline and endline) over the period 2020-2022, amidst the COVID-19 crisis. We strictly followed health guidelines during in-person interviews.

The start of the study coincided with the outbreak of the COVID-19 pandemic in Cote d'Ivoire. In March 2020, we invited 300 youth to answer a baseline survey at the community centers run by the social workers; 265 of them responded to the survey.

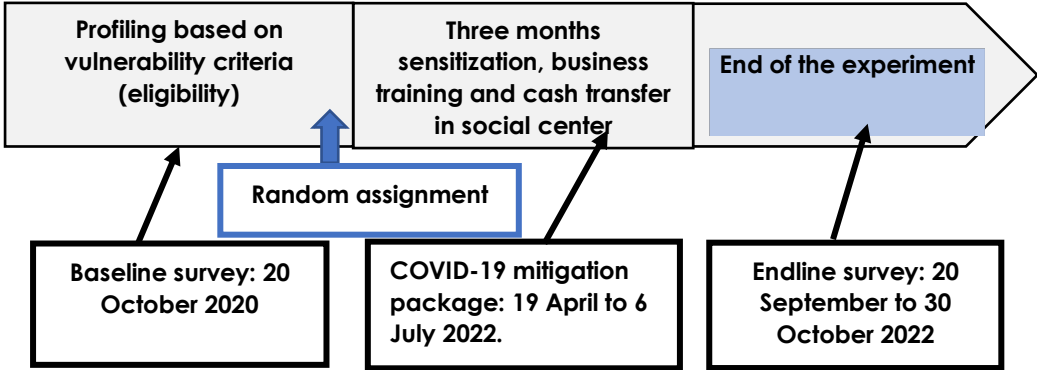
At the same time, we launched an inception study that aimed to include a COVID-19 resilience component in the intervention. The inception study took longer than expected because new information on the COVID-19 pandemic reached the country and the crisis slowed activities in general; it was completed in January 2022. The study recommendations were partly based on quantitative evidence from the baseline survey and partly based on meetings with the social workers and higher representatives of the Department of Family Affairs and of the Department of Labor.

Using simple random assignment of the sample of 265 baseline individuals, 130 were placed in the treatment group and 135 were placed in the control group in February 2022. The intervention delivered a package of benefits to treatment-group participants between April and July 2022. We collected endline data three months after the end of the intervention. Out of the 265 baseline individuals, we were able to track 195 at endline survey, including 93 from the beneficiary group and 102 from the control group, for an overall completion rate of 73.58%. An attrition analysis is offered in the next section.

In addition to attrition, another problem is the Hawthorne or John Henry effect (Peters, Langbein & Roberts, 2018). These effects occur if participants in a randomized trial are aware

that they are part of an experiment and are being observed. For example, recipients may take on desired attitudes just to please those conducting the data collection or submit false reports to conform to the prescribed behavior. Non-recipients may exhibit unusual behaviors in an effort to compete with those in the treatment group. To mitigate these potential effects, we sought to reduce the likelihood that program participants would make the connection between the intervention and survey rounds by ensuring that interviews were implemented by individuals who were distinct from those conducting the training sessions. We recruited a new set of interviewers for the baseline to reduce the risk that personal relationships would form between participants and interviewers.

Figure 1: Timeline of Experiment



4.2 Data

The main objective of the questionnaire was to gather data on two key sets of outcomes: (1) knowledge, attitudes, and behavior toward COVID-19; (2) resilience (labor-market outcomes, entrepreneurship, consumption). The module on COVID-19 was close to the one used by the global research initiative “Life with Corona” (Stojetz et al., 2022), with ethical approval from UNU-WIDER. The surveys also included a module on sociodemographic characteristics (place of residence, family background, and education, among others). We describe key outcomes in Table 1 below.

The module on COVID-19 was structured to gather evidence on (i) knowledge and attitudes; (ii) compliance with health guidelines; and (iii) vaccination and testing behavior. To assess knowledge and attitudes toward COVID-19, we included a series of true/false

questions: "COVID-19 only concerns the elderly"; "COVID-19 is a disease of disease of white people"; "During the pandemic, shaking hands with friends and family is allowed"; "During the pandemic, playing soccer is safe"; "It is not mandatory to wear a mask during the pandemic"; "Hand-washing is annoying"; "The government is not telling the truth about COVID-19"; and "I am worried about falling sick with COVID-19." These variables took the value "1" if the answer was "True" and 0 if "False."

To assess compliance with COVID-19 health guidelines, participants were asked whether they adopted COVID-19 restrictions during the five months prior to the endline survey: e.g., "I wore a face mask," "I kept my hands clean with soap or hand sanitizer," "I stayed 1 meter away from others in public spaces," and "I stayed at home, limiting social interaction as much as possible." Again, the variables were coded as binary indicators according to the answers provided. Regarding vaccination and testing, we asked participants: "Were you ever tested since they start of the pandemic"; "In the last 5 months, have you been vaccinated against COVID-19?."

