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The Fine Line between Nudging and Nagging

Increasing Take-up Rates through Social Media Platforms

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Abstract

This study assesses if nudges in the form of informational videos sent via WhatsApp are effective in boosting take-up rates among vulnerable populations, specifically in the context of a regularization program for Venezuelan forced migrants in Colombia. The study randomly assigned 1,375 eligible migrants to receive one of three informational videos or be in a control group. The videos aimed at solving issues related to awareness, trust, and bottlenecks in the step-by-step registration. The main results indicate that program take-up rates for individuals who received any video were eight percentage points *lower* compared to the control group. The effects are mostly driven by the treated individuals who received the links but *did not watch the videos*, who are older, busier, and have less internet access relative to other treated individuals. Additionally, the study evaluates the effectiveness of iterative WhatsApp surveys in collecting data from hard-to-reach populations. It finds that while iterative WhatsApp surveys had low retention rates, iterative contacts helped to reduce attrition. Furthermore, switching behaviors from nonresponse to response were common after iterative contact attempts.

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The Fine Line between Nudging and Nagging: Increasing Take-up Rates through Social Media Platforms*

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I INTRODUCTION

Individuals from vulnerable populations often display low enrollment in public services that could enhance their welfare (Currie 2006). This is primarily because access to public programs is not automatic and applicants must satisfy stringent criteria to qualify, which imposes disproportionate costs and restrictions on disadvantaged individuals. Given this context, social media platforms like WhatsApp are a cost-effective way to disseminate information about public programs and improve take-up rates through nudges. Yet, despite the widespread use of WhatsApp for this purpose, there is scant empirical evidence on its efficacy in enhancing take-up among vulnerable populations.

Informational videos sent to mobile phones can reach many people at low cost, particularly those who lack access to in-person outreach or distrust the government. Furthermore, data collection through WhatsApp may be a productive way to elicit information from highly mobile populations. This study addresses two broad questions: (i) can informational videos distributed via WhatsApp increase take-up rates for public programs among vulnerable and hard-to-reach populations?, and (ii) how effective are iterative WhatsApp surveys at collecting data from these populations?

This study focuses on Colombia's Estatuto Temporal de Proteccion para Migrantes Venezolanos (ETPV), a 10-year regularization program for undocumented Venezuelan forced migrants (herein "migrants"). The ETPV grants legal status and benefits to migrants who arrived in Colombia before January 2021. It issues a temporary protection permit (PPT) as an identification and regularization document that grants access to numerous services including healthcare, public, and financial services as well as a work permit. Previous studies of the impacts of an earlier version of this program on migrants' welfare documented large improvements in income and consumption, but low program take-up rates by migrants (Ibáñez et al. 2022).

The registration period for the PPT began in May 2021 and ended in June 2022. Prior to the

program's implementation, our research team conducted a qualitative study of the reasons for low take-up rates for previous regularization programs offered by the Colombian government.[1] We identified three primary limitations that have long been recognized in the literature as obstacles to adquire public programs in other settings. These limitations include: (i) *low awareness of the program* (Chetty, Friedman and Saez 2013, Smeeding and O'Connor 2000); (ii) *lack of trust in the government due to legal problems that arise during the regularization process*; and (iii) *lack of knowledge about the step-by-step registration process, including confusion regarding program rules and incentives* (Liebman and Zeckhauser 2004) and *psychological aversion to program complexity or the "hassles" involved* (Bertrand, Shafir and Mullainathan 2006). Insights from these works guided the design of our experiment.

We employed a randomized controlled trial design to investigate the impact of three video treatments sent through WhatsApp on the PPT take-up rates among 1,375 undocumented Venezuelan migrants. Participants were randomly assigned to one of the three treatment arms or a control group. Each treatment arm consisted of a video that addressed one or more of the three limitations identified above. In designing these videos, the research team incorporated behavioral insights to strengthen effectiveness. Specifically, we utilized the EAST methodology developed by the Behavioral Insights Team (BIT 2014, DellaVigna and Linos 2022), which emphasizes the principles of making information easy to understand, attractive, social, and timely.

Video 1 aimed to increase program awareness. It provided a detailed description of the principal benefits of the PPT, including its three-step application process, simple nature, low cost (i.e., it was free), and eligibility (the program was open to any migrant who arrived before January of 2021 to Colombia). The video was narrated by an actor who resembled a Colombian official. We refer to this treatment as the *awareness* video. Video 2 was designed to increase trust in the program. It presented the same information as

[1]The qualitative study consisted of 42 in-depth interviews with Venezuelan migrants residing in Colombian cities with a high density of migrants. Roughly half of the migrants were undocumented and the other half were documented.

Video 1 but was narrated by a Venezuelan migrant who had already registered in the program. The narrator provided a personal account of her experience, highlighting the PPT's benefits and emphasizing its legitimacy and safety. We refer to this treatment as the *trust* video. Video 3, narrated by the same Venezuelan migrant as Video 2, provided more details on and support for the step-by-step registration process. It aimed to reduce confusion through clear, concise information on requirements and procedures. Video 3, which we call the *step-by-step* video, was also the longest one. None of the treatments offered an option for migrants to ask questions; the videos simply directed them to public offices where they could obtain more information and guidance. The first two videos (awareness and trust) were each roughly 3.5 minutes long, whereas the step-by-step video was 5:28 minutes long.

We recruited undocumented Venezuelan migrants in person in the departments of Magdalena and Atlántico on the Caribbean Coast of Colombia. According to the Colombian population census of 2018, these regions have a high density of very vulnerable migrants with low rates of regularization. To ensure representativeness, we collected the sample from the largest urban center (Santa Marta) and surrounding areas. We advertised the experiment in places frequented by Venezuelan migrants and contacted local community leaders to support it by placing registration points in marginalized communities with a high concentration of undocumented migrants.

The study included individuals who met the following criteria: (i) born in Venezuela, (ii) aged 18 years or older, (iii) had internet access and WhatsApp, and (iv) had not yet scheduled an appointment to provide biometric data, a requirement for the PPT. We defined the biometric data appointment as the key point in the PPT registration process because it is the final step before the document is issued. We wanted to identify the most vulnerable individuals who might not apply for the program without external support. To do this, we collected a short, in-person, baseline survey at the registration points. We then com-

pared characteristics of the migrants in our sample to those of similar national surveys and found that indeed, our sample included some of the most vulnerable migrants.[2]

The treatment groups received their specified videos four times through WhatsApp. This transmission occurred for the first time two months after the initial recruitment and up to a total of four times, with a one-week interval between contacts. At each contact, treated participants received the designated video and a short digital survey. The control group only received the survey. Any participant who reported requesting their biometric data appointment was no longer contacted.[3] We evaluate the effects of the videos on three main outcomes: intention to register, starting the registration process, and requesting the PPT (proxied by requesting or attending the biometric data appointment).[4] Our experiment was successful in inducing random variation across groups—i.e., groups are balanced in the vast majority of variables that we collected at baseline (2 out of 56 tests of mean differences were successful). Moreover, attrition rates were not systematic and had a more random nature.

Surprisingly, we find negative effects of sending the video on the three outcomes that we examine. We document that receiving a video reduced the intention to register by 12.2 pp, lessened the probability of starting the registration process by 7.7 pp, and decreased the likelihood of requesting the PPT by 8 pp. These are meaningful effects. The treatment resulted in a reduction of 15.09 percent in PPT take-up rates relative to the control group's mean. Furthermore, the step-by-step video, which was the longest video and offered more details was the one that reduced take-up the most.

When exploring for potential explanations for the negative effects of the videos on PPT

[2]Details of this comparison are in Table 2, which is described in detail later.

[3]For reasons of confidentiality, we were denied access to public data on actual program registration.

[4]Unfortunately, IRB restrictions prevented us from collecting the ID information which complicated matching our data with public official information. When attempting to match our sample with the government records, it was extremely common to find homonym names, which prevented us from matching the majority of our sample with the government data. As such we were not able to use the government's information to confirm the reports from migrants on PPT registration.

take-up rates, we document that the results are primarily driven by the treated individuals who received the links but did not played the videos. These individuals account for 15.4 percent of the individuals assigned to treatment. We document that they are older, busier, and have less internet and WhatsApp access, relative to the rest of the treated group. We confirm this result by using multiple strategies such as propensity score matching, sample restrictions, and traditional heterogeneous effects analysis. All in all, the results of these exercises consistently suggest that the videos had effects close to zero for the individuals who watched the videos, but induced large and negative effects for the individuals in the treatment who did not watch the videos.

Our qualitative semi-structured interviews support these conclusions suggesting that individuals in the treatment group who did not watch the videos reported frustration about the multiple contacts, due to their difficulties with low technology literacy, and with their low propensity to engage in informational videos. Interestingly, these results align with other recent studies that have also suggested negative effects of nudges for populations that are not searching for the received information. For example, Damgaard and Gravert (2018) show that reminders for charity increased the intended behaviors for some, but also unintentionally increase avoidance behaviors for others who were annoyed by the messages (for instance they decided to unsubscribe from mailing lists). Kalil et al. (2023) establish that reminder text messages to parents led to a decrease in literacy skills for children— the main outcome they targeted through a literacy platform. Moreover, Costa and Kahn (2013) show that energy conservation nudges need to be targeted to be most effective.

For all individuals recruited and contacted at each stage, we explored the share that opened the link and played the videos. The most successful episode of treatment was the first contact, in which more than 70 percent of participants opened and played more than half the video. Participants who were contacted more times opened the video less and

played it fewer times, possibly due to fatigue or familiarity with the information. We also find play rates were lower for the videos narrated by a Venezuelan migrant (treatments 2 and 3) than for the one narrated by an actor resembling a Colombian official (treatment 1). That is, even a narrator who could speak about experiences similar to theirs did not increase migrants' interest in the information.

Our study suggests that sending information videos through social platforms is an ineffective way to increase public program take-up rates for vulnerable individuals who are hard-to-reach and that it may be even harmful for individuals who are not interested in receiving the information.

We also analyzed the effectiveness of iterative WhatsApp surveys (IWS) at collecting information from vulnerable populations, particularly undocumented forced migrants. Our study revealed five key findings. First, we lost half the relevant sample when transitioning from in-person interviews conducted at recruitment (1,375) to WhatsApp surveys post-treatment. Moreover, the attrition rate increased as more contact attempts were made. Finally, we observed a switching behavior from non-response to response in at least 20 percent of the sample. For instance, of the participants contacted four times, 13.17 percent responded twice (comprising 7.22 percent consecutive and 5.95 percent non-consecutive responses) and 13.43 percent responded three times (8.87 percent consecutive and 4.56 percent non-consecutive responses). Our findings suggest that while IWS may be useful for gathering information in some contexts, they may not be well-suited for obtaining information from hard-to-reach populations in developing countries. Other methods such as in-person interviews, focus groups, or community engagement may be more effective in these settings.

Contribution to literature: Our work builds on the literature concerning public program take-up rates and their determinants. Prior studies have identified information asymmetry (Daponte, Sanders and Taylor 1999, Bartlett and Hamilton 2004, Bettinger et al. 2012,

Armour 2018) and the high cost of learning about program eligibility and application procedures as major obstacles to enrollment (Chetty, Friedman and Saez 2013). Misinformation also contributes to low take-up rates, creating confusion about eligibility criteria and discouraging individuals from navigating complex application rules (Bhargava and Manoli 2015, Armour 2018, Finkelstein and Notowidigdo 2019). Previous studies have also identified lack of attention (Madrian and Shea 2001) and procrastination (Karlan et al. 2016) as significant barriers. Our study extends this research by examining the role of information in an environment with extremely high vulnerability and government distrust, which is particularly relevant in developing countries where trust in state institutions is generally low.[5] We also advance this field by assessing the efficacy of WhatsApp videos in increasing public program take-up rates among populations in jeopardy.