For labor-market and resilience outcomes, we used standard questions designed by the National Institute of Statistics to assess national labor-market trends and living standards. The recall period for labor-market outcomes was the previous month, and participants were asked to report whether they held a paid job, were self-employed, or earned income from other income-generating activities. We also recorded whether they had plans to become entrepreneurs in the future. Using an expenditure module, we collected data on food and non-food expenses with standard recall periods. We aggregated them into monthly expenses. We also asked for total income in the previous month and whether they had received any monetary or in-kind government support during the pandemic.

Table 1 describes the five outcomes: (i) knowledge of and attitudes towards COVID-19; (ii) Compliance with government health guidelines; (iii) Vaccination and testing behavior; (iv) labor-market outcomes; and (v) and resilience outcomes.

Table 1: Description of Key Outcome Variables

Variables
<i>Knowledge of and attitudes toward COVID-19</i>
Believes COVID-19 only concerns the elderly
Believes COVID-19 is a disease of white people
During the pandemic, shaking hands with friends and family is allowed
During the pandemic, playing soccer is safe
It is not mandatory to wear a mask during the pandemic
Washing hands is annoying
The government is not telling the truth about COVID-19
Worried about falling sick with COVID-19
<i>Compliance with health guidelines</i>
Wears a face mask
Keeps hands clean with soap or hand sanitizer
Stays one meter away from others in public spaces
Stayed at home, limiting social interaction as much as possible
<i>Vaccination and testing behavior</i>
Have you been tested since the start of the pandemic
In the last 5 months, have you been vaccinated against COVID-19?
<i>Labor-Market outcomes</i>
Holds a paid job in previous month
Self-employed in previous month
Plans to become an entrepreneur
Other Income Generating Activities (IGA) in previous month
<i>Resilience outcomes</i>
Monthly food expenditures (CFA francs)
Monthly non-food expenditures (CFA francs)
Monthly Total Expenditure (CFA francs)

4.3 Econometric Assessment of the Impacts

Given the research design, we simply assess the impacts of the intervention by estimating the following linear model on each primary of outcome of interest Y_i for the individual i , where T_i is the assignment indicator that takes value 1 for participants assigned to the treatment group and 0 for those assigned to the control group:

$$Y_i = \alpha + \beta T_i + \delta X_{i0} + \varepsilon_i.$$

The model also included a set of baseline control variables X_{i0} and an *iid* error term ε_i . We estimated the model by OLS. For binary outcome, the estimated parameter was thus

the difference in the proportion of participants who experienced value 1 between experimental groups. For continuous outcomes, it was the difference in means between experimental groups. Thanks to random assignment, the parameter β causally identified the average impact of the intervention for each outcome. The set of control variables included any unbalanced baseline covariate and LASSO-selected predictors for each outcome. These control variables were thus selected both to reduce bias from unbalance and increase the precision of the impact estimate. We also controlled for the family-wise error rate (FWER) using the Westfall and Young (1993) resampling method for each family of outcomes described in the previous section.

4.4 Balance and Attrition Tests

We conducted two sets of checks. The first was a standard balance check showing Romano and Wolf corrected p-values (the procedure controls for the FWER and allows for dependence among p-values). The second consisted of attrition tests. The attrition rate between baseline and endline data collections was 26.42%. This rate was relatively balanced between the beneficiary group (28.46%) and the control group (24.44%) (see Appendix Table A5). Using LASSO, we looked for predictors of attrition in the set of control covariates X_{i0} . None were selected with a linear model including the treatment assignment indicator. We also estimated a multivariate OLS model including all baseline covariates selected for the balance checks. Neither treatment status nor any of the baseline covariates are significantly correlated with attrition (see Appendix A4). We conclude that the research design is not compromised by attrition.

Study participants were at-risk either due to their environment and/or to their own past and current experiences. Table 2 presents control group means and balance-test results at baseline (see also Appendix A3 for simple average differences between experimental groups). The average age was 21 years. Most participants were literate (85%). The average years of schooling were 8.5, equivalent to the second year of junior high school. In addition, a significant proportion of youth lived with neither father nor mother (47%). However, even when they lived with family, most lived in single-parent households. In addition, 11% of them had a criminal record, 24% regularly consumed alcoholic beverages, and 11% used drugs.

12% were victims of violence in the past. More than a third (37%) were orphans and came from large families (more than five siblings). About 9% had broken all social ties.