This study also contributes to the growing body of work on the impact of informational interventions on economic decisions.[6] Previous research on the effects of clear program information on public program take-up rates have yielded mixed results. While some studies have shown such interventions can increase take-up rates (Daponte, Sanders and Taylor 1999, Saez 2009, Jones 2010, Bhargava and Manoli 2015, Finkelstein and Notowidigdo 2019, Michael Hotard and Hainmueller 2019, Domurat, Menashe and Yin 2021), others have demonstrated that one-time informational interventions are insufficient (Bettinger et al. 2012, Manoli and Turner 2014, Guyton et al. 2016). Moreover, some work has found that the effect of information can be negligible or even lead to lower take-up rates, depending on the population (Mastrobuoni 2011, Bettinger et al. 2012, Seira, Elizondo and Laguna-Müggenburg 2017, Allcott and Greenstone 2017, Armour 2018, Hainmueller et al. 2018). Recent research suggests that online and mobile technologies may reduce information asymmetries for individuals with high technological literacy (Arteaga et al. 2022) but may have negligible effects for the general population (Bahety et al. 2021). We offer new

[5]For instance, according to data from The Americas Barometer by the LAPOP Lab, Latin American countries exhibit low approval ratings for local government.

[6]For a comprehensive review of the literature, see Currie (2006).

evidence regarding the effect of iterative information sent through WhatsApp on take-up rates of vulnerable, hard-to-reach populations. Our findings imply such methods may be ineffective and might backfire, inducing frustration.

We also contribute by evaluating the effectiveness of WhatsApp videos and online surveys in reaching isolated or otherwise at-risk populations. Relatively new work concludes that online technologies could be a low-cost way to collect information in areas that are inaccessible due to conflict and disease as long as recipients have a certain level of technological literacy (Beam 2023, Heywood, Ivey and Meuter 2022). We establish that online surveys through social media might not succeed in eliciting data from stigmatized communities that also have trust issues, such as undocumented forced migrants.

II REGULARIZATION PROGRAMS IN COLOMBIA

II.A The PEP Program

The Venezuelan exodus is one of the most pressing forced migration crises today, with more than 7.1 million migrants displaced abroad as of 2023. Colombia is the principal recipient of this outpouring, and it has maintained a compassionate stance by offering them full mobility and several regularization programs to formalize their status there. One of the most extensive such initiatives took place in 2018, when the Colombian government gave nearly half a million irregular Venezuelan migrants the chance to regularize their documents, obtain a work permit, access safety nets (including comprehensive education and health services) and the financial sector, and validate their educational credentials. The program, known as the *Permiso Especial de Permanencia* (PEP), granted these benefits to migrants for a period of two years and opened the way for them to become permanent Colombian residents. PEP had significant impacts on migrants' welfare including positive effects on labor income, access to public programs, bank account ownership, and health outcomes (Ibáñez et al. 2022 and Urbina et al. 2023).[7] Despite the program's gen-

[7]Previous research on PEP's effects on hosting communities has explored its impacts on labor market outcomes and found negligible effects (Bahar, Ibáñez and Rozo 2021); local crime rates, which showed

erosity, only around 60 percent of the migrants who were offered it actually registered and received benefits. Ibáñez et al. (2020) found that reasons for failure to register included lack of awareness (both about how to register and the eligibility requirements), lack of trust in the Colombian government, and registration bottlenecks.

II.B The ETPV Program

Before the PEP program expired in 2020, the Colombian government opted to scale up the regularization of Venezuelan migrants through a program referred to as the *Estatuto Temporal de Protección para Migrantes Venezolanos* (ETPV), which extended the eligibility period for benefits. Specifically, the ETPV offered a 10-year regularization program to Venezuelan migrants who arrived in Colombia prior to January 2021 (see Figure A.1 for a timeline). The process entailed several steps, beginning with registration in an online census known as the *Registro Único de Migrantes Venezolanos*. Supporting documents—such as medical certificates, grade reports, labor certificates, and property rental agreements, among others—had to be uploaded, indicating proof of arrival in Colombia before January 31, 2021. Additionally, a Venezuelan ID document (such as a cédula, passport, or birth certificate) was required to substantiate Venezuelan origin, along with a photo ID. Applicants next had to schedule an in-person appointment to record their biometric data. Upon completion of this appointment, a permit or visa was granted virtually, and three months later, the physical document known as the *Permiso por Protección Temporal* (temporary protection permit) or PPT was issued. The window for registration and the biometric data appointment occurred between May 2021 and June 2022. The complete process is described in Figure A.2.

The PPT is both an identification and regularization document, providing a broad range of benefits including regular legal status; a work permit; access to public health services

an increase in migrants' reports of sexual abuse and domestic violence (Ibáñez, Rozo and Bahar 2020); firm development, which resulted in the creation of new mom-and-pop businesses (Bahar, Cowgill and Guzman 2023); and political outcomes, which experienced no observable changes in host voting behavior (Rozo, Quintana and Urbina 2023).

(including Covid-19 vaccinations), the pension system, education, childcare, and the financial sector; and the potential to validate Venezuelan educational certifications. Moreover, the PPT allows migrants to enter and exit the country without restrictions and serves as proof of settlement in Colombia to fulfill the time requirement for obtaining a residency visa. According to the Colombian migration agency, *Migración Colombia*, as of October 2022, nearly 2.5 million Venezuelan migrants had completed the online RUMV census (see Figure A.3 for their geographical distribution).

III THE INTERVENTION: HOW TO INCREASE TAKE-UP RATES FOR THE ETPV

III.A Rationale

Previous work shows results from our qualitative investigation into why Venezuelan migrants did not register for the PEP program.[8] We identified three key barriers that impeded participation, namely: (i) inadequate awareness of the program; (ii) lack of trust in the government due to possible legal complications during the regularization process; and (iii) confusion and insufficient information regarding registration procedures as well as reluctance related to the complex and difficult process. Our WhatsApp intervention targeted these barriers and tried to increase participation in the next regularization program (the PPT) by providing information through cost-effective platforms that could make this intervention scalable.

[8]The study included 42 in-depth interviews with Venezuelan migrants living in cities with a high population of Venezuelans. All interviewees had resided in Colombia since 2018, and were: (i) beneficiaries of the Special Permit of Permanence granted by the Administrative Registry of Venezuelan Migrants (PEP-RAMV) plus (ii) migrants who could have benefited from this permit but had not registered in RAMV or (iii) were unable to access PEP despite having participated in RAMV. Participants comprised generally young people (mostly women) with difficulties generating income despite being of working age, who lived in large households (25 women and 17 men took part in the study). The main finding was that the desire to obtain official documentation was a primary motivation for Venezuelan migration to Colombia. Nevertheless, the process was hampered chiefly due to lack of awareness of the program. Migrant networks were essential to publicize both registration in RAMV and the subsequent PEP-RAMV process. Interviews revealed that without physical or virtual contact through social networks with church and migrant group leaders, migrants would have missed the opportunity to regularize their status. There was also fear sparked by rumors that RAMV would be used by the Colombian government to deport undocumented migrants. Finally, bottlenecks in the registration process occurred as a result of: (i) lack of access to information and weak social networks; (ii) lack of money for transportation to registration points; (iii) the cost of losing part of the working day to an activity that did not generate income; and (iv) lack of incentives to register.

III.B Design

We randomly assigned a total of 1,375 eligible individuals into four groups of equal size that consisted of three treatment arms and one control group.[9] The research team interviewed individuals selected for the intervention in person at registration to collect basic sociodemographic characteristics. The three treatment arms involved the dissemination of a different video through WhatsApp, each addressing a specific barrier to registration for the PPT such as lack of program awareness, distrust of the government, and details regarding registration that were intended to reduce procedural difficulties.

As mentioned above, we based the intervention design on the EAST methodology developed by the Behavioral Insights Team (BIT 2014), which emphasizes the principles of making information easy to understand, attractive, social, and timely. We designed the videos to simplify information about benefits, eligibility criteria, and the registration process. The use of graphic design, pop-ups, and images made the videos more attractive, and a financial incentive encouraged viewership.[10] To incorporate the "social" principle, the videos informed migrants that others in their community had successfully registered for the regularization program.[11] We applied the "timely" rule by strategically timing the messages to reach individuals when they were most receptive, based on insights from previous research with this population.

Video 1 featured a Colombian actor who portrayed an official and provided clear and concise information on program eligibility, costs, and the registration process (awareness video). Video 2, narrated by a Venezuelan forced migrant and mother of two children who had registered in the program, provided the same information as Video 1 but added anecdotal evidence about her experience with the program in order to build trust and

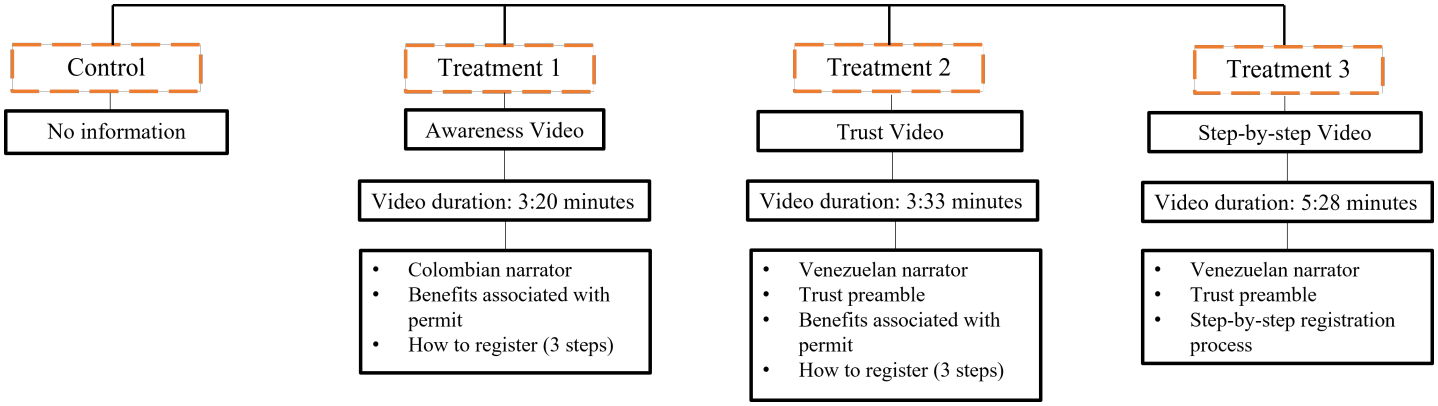
[9] Our initial plan was to recruit 4,180 eligible Venezuelan migrants in Colombia. However, in the field, we could only identify and include 1,375 individuals who were undocumented and wanted to participate in the experiment. We revised our pre-analysis plan to reflect the new sample size and estimation strategy.

[10] The value of the incentive was 10,000 Colombian pesos (COP).

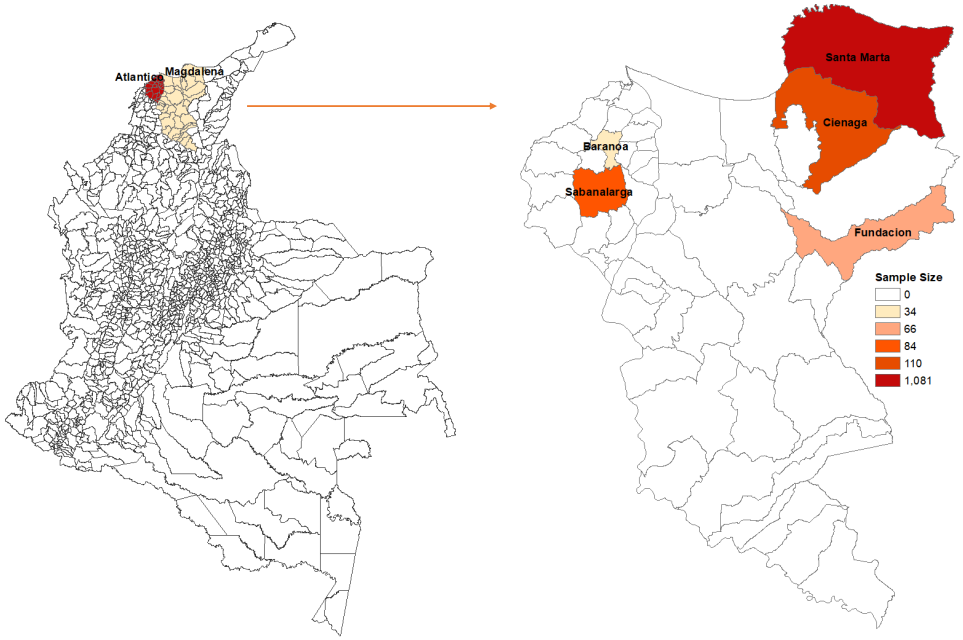
[11] Social norms insights have proven successful in changing individual behaviors (Allcott 2011, Hassett, Grolleau and Ibanez 2017, Donna, Roberts and Sweeney 2007).

empathy (trust video). Finally, Video 3, which had the same Venezuelan narrator as Video 2, offered more detail on the registration process with a step-by-step guide on how to register online (step-by-step video). All the video scripts are provided in the Appendix.

Figure 1. The Intervention



Panel A. Intervention Design



Panel B. Geographic Location

Notes: The map on the left depicts the departments where the experiment took place, and the map on the right displays the cities and the sample size of the intervention.

III.C Recruitment and eligibility

In partnership with Innovations for Poverty (IPA) Colombia, we recruited participants in Magdalena and Atlántico as they are home to many highly vulnerable migrants, according to the Colombian population census of 2018. The sample was collected to be representative of both Santa Marta, one of the largest urban centers, and rural areas that included Ciénaga, Sabana Larga, Fundación and Baranóa (see Panel B of Figure 1).[12]

Based on guidance from migrant organizations, public officials, and members of the community, we advertised the program in areas Venezuelan migrants were known to frequent. We mapped these areas and subsequently contacted local community leaders there to elicit support for opening registration points in marginalized communities with many undocumented migrants. Local leaders helped us build trust by offering information about the IPA and the researchers involved in the project. We made several modifications to our data collection process to increase trust and boost response rates. Three important ones were (i) the distribution of related research on regularization programs to local leaders, (ii) discussion to learn how to support Venezuelan migrants more effectively, and (iii) collaborations with Venezuelan enumerators to increase trust.

The study's eligibility criteria were carefully defined to ensure that individuals were both eligible for the program and vulnerable. Specifically, we recruited Venezuelan migrants who were of legal age (18 years or older), resident in any of the selected municipalities, undocumented, and who arrived in Colombia before January 1, 2021. Additionally, participants had to have access to a phone with WhatsApp and internet. The final sample numbered 1,375 individuals who met these criteria and agreed to participate in the study.

Table 1 presents descriptive statistics and provides important insights into the participants. The sample was predominantly composed of young people with an average age of 33.4 years. The majority of participants were female, accounting for approximately 67

[12]We did not recruit individuals in Barranquilla due to implementation costs.

percent of the sample. Furthermore, individuals in our sample also had low income, with an average monthly income of 250,000 COP, which represents 20 percent of the minimum wage in Colombia. The majority reported having access to the internet for at least four hours a day, which initially suggested that mobile-based interventions could be viable for this population. Notably, the descriptive statistics also seem to suggest that trust in the Colombian government was not particularly low. Yet, self-reported measures are probably biased and we did not have comparable values for Colombian natives that permitted us to make any strong conclusions.

Table 1. Sample Characterization

	Average	SD	Min	Max	N
Age	33.44	11.29	18.00	75.00	1,375
Male [=1]	0.33	0.47	0.00	1.00	1,375
Ed. Level: Primary or Less [=1]	0.19	0.39	0.00	1.00	1,375
Ed. Level: General or diversified school [=1]	0.59	0.49	0.00	1.00	1,375
Number of household members	4.68	1.74	0.00	14.00	1,375
Personal Income (COP)	249,472	217,353	0.00	1,700,000	1,375
Activity spent the most time: Working [=1]	0.42	0.49	0.00	1.00	1,375
Internet Access more than 4 hours per day [=1]	0.67	0.47	0.00	1.00	1,375
Trust in Colombian Government (1-5 scale)	4.27	1.02	1.00	5.00	1,375
Personal use of WhatsApp [=1]	0.77	0.42	0.00	1.00	1,375
Facebook or Instagram account [=1]	0.53	0.50	0.00	1.00	1,375
Twitter account [=1]	0.12	0.32	0.00	1.00	1,375
E-mail account [=1]	0.17	0.38	0.00	1.00	1,375
Social desirability index (1-4 scale)	2.28	1.40	0.00	4.00	1,375

Notes: Definition dependent variables: (i) Trust in Colombian Government is the answer to the question "Do you trust the Colombian Government?" on a five-point scale from 1-strongly disagree to 5-strongly agree; (ii) social desirability index is constructed using four questions from the Marlowe-Crowne social desirability scale (see Crowne and Marlowe 1960 for details). The four questions are: "It is sometimes hard for me to go on with my work if I am not encouraged (false corresponds to higher social desirability)"; "There have been times when I was quite jealous of the good fortune of others (false corresponds to higher social desirability)"; "I am always willing to admit when I make a mistake (true corresponds to higher social desirability)"; and "I am always courteous, even to people who are disagreeable (true is associated with higher social desirability)." Each statement gets a score of zero or one (assigned to higher social desirability answers). The total level of social desirability bias is calculated by summing the scores of all questions. Higher values indicate more social desirability bias.

We compared our sample of Venezuelan migrants with those surveyed in similar recent surveys including the 2021 Labor Force Survey (Gran Encuesta Integrada de Hogares, GEIH) and the 2020 Venezuelan Refugee Panel Survey (VenRePS) of migrants without a migratory permit. The GEIH is a comprehensive survey that regularly samples households in Colombia to collect data on the labor force and individual demographic characteristics, including those of Venezuelan migrants. The VenRePS, on the other hand,

is a representative sample of documented and undocumented migrants who arrived in Colombia between January 2017 and December 2018.

Our analysis in Table 2 indicates that, as intended, migrants in our intervention were the most vulnerable of all according to measures of income, education, unemployment, and access to health services. This aligns with our reasons for choosing Magdalena and Atlántico as locations where we could find migrants who might lack information on the regularization program or might face other challenges in registering for it.

Table 2. Sample Comparability

				Mean Difference P-value	
	Intervention	GEIH	VenRePS	ETPV vs. GEIH	ETPV vs. VenRePS
	(1)	(2)	(3)	(4)	(5)
Age	33.444	33.25	32.836	0.640	0.105
	(11.286)	(11.810)	(10.882)		
Male [=1]	0.325	0.441	0.4	0.000	0.000
	(0.469)	(0.497)	(0.490)		
Years of education	4.518	7.814	13.043	0.000	0.000
	(2.051)	(4.028)	(2.862)		
Total income (Log)	0.209	0.542	0.354	0.000	0.000
	(0.161)	(0.268)	(0.213)		
Health regime: Subsidized [=1]	0.149	0.195	0.016	0.001	0.000
	(0.356)	(0.397)	(0.127)		
Health regime: Contributory [=1]	0.107	0.097	0.009	0.337	0.000
	(0.309)	(0.295)	(0.095)		
Health regime: None [=1]	0.847	0.708	0.974	0.000	0.000
	(0.360)	(0.455)	(0.158)		
Unemployed [=1]	0.226	0.083	0.304	0.000	0.000
	(0.419)	(0.276)	(0.460)		
Observations	1,375	1,792	2,317	3,167	3,692

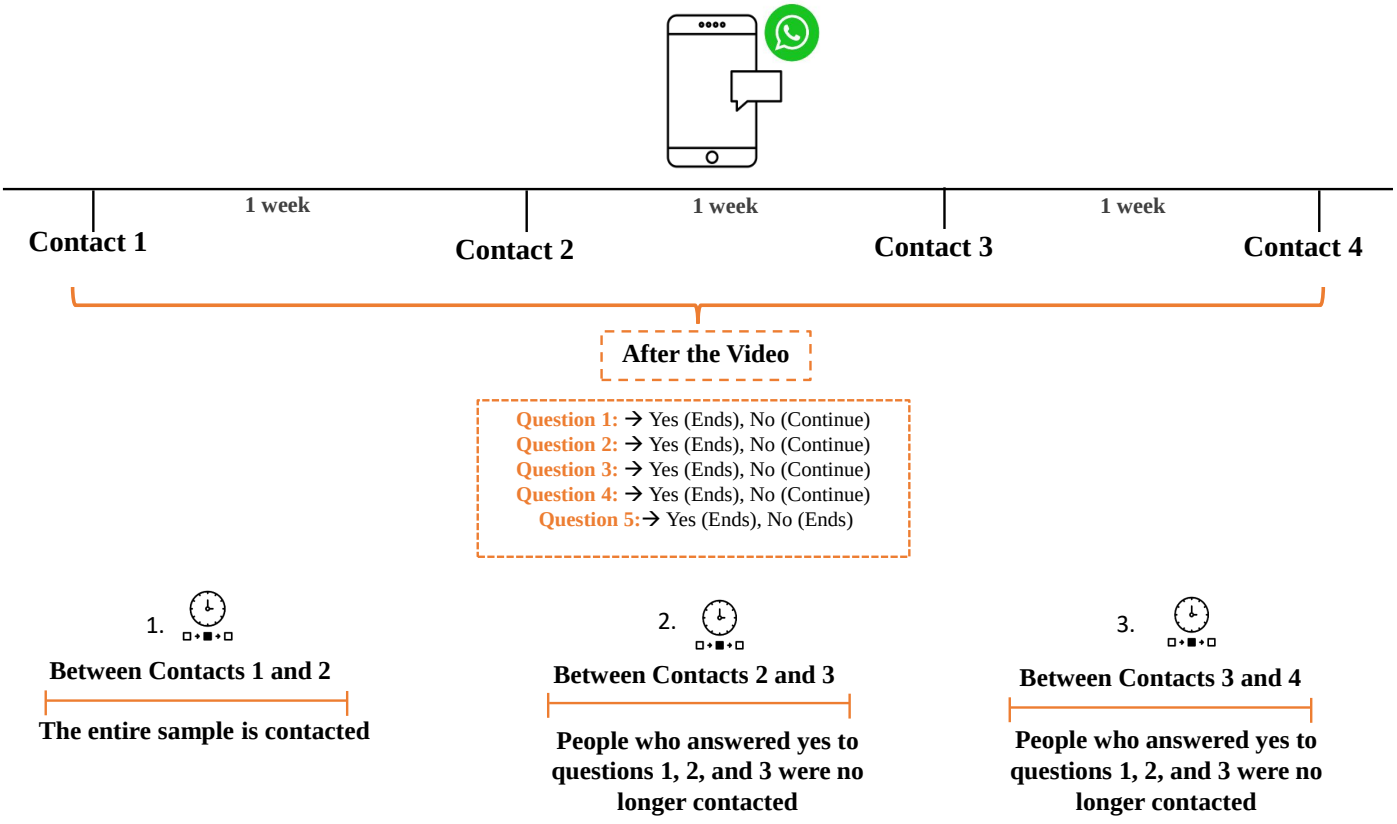
Notes: The first column presents the mean and standard deviation for the sample of this study. Column (2) shows the mean and standard deviation for the Venezuelans who responded to the Colombian Labor Force Survey of December of 2021, known as Gran Encuesta Integrada de Hogares (GEIH). Column (3) depicts the mean and standard deviation for the undocumented Venezuelans surveyed in the Venezuelan Refugee Panel Survey (VenRePS) of 2020. Columns (4) and (5) present the p-value for the mean difference between samples.