Table 2: Balance Test at Baseline

Variable	N	Overall Mean/(SE)	Control Group Mean/(SE)	Treatment Group Mean/(SE)	Mean difference	Romano-Wolf (P-value)
Age	265	21 (0.18)	21 (0.26)	20 (0.25)	0.41	1.000
Lives in urban area	265	0.82 (0.024)	0.83 (0.032)	0.82 (0.034)	0.014	1.000
Orphan	265	0.37 (0.03)	0.36 (0.041)	0.38 (0.043)	-0.021	1.000
Lives with both parents	265	0.19 (0.024)	0.21 (0.035)	0.17 (0.033)	0.038	1.000
Lives elsewhere	265	0.47 (0.031)	0.43 (0.043)	0.51 (0.044)	-0.078	0.997
Lives with father only	265	0.15 (0.022)	0.15 (0.031)	0.16 (0.032)	-0.013	1.000
Lives with mother only	265	0.19 (0.024)	0.21 (0.035)	0.16 (0.032)	0.053	1.000
Number of siblings	265	5.4 (0.19)	5.4 (0.26)	5.4 (0.28)	0.0085	1.000
Number of dependent children	265	0.12 (0.031)	0.12 (0.038)	0.13 (0.049)	-0.012	1.000
Literacy (knows how to read)	265	0.85 (0.022)	0.85 (0.031)	0.85 (0.032)	0.0057	1.000
Knows how to use computer	265	0.88 (0.02)	0.89 (0.027)	0.88 (0.029)	0.012	1.000
Attended at school	265	0.96 (0.012)	0.97 (0.015)	0.95 (0.02)	0.024	1.000
Years of schooling	265	8.5 (0.11)	8.5 (0.15)	8.6 (0.16)	-0.079	1.000
Broke all social ties	265	0.091 (0.018)	0.1 (0.026)	0.077 (0.023)	0.027	1.000
Victim of violence	265	0.12 (0.02)	0.14 (0.03)	0.092 (0.025)	0.048	0.999
Drug abuse	265	0.11 (0.019)	0.12 (0.028)	0.092 (0.025)	0.026	1.000
Exposed to crime	265	0.019 (0.0084)	0.015 (0.01)	0.023 (0.013)	-0.0083	1.000
Regular alcohol consumption	265	0.24 (0.026)	0.28 (0.039)	0.19 (0.035)	0.089*	0.955
Criminal record	265	0.079	0.11	0.046	0.065*	0.834

		(0.017)	(0.027)	(0.018)		
Believes COVID-19 only concerns the elderly	265	0.087	0.096	0.077	0.019	1.000
		(0.017)	(0.025)	(0.023)		
Believes COVID-19 is a disease of white people	265	0.11	0.13	0.085	0.041	1.000
		(0.019)	(0.029)	(0.025)		
Government is not telling the truth about COVID-19	265	0.31	0.34	0.27	0.072	0.997
		(0.028)	(0.041)	(0.039)		
Any government support during the pandemic	265	0.079	0.081	0.077	0.0046	1.000
		(0.017)	(0.024)	(0.023)		
Playing soccer is safe	265	0.46	0.39	0.53	-0.15**	0.486
		(0.031)	(0.042)	(0.044)		
Not mandatory to wear a mask	265	0.14	0.15	0.13	0.017	1.000
		(0.021)	(0.031)	(0.03)		
Washing hands is annoying	265	0.18	0.17	0.18	-0.014	1.000
		(0.024)	(0.032)	(0.034)		
Shaking hands with friends and family is allowed	265	0.18	0.16	0.2	-0.037	1.000
		(0.024)	(0.032)	(0.035)		
Worried about falling sick with COVID-19	265	0.63	0.58	0.68	-0.099*	0.030
		(0.03)	(0.043)	(0.041)		
Got tested for COVID-19	265	0.12	0.15	0.085	0.064	0.977
		(0.02)	(0.031)	(0.025)		
Wears face mask	265	0.88	0.87	0.88	-0.011	1.000
		(0.02)	(0.029)	(0.028)		
Keeps hands clean with soap or hand sanitizer	265	0.9	0.93	0.87	0.057	0.984
		(0.019)	(0.023)	(0.03)		
Stays at home as much as possible	265	0.86	0.86	0.86	-0.0023	1.000
		(0.021)	(0.03)	(0.03)		
Stays one meter away from others in public spaces	265	0.72	0.77	0.67	0.1*	0.906
		(0.028)	(0.036)	(0.041)		
Self-employed in previous month	265	0.064	0.052	0.077	-0.025	1.000
		(0.015)	(0.019)	(0.023)		
Other Income Generating Activities (IGA) in previous month	265	0.31	0.28	0.35	-0.065	1.000
		(0.029)	(0.039)	(0.042)		
Paid job in previous month	265	0.14	0.13	0.14	-0.0051	1.000
		(0.021)	(0.029)	(0.03)		
Expects to become an entrepreneur in the long-term (10 years)	265	0.094	0.067	0.12	-0.056	0.979
		(0.018)	(0.022)	(0.029)		
Log Non-food expenditures	239	7.6	7.7	7.6	0.086	1.000

		(0.072)	(0.099)	(0.1)		
Log Food expenditures	232	8.2	8.1	8.2	-0.12	1.000
		(0.058)	(0.082)	(0.081)		
Log Total expenditures	265	14	14	14	-0.49	1.000
		(0.26)	(0.37)	(0.37)		
Income	265	17261	18852	15608	3244*	0.962
		(970)	(1322)	(1412)		
F-test of joint significance (F-stat)					.0	
F-test, number of observations					.0	