IV DATA: ITERATIVE WHATSAPP SURVEYS (IWS)

After the in-person registration (which included the short sociodemographic survey) and randomization, we used WhatsApp contact each participant up to a maximum of four times in order to distribute videos and/or the survey (the control group only received the survey). At each point of contact, we sent the link to the video and one hour later the sur-

vey. The control group only received the survey. Specifically, we only recontacted those participants who had not responded to previous attempts or who had not yet requested the biometric data appointment. We considered the PPT successfully completed once a participant had either requested or attended the biometric data appointment. It should be noted, however, that attendance at the appointment was necessary to finish the official process. We did this because the videos specifically targeted the act itself of requesting the appointment. Moreover, due to a backlog in governmental processing times, appointments were often scheduled after our last point of contact. In fact, many appointments were rescheduled due to governmental delays. We conducted the surveys according to the timeline in Figure 2.

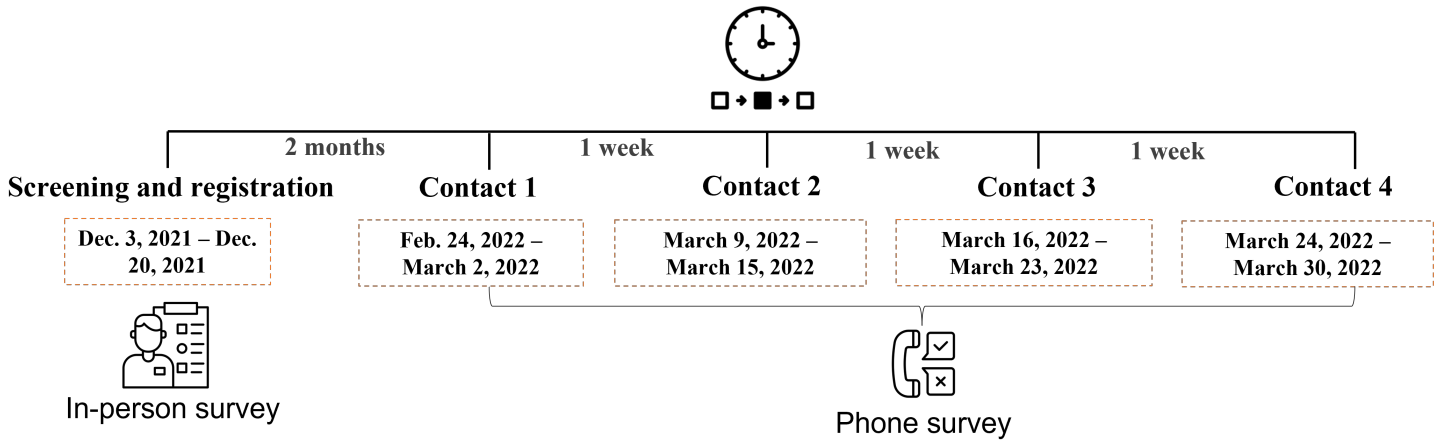
Figure 2. Iterative WhatsApp Survey Collection



The WhatsApp surveys administered in this study included a maximum of five questions

(but possibly fewer) that focused on different stages of the PPT registration process in reverse order. They were: (i) receiving the PPT, (ii) attending the biometric data appointment, (iii) requesting the biometric data appointment, (iv) starting the RUMV registration, and (v) intending to register. If a respondent indicated they had already received the PPT, they were not contacted again and subsequent questions were not posed as completion of all previous stages could be inferred. Similarly, if respondents replied in the affirmative to question (ii), they were not contacted again and the remaining questions were not asked, as successful completion of all prior steps could be assumed. This sequential approach was followed to query stages (i) through (v) only if the respondent answered negatively to all preceding questions. The detailed procedure is illustrated in Figure 3.

Figure 3. Iterative WhatsApp Survey Structure



V INTERNAL VALIDITY

V.A Successful randomization

We examine the internal validity of our experiment in Table 3, which reports the balance test results for the baseline covariates across treatment and control groups. Our findings indicate that of the 14 covariates observed and the 56 means difference tests evaluated, only two differences were statistically significant. These results support the internal validity of our experimental design and lend confidence to our estimate of the causal effect

of the intervention on the outcomes of interest.

Table 3. Successful Covariate Balance by Treatment Type

	Control	Information Video	Trust Video	Step-by-Step Video	Any Video	P-value			
	(1)	(2)	(3)	(4)	(5)	(1)-(2)	(1)-(3)	(1)-(4)	(1)-(5)
Age	33.130	32.607	32.797	35.251	33.551	0.533	0.691	0.017	0.548
	(11.151)	(10.847)	(10.840)	(12.113)	(11.335)				
Male [=1]	0.305	0.334	0.313	0.348	0.332	0.418	0.830	0.235	0.367
	(0.461)	(0.472)	(0.464)	(0.477)	(0.471)				
Ed. Level: Primary or Less [=1]	0.210	0.199	0.165	0.187	0.184	0.722	0.129	0.445	0.277
	(0.408)	(0.400)	(0.372)	(0.391)	(0.388)				
Ed. Level: General or diversified school [=1]	0.625	0.560	0.620	0.535	0.572	0.082	0.891	0.016	0.081
	(0.485)	(0.497)	(0.486)	(0.499)	(0.495)				
Number of household members	4.593	4.613	4.751	4.770	4.711	0.880	0.225	0.193	0.273
	(1.733)	(1.708)	(1.677)	(1.822)	(1.737)				
Personal Income (Sin*)	9.886	9.583	9.413	9.856	9.616	0.429	0.217	0.935	0.391
	(4.841)	(5.232)	(5.234)	(4.958)	(5.142)				
Activity spent the most time: Working [=1]	0.452	0.460	0.461	0.512	0.478	0.834	0.824	0.120	0.417
	(0.498)	(0.499)	(0.499)	(0.501)	(0.500)				
Trust in Colombian Government (SD)	0.067	0.003	-0.059	-0.012	-0.023	0.380	0.082	0.281	0.139
	(0.912)	(0.989)	(0.994)	(1.008)	(0.997)				
Internet Access more than 4 hours per day [=1]	0.277	0.217	0.261	0.225	0.234	0.070	0.640	0.119	0.114
	(0.448)	(0.413)	(0.440)	(0.418)	(0.424)				
Personal use of Whatsapp [=1]	0.795	0.754	0.774	0.740	0.756	0.191	0.493	0.084	0.133
	(0.404)	(0.432)	(0.419)	(0.439)	(0.430)				
Facebook or Instagram account [=1]	0.516	0.537	0.557	0.523	0.539	0.585	0.284	0.843	0.457
	(0.500)	(0.499)	(0.498)	(0.500)	(0.499)				
Twitter account [=1]	0.110	0.097	0.101	0.146	0.115	0.584	0.730	0.150	0.789
	(0.313)	(0.296)	(0.302)	(0.354)	(0.319)				
E-mail account [=1]	0.167	0.167	0.159	0.213	0.180	1.00	0.784	0.122	0.589
	(0.374)	(0.374)	(0.367)	(0.410)	(0.384)				
Social desirability index (SD)	0.009	0.017	0.045	-0.072	-0.003	0.917	0.631	0.302	0.848
	(1.016)	(0.979)	(0.974)	(1.030)	(0.995)				
Observations	347	341	345	342	1,028	688	692	689	1,375

Notes: Columns (1)–(5) present the mean and standard deviation for the control, the three treatments, and any of the treatment samples. Columns (6)–(9) depict the p-value of the t-test. Definition-dependent variables: (i) Personal income was transformed using the inverse hyperbolic sine transformation (see Burbidge, Magee and Robb 1988 and MacKinnon and Magee 1990 for details). (ii) Trust in Colombian Government is the standardized answer to the question "Do you trust the Colombian Government?" on a five-point scale from 1-strongly disagree to 5-strongly agree. (iii) Social Desirability Index is constructed using four questions from the Marlowe-Crowne social desirability scale (see Crowne and Marlowe 1960 for details).

V.B Attrition analysis

Table 4 presents a regression of attrition rates according to sociodemographic characteristics for the full sample of individuals. In the table, attrition is defined as an indicator variable equal to one if the individual did not respond to any of the four contact attempts. The results of the exercise are reassuring because for the 14 variables that were collected at baseline, only one is statistically significant, which corresponds to having a personal WhatsApp account (compared with a shared account). Remarkably, variables such as age, gender, income, and time spent working are not correlated with attrition rates. This exercise suggests that attrition rates are not systematic and have a more random nature. To further evaluate whether attrition had a different prevalence according to treatment status, we also evaluated the correlation of attrition according to the observed covariates, their interactions with treatment status, and treatment status by itself (see Table C.2). The table illustrates this exercise for three different definitions of attrition. The results are reassuring since of the 42 interactions tested, only two were significant and the treatment status by itself does not correlate with any definitions of attrition that we tested. Table C.1 also shows the prevalence of attrition according to multiple definitions. For the whole sample and the most straightforward definition of attrition, we observe that 22.5 percent of the sample never responded to any of the four WhatsApp contacts, and 27.6 percent responded to one of follow-ups 1–3 but had not completed the PPT registration process. The table also shows that attrition rates between the control group and individuals treated by any video are similar.[13]

[13]For completeness, we also explored how our results would change if attrition were non-random (although our analysis shows this was not the case) and if we dropped individuals who were not interested in the program and never registered. This exercise amounts to using worst-case scenario imputations (as defined in Horowitz and Manski 2000, Stantcheva 2022), which here means replacing missing values for attrited individuals with zeroes for the treatment variables. Our results are available upon request and point to similarly sized effects and direction in the outcomes of interest.

Table 4. Characterizing Attrition
Attrition [=1 if individual never responded to IWS]

	Attrited Individuals (Never responded)
Age	-0.000
	(0.001)
Male [=1]	0.051*
	(0.026)
Ed. Level: Primary or Less [=1]	0.047
	(0.037)
Ed. Level: General or diversified school [=1]	-0.043
	(0.031)
Number of household members	-0.003
	(0.007)
Personal Income (Sin*)	0.001
	(0.003)
Activity spent the most time: Working [=1]	-0.016
	(0.029)
Trust in Colombian Government (SD)	0.009
	(0.012)
Internet Access more than 4 hour per day [=1]	-0.006
	(0.025)
Personal use Whatsapp [=1]	-0.060**
	(0.027)
Facebook or Instagram account [=1]	0.020
	(0.027)
Twitter account [=1]	-0.052
	(0.044)
E-mail account [=1]	-0.050
	(0.033)
Social desirability index (SD)	0.014
	(0.016)
R-squared	0.024
Mean Dependent Variable	0.225
Observations	1,375

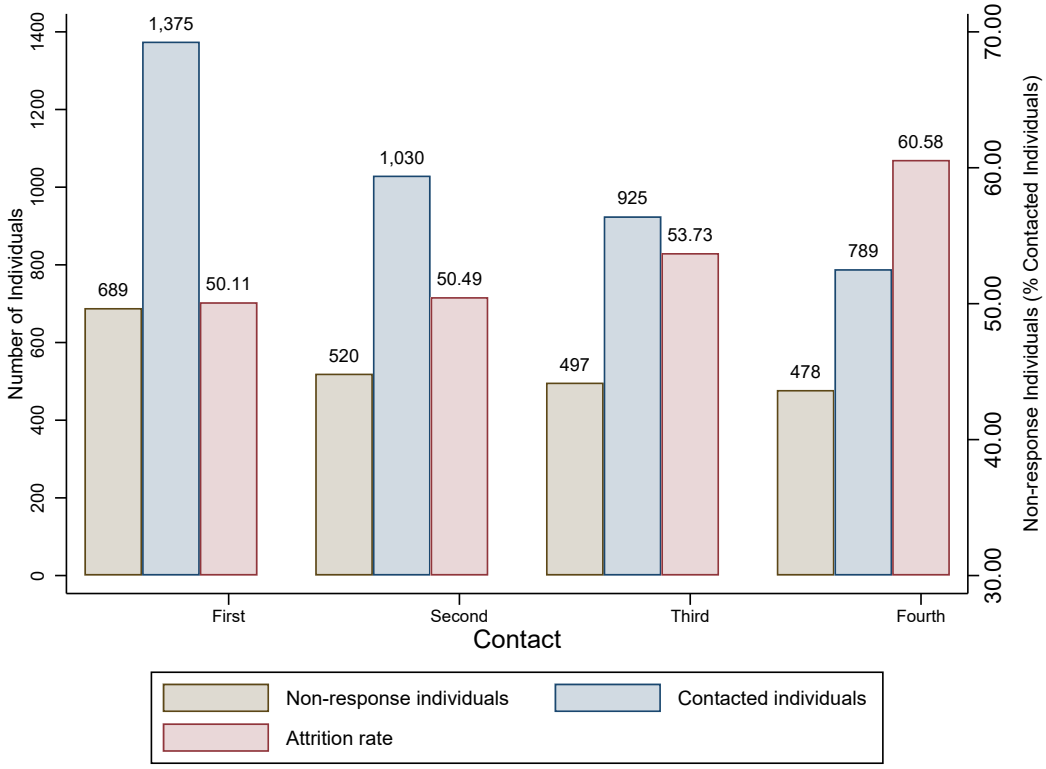
Notes: Attrited Individuals is an indicator [=1] for the people who did not answer the survey and could not be contacted through WhatsApp. *** significant at the 1%, ** significant at the 5%, and * significant at the 10%.

To complement this analysis and learn from using IWS with hard-to-reach, at-risk populations, we also examine attrition rates by contact attempt in Figure 4. In the figure, an individual is considered attrited if they did not respond to the survey at each spe-

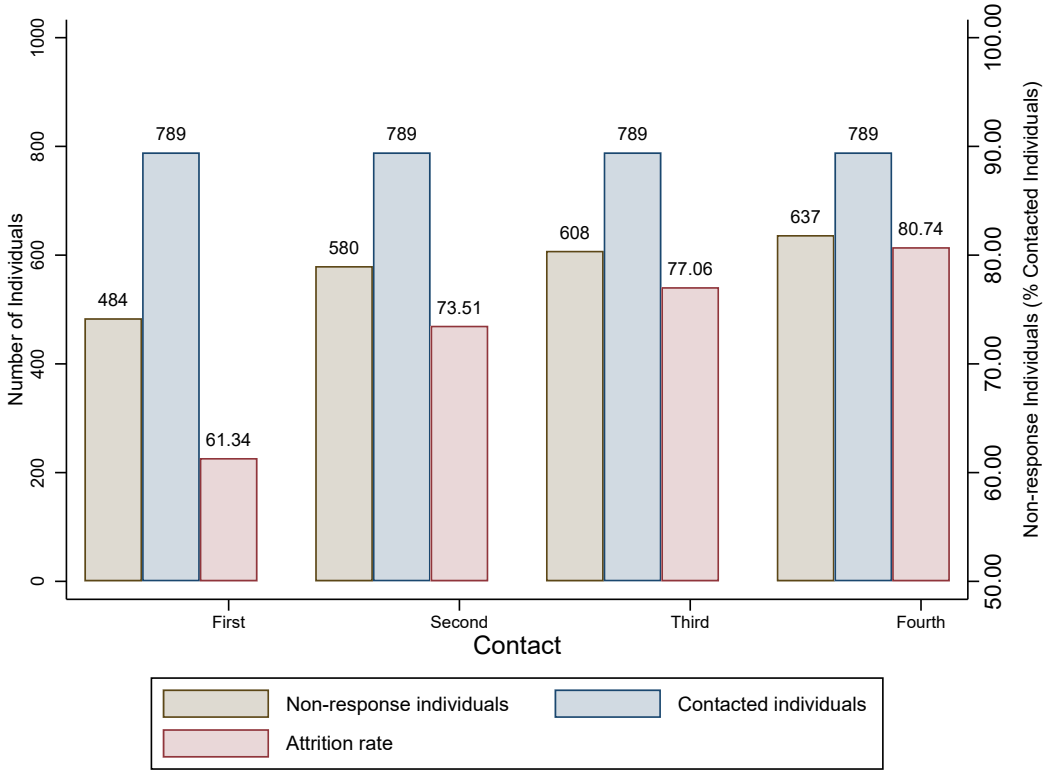
cific contact attempt. The figure highlights that nearly half of the sample was lost at the first contact attempt. Moreover, the sample size shrank as more contacts were attempted (Panel A). This observation is also confirmed when we consider the subsample of 789 individuals who were contacted four times (Panel B).

Figure 4. Attrition Rate by Type of Treatment

Panel A: Full Sample



Panel B: Contacted Four Times



In addition, nearly 40 percent of participants who were contacted four times never responded to any of the IWS. We present the distribution of possible outcomes for individuals contacted four times in Panel A of Table 5. Panel A delineates the 16 cases that could have occurred. In this table, a value of "0" indicates the participant was contacted but did not respond to the survey, while a value of "1" indicates that they were contacted and responded to the survey. Just under 20 percent of individuals responded to all the surveys. The table illustrates that switching behavior from non-response to response was observed in at least 20 percent of the sample of individuals contacted four times. What is more, the table reveals there were participants in all possible response scenarios, implying that repeated contact attempts may prove worthwhile even if someone has not previously responded. To corroborate this finding, we combined the possible number of responses for each individual (for the sample contacted four times), as detailed in Panel B of Table 5. Our analysis indicates that 39.29 percent of the sample never responded to any of the WhatsApp surveys, whereas 14.82 percent responded only once, 13.17 percent responded twice (comprising 7.22 percent consecutive and 5.95 percent non-consecutive responses), 13.43 percent responded three times (8.87 percent consecutive and 4.56 percent non-consecutive responses), and 19.26 percent responded to all contact attempts.

Table 5. Distribution of Possible Contact Combinations
Individuals Contacted Four Times

Panel A: Possible Contact Cases

Possible Contact Cases	Number of Individuals	(% of Total)
0 0 0 0	310	39.29
0 0 0 1	22	2.79
0 0 1 0	15	1.90
0 0 1 1	22	2.79
0 1 0 0	30	3.80
0 1 0 1	24	3.04
0 1 1 0	20	2.53
0 1 1 1	41	5.20
1 0 0 0	50	6.34
1 0 0 1	15	1.90
1 0 1 0	8	1.01
1 0 1 1	23	2.92
1 1 0 0	15	1.90
1 1 0 1	13	1.65
1 1 1 0	29	3.68
1 1 1 1	152	19.26
Total	789	100

Panel B: Successfully Reached Combinations

Successfully Reached Possible Combinations	Number of Individuals	(%)
Never	310	39.29
One Time	117	14.82
Two Consecutive Times	57	7.22
Two Non-Consecutive Times	47	5.95
Three Consecutive Times	70	8.87
Three Non-Consecutive Times	36	4.56
Always	152	19.26
Total	789	

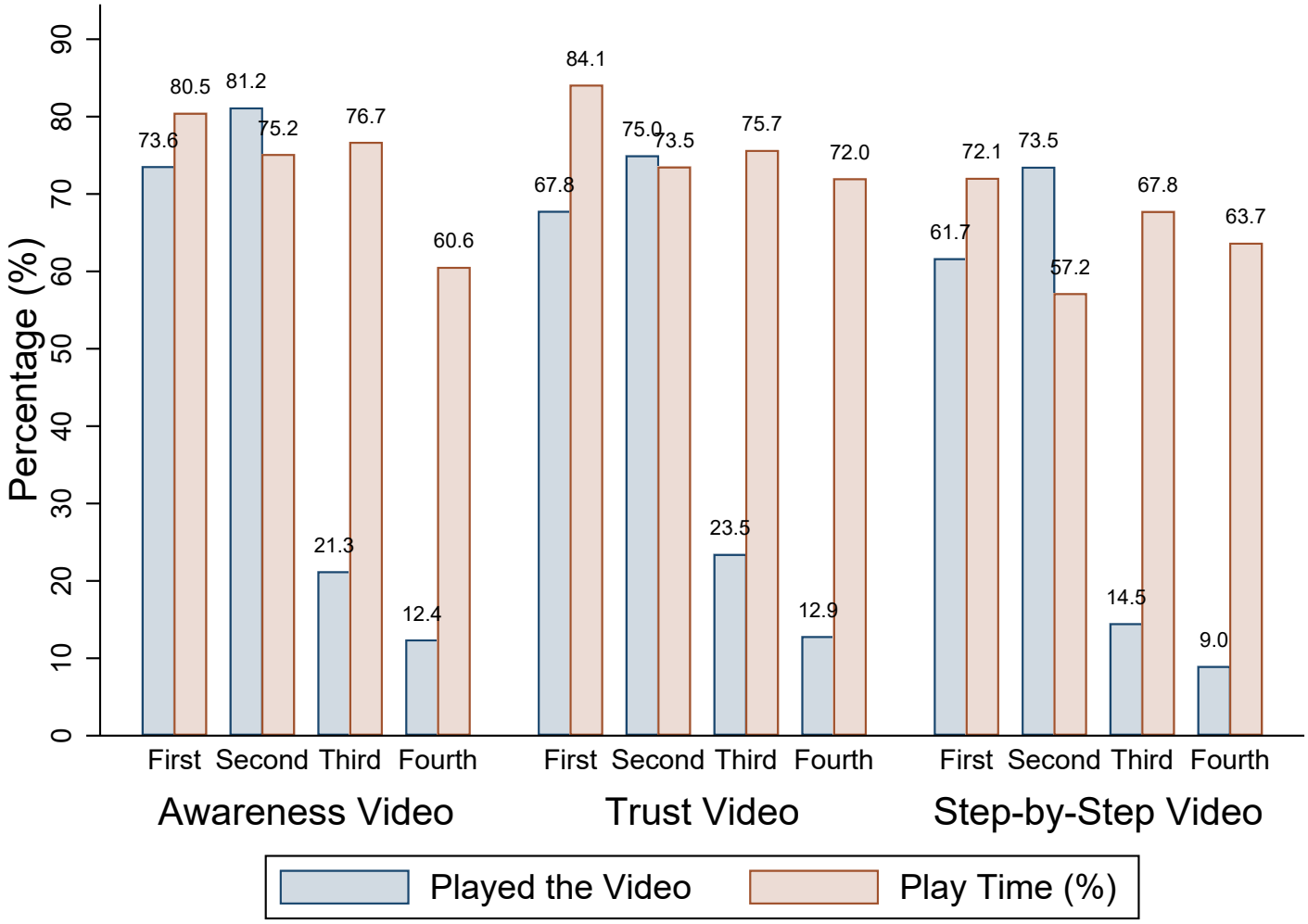
Notes: In the table on the left "0" corresponds to the individuals who were contacted but did not answer the survey and "1" to the individuals who were contacted and completed the survey.

V.C Success of video plays

Figure 5 presents the proportion of individuals who opened and played the video by treatment type for all participants recruited and contacted at each stage. Our analysis reveals three notable trends. First, the contact point with the highest success rate was the initial one, when over 73.6 percent of participants opened and played more than half the video. Second, as individuals were contacted more times, their engagement with the

video decreased, which could be attributed to fatigue or prior knowledge of the content. Third, play rates were lower for Videos 2 and 3 with a Venezuelan migrant as narrator compared with Video 1, which featured an actor resembling a Colombian official. This implies that a narrator with personal experiences similar to those of migrants did not generate additional interest in the video content.