Note: No baseline data on vaccination as vaccines were not yet distributed at that date. Standard error in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

Table 2 also presents baseline levels for the key outcomes of interest. Despite public information campaigns held throughout the pandemic, some misconceptions still prevailed, partly in relation to general distrust with the government messages on COVID-19. More than a third believed the government was not telling the truth about COVID-19; yet more than 60% worried about falling sick with the disease. A minority believed themselves to be immune to it: 11% thought of it as a disease of white people and 9% as a disease that only concerned the elderly. Knowledge and attitudes towards public health messages were mixed: 14% thought that wearing a mask was not mandatory; 18% perceived that shaking hands with family and friends was acceptable; 18% thought that washing hands was annoying; as many as 46% considered playing soccer as safe. There is a gap between knowledge/attitudes and self-reported behavior, perhaps because of social desirability bias. A large majority (more than ¾) reported complying with public health guidelines, and around 12% reported getting tested for COVID-19 at baseline.

According to Table 2, the youth had limited sources of livelihoods and low aspirations. About 14% held a paid job at baseline. Merely 6% of participants were self-employed and around 9% planned to become entrepreneurs in the future. Another 31% were employed in other income-generating activities that did not qualify as self-employment or paid employment. The remaining ones were unemployed. Less than 10% report any government support during the pandemic.

Except for the variable “Worried about falling sick with COVID-19”, we did not find any unbalances across experimental groups. We include the baseline covariates in our main model for all outcomes.

V. Empirical findings

In the following Tables (Table 3-5), we present our main findings based on Equation (1). We only report regression-adjusted estimates. We report the findings for the five family of outcomes: (i) knowledge of and attitudes towards COVID-19; (ii) Compliance with government health guidelines; (iii) Vaccination and testing behavior; (iv) labor-market outcomes; and (v) and resilience outcomes described in Table 1 above.

5.1 COVID-19 Outcomes: Knowledge of and Attitudes and Behavior toward COVID-19

Tables 3-4 summarize our main results. The reinforcement messages helped deconstruct certain myths, resulting in an increased risk perception. Consistent with the mixed findings at baseline (distrust of government COVID-19 information campaign and concerns about getting sick), the reinforcement of public health COVID-19 messages offered during the intervention affected the youth on some margins. We find a significant 18 percentage point reduction in the proportion who believed COVID-19 to be a disease of white people. Consistently, the fraction worrying about falling sick with COVID-19 increased by a significant 23 percentage points. As compared to baseline levels (respectively, 13% and 58%), a larger proportion at endline felt immune to the disease and fewer were concerned with getting sick among control study participants (respectively, 30% of control group and less than 40% of them).

As noted by Wright et al. (2020), the feeling of concern from increased knowledge is an important determinant of adherence to health guidelines. In relation with the higher awareness of COVID-related risks, treated participants are more likely to comply with social distancing and to impose to themselves a home lockdown. We found a significant 12 percentage point increase in the fraction reporting staying one meter away from others in public spaces (corresponding to a doubling of the rate of compliance found in the control group) and a significant sixteen percentage point increase (more than a doubling) of the

fraction who self-imposed home lockdown. The intervention also resulted in a higher fraction of participants who were tested for COVID-19 (a nine percentage point increase).

Besides the tailored information campaign targeting the youth, the impact on knowledge, attitude and behavior may also be driven the unconditional cash transfer component of the intervention. According to Brooks et al. (2022) and Dunn et al. (2021), the context of poverty may be an obstacle to sustaining behavioral change and meeting desired public health requirements. Cash transfers may improve recipients' self-efficacy, which in turn could foster knowledge acquisition and positive attitudes (Freudenburg, 1993). In addition, cash transfers delivered during the pandemic were shown to improve household welfare in Brazil and Peru while promoting the fight against the pandemic (Bird, Frisancho & Lavado, 2020; De Leon, Malde & McQuillin, 2023). The transfers helped households cope with the increased burdens of caregiving and family responsibilities. Given our study design, we cannot separately estimate the effects of each component (information campaign / cash transfer).

Table 3. OLS impact estimates: Knowledge of and attitudes towards COVID-19.