Figure 5. Video Play Rates by Treatment Arm



Notes: The percentage is calculated over the treated sample contacted in each of the treatment arms. The treated sample for the first contact corresponded to 750 individuals, for the second contact to 257 individuals, for the third contact to 176 individuals, and for the fourth contact to 105 individuals.

VI EMPIRICAL STRATEGY

We estimate the effects of the intervention on three outcomes: intention to register for the PPT, started registration (indicated by 1 if the individual started the RUMV registration), and actual registration for the PPT program (indicated by 1 if the individual requested or attended the biometric data appointment, or received the PPT). The primary outcome information corresponds to the last WhatsApp contact with the participant.

To estimate program effects, we recover the average effects of the treatment on everyone who received the videos on the outcomes, generally known as ITT estimates. This is inclusive of individuals who received the videos but did not watch them. For this purpose, we use a standard ordinary least squares (OLS) specification for all individuals in our study, given by the following equation:

$$Y_i = \alpha + \beta_1 \text{Any Video}_i + \varepsilon_i \tag{1}$$

where *i* stands for individual, Y for the outcomes, and Any Video represent the treatment assignment. We also evaluate the effectiveness of each the three videos individually (as written in the pre-analysis plan).

VII RESULTS

VII.A Pooled estimates for recipients of "Any video"

Table 6 presents the empirical results of the pooled regression for all treatment arms, utilizing the last recorded response of each participant in our study.[14] Panel A reports results of the ITT estimates for everyone who received the video, and Panel B presents the estimates differentiated the treatment by type of video.

We find negative effects of sending the video on all three outcomes that we examine.

[14]Of the 1,375 individuals registered in the experiment, we excluded 245 individuals from the sample who did not respond to any WhatsApp survey.

Specifically, Panel A shows that receiving a video reduced the intention to register by 12.2 pp (Column 3), lessened the probability of starting the registration process by 7.7 pp (Column 2), and decreased the likelihood of requesting the PPT by 8 pp (Column 1). Interestingly, participants in the control group who registered for the regularization program after signing up for the experiment (since no one had registered beforehand) had a mean registration rate of 53.8 percent. Therefore, the treatment resulted in a reduction of 15.09 percent in PPT take-up rates relative to the control group's mean.

Panel B, reports ITT coefficients that are negative for all treatments, albeit with less precision relative to the pooled estimates. However, the effects are largest and always statistically significant for the intention to register and for the Step-by-Step video. This suggest that the longest video which offered more details was actually the one that reduced take-up the most.

Table 6. Intervention Effects on PPT Take-up Rates (Responses from Last Contact)

Indicator Variables	Request PPT (1)	Start Registration Process (2)	Intention to Register (3)
Panel A. ITT - General Effect			
β_1[Any Video]	-0.080**	-0.077**	-0.122***
	(0.034)	(0.034)	(0.030)
FDR q-values	[0.015]	[0.015]	[0.001]
R-squared	0.005	0.005	0.015
Panel B. ITT - Dissaggregated Effect			
β_1[Awareness]	-0.060	-0.057	-0.103***
	(0.041)	(0.041)	(0.036)
β_2[Trust]	-0.065	-0.069*	-0.098***
	(0.041)	(0.041)	(0.036)
β_3[Step-by-Step]	-0.117***	-0.108**	-0.168***
	(0.042)	(0.042)	(0.037)
R-squared	0.007	0.006	0.019
Mean Untreated Group	0.538	0.585	0.826
Observations (All Panels)	1,130	1,130	1,130

Notes: Dependent variables: (i) Request PPT is an indicator [=1] if the individual reported having requested the PPT, or requested or attended the biometric appointment in the last survey contact. (ii) Start Registration Process is an indicator [=1] if the individual reported starting the RUMV census in the last survey contact. (iii) Intention to Register is an indicator [=1] if the individual reported the intention to start the RUMV census in the last survey contact. The experiment had 1,375 individuals registered. This table excludes from the sample 245 individuals who did not answer any of the four WhastApp surveys. Standard errors are reported in parentheses and False Discovery Rate (FDR) q-values are reported in brackets. *** significant at the 1%, ** significant at the 5%, * significant at the 10%.

Robustness exercises. The results are robust to multiple hypothesis testing as indicated by the False Discovery Rate adjusted p-values reported in brackets. To ensure the robustness of our estimates and account for potential biases from the different number of contacts and response rates, we re-estimate the effects of the videos using responses only from the first WhatsApp survey. Table B.1 presents results of this analysis. Reassuringly, the effects have the same directions and are even larger in magnitude than those in Table 6. The estimates use the same sample size as in Table 6 since the first contact maximizes the number of observations.

VII.B What explains the average negative effects of the intervention?

One of the most intuitive explanations behind the results is that the intervention was only effective for the individuals who actually viewed the video and might have induced discomfort for the others (on average inducing negative effects). Hence, we proceeded to examine whether watching some part of the video had differential effects following the steps outlined below.

1. Characterizing variation in take-up rates in the treatment group. We characterized if there was variation on the time that individuals assigned to treatment watch the video. This variation is illustrated in Table 7. It shows that approximately 15.40 percent of the individuals assigned to treatment did not watch the video. Hence, we created a dichotomous variable for treated individuals that takes the value of zero for those who did not watch the video at all and one for those who watched at least some part of the video. This variable for our purposes corresponds to the treatment take-up.

Table 7. Video Play Time Percentage Distribution

Play Time (%)	Observations	%
0%	128	15.40
1-10%	14	1.68
10%-20%	8	0.96
20%-30%	11	1.32
30%-40%	7	0.84
40%-50%	14	1.68
50%-60%	8	0.96
60%-70%	15	1.81
70%-80%	11	1.32
80%-90%	18	2.17
90%-99%	327	39.35
100%	270	32.49
Total	831	100

2. Predicting take-up rates. Who watched the video? Next, we examine if treated individuals who did not watch the videos are statistically different from those individuals who watched at least some part of the videos in Table 8. For this purpose, we use the variables collected at baseline and a few additional variables collected at the end of the intervention for individuals who were assigned to treatment.[15] We were able to identify statistically significant differences in multiple covariates between groups for the variables of age, time use, internet access, and personal vs. shared use WhatsApp. Particularly, we observe that older individuals played the videos less than younger individuals. We also observe that individuals who are busier working, looking for a job, or studying tend to play the videos less than the rest. Although the estimates are only statistically significant and negative for the individuals who are studying. Moreover, individuals with limited internet tend to play the videos less relative to those with internet half or the full day. Finally, individuals who can use WhatsApp individually play the videos more relative to those individuals who have to share it.

[15]The data was gathered at the end of the intervention only for the treatment group to attempt to understand the surprising results of the intervention. We also attempted to collect a survey one year after the intervention took place but response rates were low and close to 20 percent.

Table 8. Who Played the Video?

	Did not Played the Video	Played the Video	Difference
	(1)	(2)	(1)-(2)
Age	35.922	33.043	2.879***
	(11.672)	(10.734)	
Male [=1]	0.344	0.320	0.024
	(0.477)	(0.467)	
Ed. Level: Primary or Less [=1]	0.172	0.174	-0.002
	(0.379)	(0.379)	
Ed. Level: General or diversified school [=1]	0.531	0.589	-0.058
	(0.501)	(0.492)	
Number of household members	4.608	4.713	-0.105
	(1.818)	(1.688)	
Number of minors in charge	2.071	1.969	0.102
	(1.507)	(1.341)	
Personal Income (Sin*)	9.501	9.597	-0.096
	(5.085)	(5.113)	
Health regime: Subsidized healthcare [=1]	0.180	0.161	0.019
	(0.385)	(0.368)	
Health regime: None [=1]	0.836	0.832	0.004
	(0.372)	(0.374)	
Activity spent the most time: Working [=1]	0.523	0.455	0.068
	(0.501)	(0.498)	
Activity spent the most time: Looking for a job [=1]	0.227	0.213	0.013
	(0.420)	(0.410)	
Activity spent the most time: Studying [=1]	0.062	0.037	0.026
	(0.243)	(0.189)	
Activity spent the most time: Doing house chores [=1]	0.289	0.349	-0.059
	(0.455)	(0.477)	
Trust in Colombian Government (SD)	-0.172	-0.015	-0.158
	(1.150)	(0.997)	
Internet Access: 1 to 4 hours [=1]	0.250	0.213	0.037
	(0.435)	(0.410)	
Internet Access: All or half of the day [=1]	0.594	0.663	-0.069
	(0.493)	(0.473)	
Individual Whatsapp [=1]	0.695	0.771	-0.076*
	(0.462)	(0.421)	
Shared WhatsApp use [=1 [=1]	0.227	0.182	0.044
	(0.420)	(0.386)	
Facebook or Instagram account [=1]	0.547	0.532	0.015
	(0.500)	(0.499)	
Twitter account [=1]	0.148	0.119	0.029
	(0.357)	(0.325)	
E-mail account [=1]	0.219	0.185	0.034
	(0.415)	(0.389)	
Social desirability index (SD)	-0.045	-0.025	-0.020
	(1.041)	(1.013)	
Observations	128	703	831

Notes: The first column presents the mean and standard deviation for the sample assigned to the treatment group that did not played the video. Column (2) shows the mean and standard deviation for the sample assigned to the treatment group who played less than 90% of the video. Column (3) depicts the mean and standard deviation for the sample assigned to the treatment group who played more than 90% of the video. Columns (4) and (5) present the difference between samples.*** significant at the 1%, ** significant at the 5%, * significant at the 10%.

3. Matching on observables. We next examine the difference in treatment effectiveness between the control and treatment groups matching the individuals in both groups based on all the variables that predict the probability of watching the videos. We do this in two separate exercises by restricting the treatment group to those who watched and did not watch the video. The results are presented in Table 9. Panel A of the table presents the results for the exercise that includes the control group and those individuals who did not play the video. Panel B presents the results for the control group and the individuals who watched the video. All in all, we observe that the videos had negative effects on the three outcomes that we examine. Yet, the effects are close to zero and mostly not statistically significant for the individuals who watched the videos (with the exception of the outcome intent to register). Yet, the effects of the videos are large, negative, and statistically significant for those individuals who did not watch the videos. This suggests that the average negative effects of the interventions are mostly driven by the individuals who received the messages but who did not watch the videos.

Table 9. Intervention Effects on PPT Take-up Rates (Responses from Last Contact)
Propensity Score Matching

Indicator Variables	Request PPT	Start Registration Process	Intention to Register
	(1)	(2)	(3)
Panel A. Propensity Score Matching - People who did not played the video			
$\beta_1[AnyVideo]$	-0.257***	-0.265***	-0.342***
	(0.051)	(0.051)	(0.044)
FDR q-values	[0.001]	[0.001]	[0.001]
R-squared	0.056	0.059	0.123
Mean Untreated Group	0.538	0.585	0.826
Observations	427	427	427
Panel B. Propensity Score Matching - People who played the video			
$\beta_1[AnyVideo]$	-0.047	-0.042	-0.083**
	(0.035)	(0.034)	(0.029)
FDR q-values	[0.171]	[0.171]	[0.016]
R-squared	0.002	0.002	0.008
Mean Untreated Group	0.538	0.585	0.826
Observations	997	997	997

Notes: Dependent variables: (i) Request PPT is an indicator [=1] if the individual reported having requested the PPT, or requested or attended the biometric appointment in the last survey contact. (ii) Start Registration Process is an indicator [=1] if the individual reported starting the RUMV census in the last survey contact. (iii) Intention to Register is an indicator [=1] if the individual reported the intention to start the RUMV census in the last survey contact. The experiment had 1,375 individuals registered. This table excludes from the sample 245 individuals who did not answer any of the four WhastApp surveys. Standard errors are reported in parentheses and False Discovery Rate (FDR) q-values are reported in brackets. *** significant at the 1%, ** significant at the 5%, * significant at the 10%.