	COVID-19 only concerns the elderly	COVID-19 is a disease of white people	Shaking hands with friends and family is allowed	Playing soccer is safe	Not mandatory to wear a mask during the pandemic	Washing hands is annoying	Government not telling truth about COVID-19	Worried about falling sick with COVID-19
Variables								
Treatment	-0.0374 (0.0550)	-0.183*** (0.0573)	-0.128** (0.0570)	-0.0522 (0.0706)	-0.0684 (0.0525)	0.0273 (0.0588)	-0.119* (0.0669)	0.233*** (0.0697)
Westfall and Young (1993) p-value	0.832	0.012	0.151	0.832	0.574	0.832	0.322	0.007
Baseline controls	Lasso	Yes	Lasso	Yes	Yes	Yes	Yes	Yes
Control Group Mean	-0.7389** (0.3136)	0.3333*** (0.0735)	-0.0486 (0.1831)	0.4286*** (0.0771)	0.2143*** (0.0639)	0.1667*** (0.0581)	0.4762*** (0.0778)	0.3333*** (0.0735)
Observations	193	193	194	195	195	195	195	195
R-squared	0.254	0.049	0.086	0.009	0.011	0.008	0.030	0.061

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1. Control variables: all models include baseline value « Afraid of falling sick with COVID-19 », as well as outcome-specific baseline controls selected with LASSO. Variables for which the "Baseline controls" row is "Lasso" are variables for which Lasso has selected at least one variable. For multiple hypothesis testing, all "Knowledge and attitudes towards COVID-19" variables are used as a single family of outcomes.

Table 4: OLS impact estimates: Compliance with COVID-19 health guidelines, testing and vaccination behavior.

VARIABLES	Wear face mask	Wash hands regularly or use a hand sanitizer	Stays one meter away from others in public spaces	Stays at home as much as possible	Got tested for COVID-19	Got vaccinated for COVID-19
Treatment	0.0369 (0.0492)	0.0369 (0.0386)	0.118** (0.0547)	0.161*** (0.0557)	0.0893** (0.0421)	0.0601 (0.0553)
Westfall and Young (1993) p-value	0.561	0.561	0.082	0.013	0.074	0.249
Baseline control	Yes	Yes	Yes	Yes	Yes	Lasso
Control Group Mean	0.7857*** (0.0639)	0.9524*** (0.0332)	0.1190** (0.0505)	0.1190** (0.0505)	0.0238 (0.0238)	0.3347 (0.3392)
Observations	195	195	195	195	195	195
R-squared	0.008	0.032	0.026	0.043	0.030	0.161

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1. Control variables: all models include baseline value « Afraid of falling sick with COVID-19 », as well as outcome-specific baseline controls selected with LASSO. Variables for which the "Baseline controls" row is "Lasso" are variables for which Lasso has selected at least one variable. For multiple hypothesis testing, the first four variables in the table are one family of outcomes, while the last two are another.

5.2 Labor market and resilience outcomes

5.2.1 Labor market outcomes

The intervention resulted in significant improvements in the youth capacity to attend to their livelihoods and entrepreneurship aspirations. The fraction holding a paid job in the month prior to the endline survey rose by 15 percentage points, a two-third increase with respect to the control group level. The fraction self-employed in the month prior to endline increased by 18.3 percentage points (a doubling as compared to the control group). The impact is significant and negative impact on other income-generating activities. Twice as many treated youths aspired to become entrepreneurs in the future, a large and significant 29 percentage point increase.

Our results are in line with findings in other contexts. Part of these effects may be driven by the inclusion of a soft skill training component in the business training model. Business education programs that feature soft-skills training were shown to improve entrepreneurs' outcomes (Brooks, Donovan & Johnson, 2018; Dimitriadis & Koning, 2022). The effect may also be driven by the cash transfer component. A one-time transfer significantly improved outcomes among the poor, increasing the profits of micro-enterprises affected by COVID-19 (Brooks et al., 2022). In response to a drought, another form of shock, households benefitting from cash transfers were also more likely to finance family businesses in Kenya (Premand & Stoeffler, 2020). Our results are in contrast with the evidence from classroom training, which were mostly found ineffective on business start-up (McKenzie & Woodruff, 2014; 2017).

5.2.2 Resilience

We considered food, non-food expenditures, and total expenditures to measure the likelihood that the intervention would support resilience for the targeted youth. The intervention had large positive and significant impacts on all these measures. Food expenditures increased by 40%, non-food expenses by 36% and total expenditures by 40%.

As a result of the multi-faceted intervention, vulnerable youth coped with pandemic. Clearly, cash transfers directly helped sustain livelihoods. They probably also indirectly helped

as beneficiaries funneling the extra resources into business investments (Brooks et al., 2022; Premand & Stoeffler, 2020; Babatunde & Olagunju, 2020; and Londono-Vélez et Querubin, 2022) despite the pandemic context. The business training component may also have directly supported beneficiary livelihoods by enabling them to increase their participation to the labor market.

Table 5: OLS Impact Estimates: Labor-Market and Resilience Outcomes

VARIABLES	Holds a paid job previous month	Self-employed previous month	Plan to become an entrepreneur	Holds other income generating activities previous month	Log food expenditure	Log non-food expenditure	Log Total consumption
Treatment	0.153** (0.0676)	0.183*** (0.0593)	0.293*** (0.0638)	-0.127** (0.0600)	0.397*** (0.128)	0.359*** (0.118)	0.401*** (0.113)
P-value of Westfall and Young (2019)	0.041	0.008	0.000	0.041	0.005	0.005	0.000
Baseline Control	Yes	Yes	Yes	Lasso	Yes	Lasso	Yes
Control Group Mean	0.2619*** (0.0685)	0.1429*** (0.0545)	0.2619*** (0.0685)	0.2135 (0.0789)	10.8843*** (0.1512)	10.8490*** (0.4186)	11.4161*** (0.1254)
Observations	195	195	195	195	188	194	194
R-squared	0.030	0.055	0.123	0.104	0.050	0.134	0.063

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

Control variables: all models include baseline value "Afraid of falling sick with COVID-19," as well as outcome-specific baseline controls selected with LASSO. Variables for which the "Baseline controls" row is "Lasso" are variables for which Lasso has selected at least one variable. For multiple-hypothesis testing, the first four variables in the table are one family of outcomes, while the last three are another.

VI. Discussion

This paper analyses the effects of a social-protection policy on the well-being of at-risk youth in the context of a pandemic. We combined three types of treatment: tailored information, cash transfers, and business literacy, all of which were supported by soft-skills training. One of the key limitations of our field experiment was the difficulty of distinguishing among the effectiveness of treatment arms, making it difficult to infer specific policy implications from the interventions.

Our research did not show the importance of a specific youth information strategy or youth behavior during the COVID-19 pandemic, nor does it pinpoint the impact of cash transfers on small businesses managed by the poor as in Brooks et al. (2022) or the importance of cash transfers to labor-market outcomes as in Premand and Stoeffler (2020). Another limitation of the research is the lack of a gender dimension in our investigation; several papers have emphasized the differential impacts of cash transfers on men and women (Fisher et al., 2017).

Nevertheless, these limitations are, indeed, the major contribution of the research to the literature. Our paper shows that periodic unconditional cash transfers, coupled with entrepreneurial literacy, adapted messaging, and soft-skills training, improved not only health knowledge but also the economic prospects of vulnerable youth during the pandemic. These results suggest that the program sufficiently equipped at-risk youth with exit strategies. Specifically, the program appears to have empowered youth to make healthy and responsible choices to better manage their lives. Improvement of employment status and entrepreneurship illustrates the changes that occurred thanks to participation in the program. The intervention seems to have led at-risk youth to shift from less productive or minor activities to much more efficient business opportunities that were valuable to improving their living conditions. Our results therefore argue in favor of a bold approach in effectively empowering the marginalized segment of the population during an exogenous shock.

VII. Conclusion

We sought to understand how to improve the post-COVID-19 adaptation or recovery of marginalized youth. Specifically, we tested whether the combination of unconditional cash transfers and business training could increase their ability to absorb health shocks and reposition themselves. Using a randomized field experiment, we tested the impact on several outcome indicators. The objective of the intervention was to simulate the impact of public policies to mitigate the socioeconomic effects of COVID-19 on vulnerable youth. Three outcomes were analyzed: health, labor market, and consumption. We assessed the perception and behavior of youth during the COVID-19 pandemic, gauged the impact of a communication strategy on

The mitigation package promoted better knowledge of and attitudes towards COVID-19, deconstructing some misperceptions and increasing awareness of COVID-19 risk. The program had a positive effect on adherence to health guidelines such as social distancing and home lockdown. The mitigation package also significantly increased the ability of vulnerable youth to build resilience in the face of the pandemic. The beneficiaries experienced higher labor force participation, in both paid job and self-employment, and sustained higher levels of expenditures. Though these are all short-term impacts, the beneficiaries were also found to sustain higher aspirations, notably with plans for small business creation for the future.

The evidence is one proof-of-concept advocating for an integrated approach to support the resilience of marginalized groups during a crisis. More research is needed to evaluate the long-term benefits of the approach. More is also needed on other youth at-risk programs to identify the more cost-effective ones.

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Appendix

Table A 1: Contents of the Training Packages: COVID-19 Knowledge, Soft Skills, Business Literacy

ITEMS	CONTENTS
COVID 19: General Knowledge and current trend in Cote d'Ivoire	Overview of the COVID-19, transmission routes, transmission phases
LIFE SKILLS	Self-efficiency
INTROSPECTION and personal development	Self-esteem, self-confidence and assertiveness Emotional Intelligence Discovering and activating resources in times of crisis, the case of the COVID pandemic 19
Civic education/citizenship and gender	Building Resilience Civic-mindedness and Citizenship at COVID 19 Gender Awareness and COVID 19
COVID 19: the disease	Incubation period, manifestation of symptoms, complications
Living together and creating compassion and community of solidarity	Understand the strength of the collective and the notions of sharing and mutual aid Create communities of solidarity with moments of fellowship and celebration Learn to adopt a posture of empathy and active listening Mobilize leaders in community outreach.
COVID 19: prevention and cure	Diagnosis, treatment, vaccination, barrier measures, public awareness
ZERO DEBT ENTREPRENEURSHIP INITIATIVE	
ENTREPRENEURSHIP: business management	6 tools Technical, commercial, financial, security, simplified accounting, soft skills (business relationship)
ENTREPRENEURSHIP 2 MARKETING	How to sell/trade
ENTREPRENEURSHIP 3 Finance and accounting	Financial concepts and simplified accounting Purchases, sales, cash registers
Entrepreneurship: LEADERSHIP	Management Unit, general interest, equity
Entrepreneurship: business value	Fairness, discipline
ENTREPRENEURSHIP Human Resources	Compensation/pay, job stability, promotion
EVALUATION -	COVID 19 -Life Skills - Entrepreneurship