4. Exploring for heterogeneous effects. Our results suggest that the videos had a negative effect on the PPT take-up rates (measured as intentions to register, starting the registration process or completing the process) and that those effects are driven by the individuals who were assigned to treatment but did not watch the videos. To further confirm these conclusions we carry out two additional exercises: i) we spit the treated sample between those individuals who watched and did not watch the videos and compare their outcomes with the control group (see Table 10), and ii) examine for heterogeneous effects for those individuals who played the videos through an interaction (see Table 11). Both exercises confirm that the observed negative effects of the program are coming from those treated individuals who did not watch the videos.

Table 10. Heterogeneous Effects on PPT Take-up Rates by Video Reproduction

Indicator Variables	Request PPT		Start Registration Process		Intention to Register	
	Didn't Played Video	Played Video	Didn't Played Video	Played Video	Didn't Played Video	Played Video
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. General Effect - ITT						
$\beta_1[AnyVideo]$	-0.257***	-0.048	-0.265***	-0.043	-0.342***	-0.082***
	(0.051)	(0.035)	(0.051)	(0.034)	(0.044)	(0.029)
R-squared	0.056	0.002	0.059	0.002	0.123	0.008
Panel B. Dissaggregated Effect - ITT						
$\beta_1[Awareness]$	-0.228**	-0.040	-0.240**	-0.036	-0.240***	-0.087**
	(0.095)	(0.043)	(0.095)	(0.042)	(0.082)	(0.036)
$\beta_2[Trust]$	-0.295***	-0.026	-0.293***	-0.032	-0.411***	-0.045
	(0.081)	(0.043)	(0.081)	(0.043)	(0.070)	(0.036)
$\beta_3[Step-by-Step]$	-0.245***	-0.082*	-0.258***	-0.066	-0.343***	-0.119***
	(0.070)	(0.045)	(0.070)	(0.045)	(0.060)	(0.038)
R-squared	0.057	0.003	0.059	0.002	0.128	0.011
Mean Untreated Group	0.538	0.538	0.585	0.585	0.826	0.826
Observations (All Panels)	427	1,002	427	1,002	427	1,002

Notes: Dependent variables: (i) Request PPT is an indicator [=1] if the individual reported having requested the PPT, or requested or attended the biometric appointment in the last survey contact. (ii) Start Registration Process is an indicator [=1] if the individual reported starting the RUMV census in the last survey contact. (iii) Intention to Register is an indicator [=1] if the individual reported the intention to start the RUMV census in the last survey contact. The experiment had 1,375 individuals registered. This table excludes from the sample 245 individuals who did not answer any of the four WhastApp surveys. Standard errors are reported in parentheses and False Discovery Rate (FDR) q-values are reported in brackets. *** significant at the 1%, ** significant at the 5%, * significant at the 10%.

Table 11. Heterogeneous Effects on PPT Take-up Rates by Video Reproduction

Indicator Variables	Request PPT	Start Registration Process	Intention to Register
	(1)	(2)	(3)
Panel A. General Effect - ITT			
$\beta_1[AnyVideo]\times$ I(Played the Video)	0.210***	0.222***	0.260***
	(0.048)	(0.047)	(0.041)
$\beta_2[AnyVideo]$	-0.257***	-0.265***	-0.342***
	(0.052)	(0.052)	(0.045)
Diff. Effect= $\beta_1+\beta_2$	-0.048	-0.043	-0.082***
	(0.034)	(0.034)	(0.030)
R-squared	0.022	0.024	0.048
Mean Untreated Group	0.538	0.585	0.826
Observations (All Panels)	1,130	1,130	1,130

Notes: Dependent variables: (i) Request PPT is an indicator [=1] if the individual reported having requested the PPT, or requested or attended the biometric appointment in the last survey contact. (ii) Start Registration Process is an indicator [=1] if the individual reported starting the RUMV census in the last survey contact. (iii) Intention to Register is an indicator [=1] if the individual reported the intention to start the RUMV census in the last survey contact. The experiment had 1,375 individuals registered. This table excludes from the sample 245 individuals who did not answer any of the four WhastApp surveys. Standard errors are reported in parentheses and False Discovery Rate (FDR) q-values are reported in brackets. *** significant at the 1%, ** significant at the 5%, * significant at the 10%.

VIII ADDITIONAL QUALITATIVE EVIDENCE EXPLAINING THE RESULTS

In searching for insights that could inform our results, we called several participants and conducted qualitative semi-structured interviews to explore the experiences and opinions of treatment recipients. When asked about potential explanations for the negative effects of the program for individuals who did not watch the videos, respondents mentioned frustration with the multiple contacts, frustration due to technological literacy barriers (some of them did not have an email address and could not follow-up the instructions), and frustration due to internet barriers (in some cases, they could not open the video because they did not have a mobile network at home or enough mobile data or Wi-Fi when the video and survey links arrived). All these results are in line with our quantitative characterization of the individuals who watched the videos.

IX DISCUSSION

This paper describes an experiment we conducted in Colombia to increase take-up rates of a regularization program for undocumented Venezuelan forced migrants in 2021. We recruited and screened in-person 1,375 individuals who had not yet registered for regularization and randomly assigned them to three treatment arms and a control group. Each treatment offered information on registering for the regularization program but targeted a different issue. The first video addressed awareness; the second video, trust; and the third video aimed to increase trust and resolve administrative challenges by offering detailed information in a step-by-step description of the process. We successfully randomized individuals to the different groups.

We document that sending informational videos had on average detrimental effects on take-up rates for everyone contacted, and that the longer videos which presented more details on the program registration had the largest negative effects on PPT take-up rates. We also find that these effects are mostly driven by the individuals who did not watch the videos who are older, busier, and have less access to internet and WhatsApp. These re-

sults are in line with our qualitative semi-structured interviews with participants, which yielded several explanations for the lack of effectiveness of the treatment for the individuals who did not watch them. These included frustration due to the multiple contact attempts, technological literacy barriers, and limited access to reliable Wi-fi networks.

We also used the experiment to examine the effectiveness of Iterative WhatsApp Surveys in collecting data for hard-to-reach populations of this type. We found that a large portion of the sample was lost when transitioning from in-person interviews to WhatsApp surveys. Moreover, the sample size shrank as more contacts were attempted. Here we observed the same challenges as above, with the addition of hesitation to share personal information via digital platforms.

Our results suggest that information videos through digital platforms might not be an effective tool to increase take-up rates among vulnerable populations that are hard to reach, and that on the contrary, they may create frustration and even reduce take-up rates for the individuals who do not watch them.

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Contents

A Details on the ETPV

Figure A.1. ETPV Registry and Program Rollout

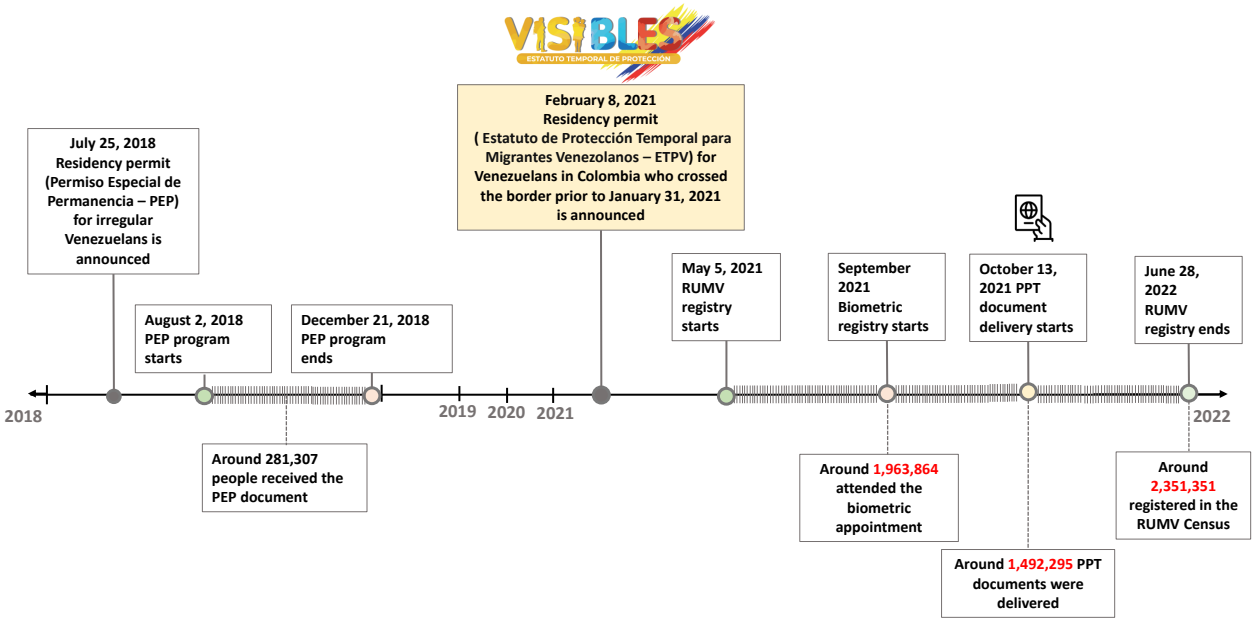


Figure A.2. ETPV Application Process

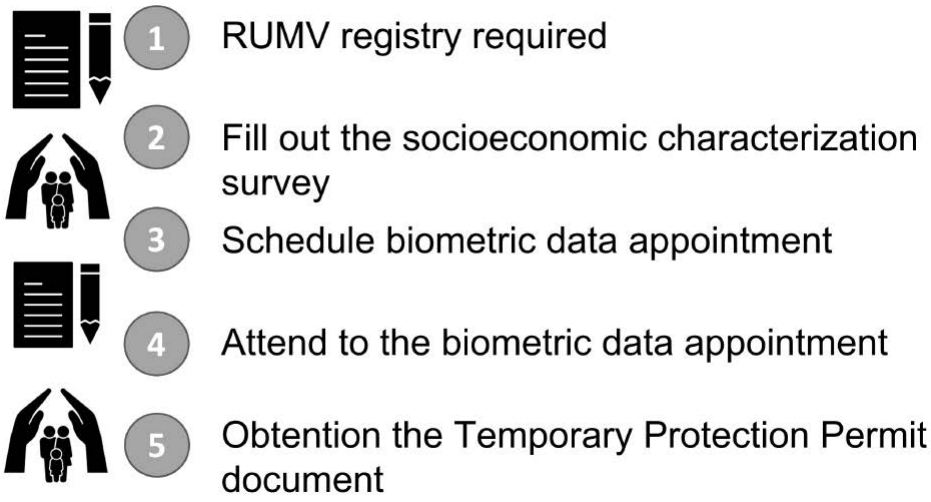
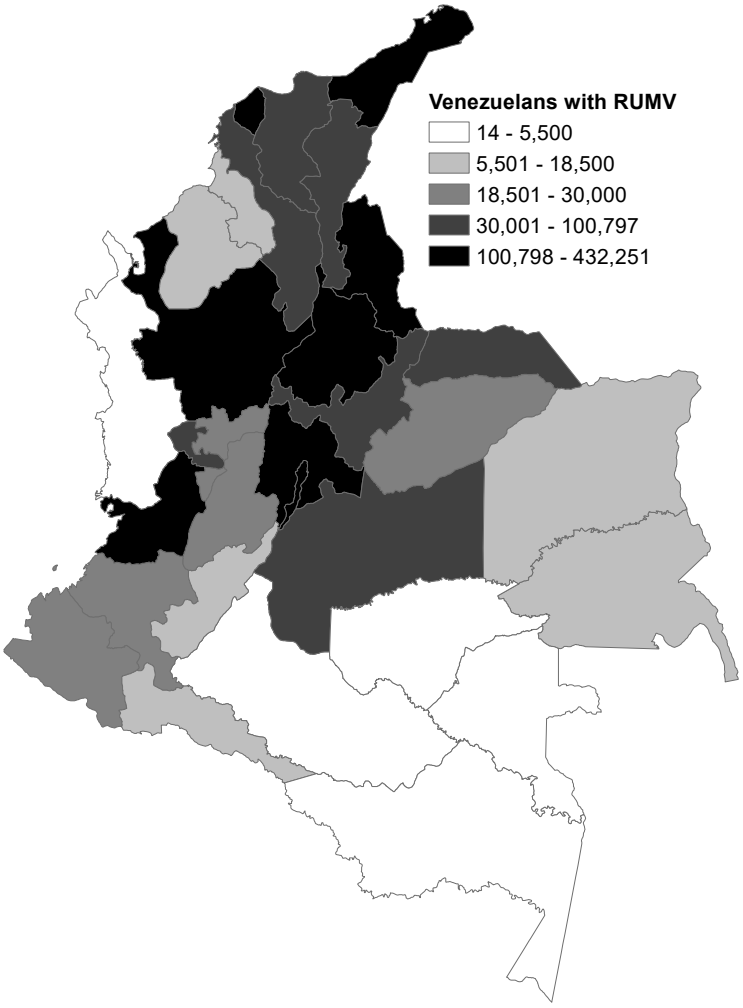


Figure A.3. Geographical Distribution of Venezuelans Registered in the RUMV Census



APPENDIX B. Treatment Scripts

A.A Treatment 1 Script: Information Video

[A Colombian actor resembling an official provides the information.]