Table A 2: Attrition in Relation to Treatment Status

	Baseline number of obs. (% over its column)	Endline number of obs. (% over its column)	Attrition number of obs. (% over its column)
Control	135 (50.94%)	102 (52.31%)	33 (47.14%)
Treatment	130 (49.06%)	93 (47.69%)	37 (52.86%)
Total	265 (100%)	195 (100%)	70 (100%)

Table A 3: Balance Check, Pairwise-Comparison

Variable	Overall Mean/(SE)	Control Group Mean/(SE)	Treatment Group Mean/(SE)	Mean difference
Age	21 (.18)	21 (.26)	20 (.25)	.41
Lives in urban area	.82 (.024)	.83 (.032)	.82 (.034)	.014
Orphan	.37 (.03)	.36 (.041)	.38 (.043)	-.021
Lives with both parents	.19 (.024)	.21 (.035)	.17 (.033)	.038
Lives elsewhere	.47 (.031)	.43 (.043)	.51 (.044)	-.078
Lives with father only	.15 (.022)	.15 (.031)	.16 (.032)	-.013
Lives with mother only	.19 (.024)	.21 (.035)	.16 (.032)	.053
Number of siblings	5.4 (.19)	5.4 (.26)	5.4 (.28)	.0085
Number of dependent children	.12 (.031)	.12 (.038)	.13 (.049)	-.012
Literacy (knows how to read)	.85 (.022)	.85 (.031)	.85 (.032)	.0057
Knows how to use computer	.88 (.02)	.89 (.027)	.88 (.029)	.012
Attended at school	.96 (.012)	.97 (.015)	.95 (.02)	.024
Years of schooling	8.5 (.11)	8.5 (.15)	8.6 (.16)	-.079
Broke all social ties	.091 (.018)	.1 (.026)	.077 (.023)	.027
Victim of violence	.12 (.02)	.14 (.03)	.092 (.025)	.048
Drug abuse	.11	.12	.092	.026

	(.019)	(.028)	(.025)	
Exposed to crime	.019 (.0084)	.015 (.01)	.023 (.013)	-.0083
Regular alcohol consumption	.24 (.026)	.28 (.039)	.19 (.035)	.089*
Criminal record	.079 (.017)	.11 (.027)	.046 (.018)	.065*
Believes COVID-19 only concerns the elderly	.087 (.017)	.096 (.025)	.077 (.023)	.019
Believes COVID-19 is a disease of white people	.11 (.019)	.13 (.029)	.085 (.025)	.041
Government is not telling the truth about COVID-19	.31 (.028)	.34 (.041)	.27 (.039)	.072
Playing soccer is safe	.46 (.031)	.39 (.042)	.53 (.044)	-.15**
Not mandatory to wear a mask	.14 (.021)	.15 (.031)	.13 (.03)	.017
Washing hands is annoying	.18 (.024)	.17 (.032)	.18 (.034)	-.014
Shaking hands with friends and family is allowed	.18 (.024)	.16 (.032)	.2 (.035)	-.037
Worried about falling sick with COVID-19	.63 (.03)	.58 (.043)	.68 (.041)	-.099*
Got tested for COVID-19	.12 (.02)	.15 (.031)	.085 (.025)	.064
Wears face mask	.88 (.02)	.87 (.029)	.88 (.028)	-.011
Keeps hands clean with soap or hand sanitizer	.9 (.019)	.93 (.023)	.87 (.03)	.057
Stays at home as much as possible	.86 (.021)	.86 (.03)	.86 (.03)	-.0023
Stays one meter away from others in public spaces	.72 (.028)	.77 (.036)	.67 (.041)	.1*
Self-employed in previous month	.064 (.015)	.052 (.019)	.077 (.023)	-.025
Other Income Generating Activities (IGA) in previous month	.31 (.029)	.28 (.039)	.35 (.042)	-.065

Paid job in previous month	.14 (.021)	.13 (.029)	.14 (.03)	-.0051
Expects to become an entrepreneur in the long-term (10 years)	.094 (.018)	.067 (.022)	.12 (.029)	-.056
Log Food expenditures	8.2 (.058)	8.1 (.082)	8.2 (.081)	-.12
Log Non-food expenditure	7.6 (.072)	7.7 (.099)	7.6 (.1)	.086
Log Total expenditure	14 (.26)	14 (.37)	14 (.37)	-.49
Income	17261 (970)	18852 (1322)	15608 (1412)	3244*
Any government support during the pandemic	.079 (.017)	.081 (.024)	.077 (.023)	.0046
F-test of joint significance (F-stat)				.0
F-test, number of observations				.0

Note: Sample size as indicated except for log non-food expenditures (all: 239; treatment: 119; control: 120) and for log food expenditures (all: 232; treatment: 117; control: 115). Standard error in parenthesis. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Romano-Wolf Correction to Statistics for Pair-Wise Differences

Outcome Variables	Pair-wise test p-value	Romano-Wolf p-value
age	0.254	1.000
Lives in urban area	0.763	1.000
orphan	0.719	1.000
Lives with both parents	0.429	1.000
Lives elsewhere	0.204	0.997
Lives with father only	0.764	1.000
Lives with mother only	0.270	1.000
Number of siblings	0.982	1.000
Number of dependent children	0.843	1.000
literacy (Know how to read)	0.897	1.000
Know how to compute	0.763	1.000
Attended at school	0.325	1.000
Years of schooling	0.717	1.000
Broke all social ties	0.450	1.000
Victim of violence	0.222	0.999
Drug abuse	0.490	1.000
Exposed to crime	0.623	1.000
Regular alcohol consumption	0.089	0.955
Criminal record	0.051	0.834

Believes COVID-19 only concerns the elderly	0.577	1.000
Believes COVID-19 is a disease of white people	0.276	1.000
Government is not telling the truth about COVID-19	0.208	0.997
Any government support during the pandemic	0.891	1.000
Playing soccer is safe	0.017	0.486
Not mandatory to wear a mask	0.685	1.000
Washing hands is annoying	0.763	1.000
Shaking hands with friends and family is allowed	0.436	1.000
Worried about falling sick with COVID-19	0.001	0.030
Got tested for COVID-19	0.108	0.977
Wears face mask	0.793	1.000
Keeps hands clean with soap or hand sanitizer	0.128	0.984
Stays at home as much as possible	0.958	1.000
Stays one meter away from others in public spaces	0.067	0.906
Self-employed in previous month	0.407	1.000
Other Income Generating Activities (IGA) in previous month	0.258	1.000
Paid job in previous month	0.903	1.000
Expects to become an entrepreneur in the long-term (10 years)	0.117	0.979
Log Non-food expenditures	0.550	1.000
Log food expenditure	0.310	1.000
Log Total expenditure	0.353	1.000
Income	0.094	0.962

Table A 5: Differential Attrition Test

VARIABLES	(1) No controls	(2) With controls
D_Assignment	0.0402 (0.0544)	0.0840 (0.0640)
Age		0.00689 (0.0110)
Lives in urban area		0.000588 (0.0864)
Orphan		0.0980 (0.0748)
Lives with both parents		-
Lives elsewhere		-0.0983 (0.0976)
Lives with father only		0.0352 (0.116)
Lives with mother only		-0.163 (0.104)
Number of siblings		-0.0103 (0.01000)
Number of dependent children		-0.0402 (0.0557)
Literacy (knows how to read)		0.106 (0.109)
Knows how to use computer		-0.0158 (0.109)
Attended at school		-0.468***

	(0.178)
Years of schooling	0.0157 (0.0168)
Broke all social ties	0.119 (0.144)
Victim of violence	0.0379 (0.107)
Drug abuse	-0.101 (0.113)
Exposed to crime	0.0385 (0.390)
Regular alcohol consumption	0.0422 (0.0820)
Criminal record	0.00950 (0.119)
Believes COVID-19 only concerns the elderly	-0.224** (0.101)
Believes COVID-19 is a disease of white people	0.00792 (0.120)
Government is not telling the truth about COVID-19	0.0482 (0.0684)
Playing soccer is safe	0.0684 (0.0705)
Not mandatory to wear a mask	-0.149* (0.0870)
Washing hands is annoying	-0.0909 (0.0829)
Shaking hands with friends and family is allowed	-0.0485 (0.0901)
Worried about falling sick with COVID-19	0.0927 (0.0740)
Got tested for COVID-19	0.137 (0.0951)
Wears face mask	0.0243 (0.0999)
Keeps hands clean with soap or hand sanitizer	-0.0526 (0.118)
Stays at home as much as possible	0.0495 (0.0923)
Stays one meter away from others in public spaces	-0.0332 (0.0790)
Self-employed in previous month	-0.169 (0.150)
Other Income Generating Activities (IGA) in previous month	-0.0181 (0.0689)
Paid job in previous month	-0.000976 (0.146)
Expects to become an entrepreneur in the long-term (10 years)	0.0409 (0.122)
Log Non-food expenditures	-0.0653 (0.0654)
Log Food expenditures	-
Any government support during the pandemic	0.0832 (0.119)
Log Total expenditures	0.0447 (0.0342)
Income (CFA francs)	-2.02e-06 (1.66e-06)

Constant	0.244*** (0.0371)	0.182 (0.515)
Observations	265	213
R-squared	0.002	0.171
F-test		1.276
Prob > F		0.146

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.