Good morning, I am going to tell you what the Temporary Statute for Venezuelan Migrants is, better known as ETPV. The ETPV is a measure created for the regularization of Venezuelans for 10 years in Colombia. It will allow you to apply for the Temporary Protection Permit, known as PPT, which will give you access to the following benefits:

- Get vaccinated against Covid-19
- Full access to health services for you and your family
- Access to government subsidies through SISBEN
- Access to any job with an employment contract in Colombia
- Apply for a resident visa to be permanently legal in Colombia
- Validate professional degrees
- Open a bank account and apply for credits
- Enter and leave the country without restriction
- Access to the retirement system

You are eligible to apply to the PPT and it's free. In addition, 1,434,975 Venezuelans have already registered. I am going to explain how to apply, everything is done online and you just have to follow the following three steps:

1. Enter the page https://www.migracioncolombia.gov.co/visibles to register in the Unique Registry of Venezuelan Migrants, more known as RUMV

2. After registering for the RUMV, you schedule the appointment for the collection of biometric data on the page: https://agendamigracoletp.emtelco.co/#/. You must confirm the appointment in your email and attend the biometric data collection in person on the assigned date
3. You will receive the PPT virtually and three months later they will deliver it to you physically.

I will tell you what you need to register in the RUMV:

1. Computer with internet
2. Active email
3. Have the following three documents scanned:
    - Identity Document: the passport, the Venezuelan ID or the Special Permit of Permanence are valid.
    - Photography with a white background. Remember that you can take it from your cell phone.
    - "Prueba Sumaria": this is a document that proves that you arrived in Colombia before January 31, 2021. It could be a certificate of medical attention, the certificate of your child's grades, the certification of your work, or any similar document that certifies that you were in Colombia before the stipulated date.

Remember that all persons of legal age in your household must register separately. However, when you make the RUMV registration, you will have the option of adding the minors in your charge, the system will schedule the appointment for taking biometric data for children between seven and 18 years old. Children under seven do not need an appointment because they have access to benefits with your PPT.

I WILL SUMMARIZE THE STEPS FOR YOU:

- REGISTER IN THE RUMV
- APPOINTMENT FOR THE BIOMETRIC DATA
- OBTAINING THE PPT

DON'T FORGET TO SCAN:

- YOUR PHOTOGRAPH
- YOUR IDENTITY DOCUMENT
- YOUR "PRUEBA SUMARIA"

SAVE YOUR EMAIL AND PASSWORD, YOU WILL RECEIVE YOUR DOCUMENT THERE
Do you need more information? Enter the website of https://www.migracioncolombia.gov.co/visibles

A.B Treatment 2 Script: Information Video Leveraging In-group Trust

[A Venezuelan woman with children provides the information; the goal is for the vulnerable migrant to identify with the person providing the message.]

Good morning, my name is María González, I am a Venezuelan immigrant, I arrived in Colombia irregularly with my children in July 2020, and I am going to tell you what is the Temporary Statute for Venezuelan Migrants, better known as ETPV. The ETPV is a measure created for the regularization of Venezuelans for 10 years in Colombia. It will allow you to apply for the Temporary Protection Permit, known as PPT, which will give you access to the following benefits:

- Get vaccinated against Covid-19
- Full access to health services for you and your family
- Access to government subsidies through SISBEN
- Access to any job with an employment contract in Colombia
- Apply for a resident visa to be permanently legal in Colombia
- Validate professional degrees
- Open a bank account and apply for credits
- Enter and leave the country without restriction
- Access to the retirement system

You are eligible to apply to the PPT and it's free. In addition, 1,434,975 Venezuelans have already registered. I am going to explain how to apply, everything is done online and you just have to follow the following three steps:

1. Enter the page https://www.migracioncolombia.gov.co/visibles to register in the Unique Registry of Venezuelan Migrants, better known as RUMV
2. After registering for the RUMV, you schedule the appointment for the collection of biometric data on the page https://agendamigracoletp.emtelco.co/#/. You must confirm the appointment in your email and attend the biometric data collection in person on the assigned date
3. You will receive the PPT virtually and three months later they will deliver it to you physically.

I will tell you what you need to register in the RUMV:

1. Computer with internet
2. Active email
3. Have the following 3 documents scanned:

- Identity Document: the passport, the Venezuelan ID or the Special Permit of Permanence are valid.
- Photography with a white background. Remember that you can take it from your cell phone.
- "Prueba Sumaria": this is a document that proves that you arrived in Colombia before January 31, 2021. It could be a certificate of medical attention, the certificate of your child's grades, the certification of your work, or any similar document that certifies that you were in Colombia before the stipulated date.

Remember that all persons of legal age in your household must register separately. However, when you make the RUMV registration, you will have the option of adding the minors in your charge, the system will schedule the appointment for taking biometric data for children between seven and 18 years old. Children under seven do not need an appointment because they have access to benefits with your PPT.

I WILL SUMMARIZE THE STEPS FOR YOU:

- REGISTRATION IN THE RUMV
- APPOINTMENT FOR THE BIOMETRIC DATA
- OBTAINING THE PPT

DON'T FORGET TO SCAN:

- YOUR PHOTOGRAPH
- YOUR IDENTITY DOCUMENT
- YOUR "PRUEBA SUMARIA"

SAVE YOUR EMAIL AND PASSWORD, YOU WILL RECEIVE YOUR DOCUMENT THERE
Do you need more information? Enter the website at https://www.migracioncolombia.gov.co/visibles

A.C Treatment 3 Script: Registration Process Video Leveraging In-group Trust

[A Venezuelan woman with children provides the information; the goal is for the vulnerable migrant to identify with the person providing the message.]

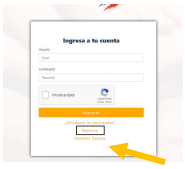
Good morning, my name is María González, I am a Venezuelan immigrant, I arrived in Colombia irregularly with my children in July 2020, and I will explain to you step-by-step how I applied for the Temporary Protection Permit, better known as the PPT.

Figure B.1. Registration Process Video Step-by-Step

1. I entered the Migración Colombia page: https://www.migracioncolombia.gov.co/
2. Click on the button **"MAKE THE REGISTRATION IN THE RUMV HERE"**

3. Click on the button **"MAKE THE REGISTRATION IN THE RUMV HERE"**

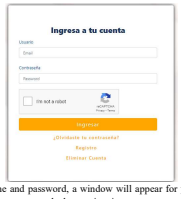
4. I entered my account and username, if you do not have it, follow the following procedure, select the option **REGISTER**



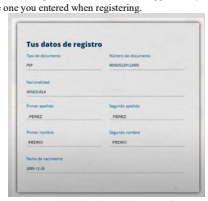
5. In the register option, fill in the corresponding information. Remember that you must have an active email and you must have the number of one of the following types of documents: Passport, PEP, identity card, or birth certificate.

6. After filling in the information and selecting to register, you will receive an account activation email to your email, select the activation link and with this you will have your registration done.

7. With your registration done, you will have an active username and password. The username corresponds to the email and password you used to register. Now, you must enter them in the window of the home page, it will appear just as soon as you finish the registration.



8. Once you have entered the username and password, a window will appear for you to review your information and verify that this is the same as the one you entered when registering.



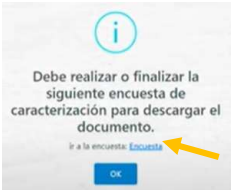
9. Review the information, select **next** and enter the data that will be part of your resumé. In the Operation Type box, select the only option that appears, the rest you can easily fill out.

10. Select next and enter your requested address and contact information.
11. Select next and register your family group information. Here you can add minors in your charge. If you are only going to make your registration, you do not need to fill out this information. Remember that all persons of legal age must register, it is not a registration per household, but per individual person.
12. Select the following and attach the required documents:

- Upload a document type photograph on a white background
- Upload a photo of the identification document
- Upload the "prueba sumaria". Remember that this is a document that proves that you arrived in Colombia before January 31, 2021. It could be a certificate of medical attention, the certificate of your child's grades, the certification of your work by the employer, or any similar document that certifies that you were in Colombia before the stipulated date. This document is only for people who were irregularly in Colombia before January 31, 2021. If not, you should not upload it

After uploading all the documents, select **UPLOAD DOCUMENTS**

13. When uploading the documents, you will get an ad with the indication to read and accept the terms, select the **I agree box** and then the button **FINISH**
14. Once the registration is finished, a window will appear with the announcement that will refer you to the completion of the Characterization Survey: Select go to the survey



15. **When you go to the survey, you will have to fill out the following information (show list on screen):**
- Questions of recognition and permanence
- Questions about your documentation, ethnicity and identity
- Questions about your family group
- Questions about living condition
- Questions about occupation and study
- Questions about social security
- Questions about health
- Question about reasons for migration
- Questions about perception of integration
- Questions about vulnerability ad

16. Once the survey is finished, you will be ready to schedule your face-to-face appointment for biometric registration.

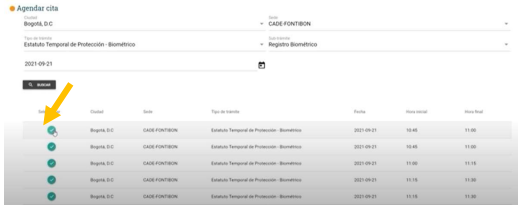
Figure B.2. Registration Process Video Step-by-Step

17. After completing the survey, you will be directed to the window that allows you to schedule your appointment. There you must select the button, schedule appointment

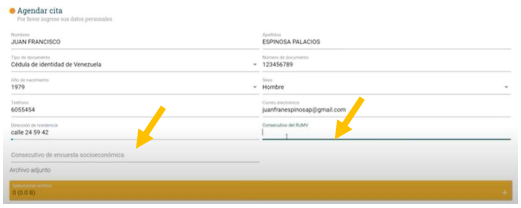
18. You will get an informative notice, after reading it, click accept

19. Fill in the data for the appointment scheduling, you must fill out the following information:
- **City**: The city in which you are going to carry out the procedure
- **Headquarters**: The closest office to the place where you live
- **Type of Procedure:** Temporary Protection Status - Biometric
- **Sub-procedure**: Biometric Registration
- Date available to attend the appointment

The system will show you the dates and times available to carry out your procedure, select the date and venue that is of interest to you, by clicking the green button to the left of the appointment.

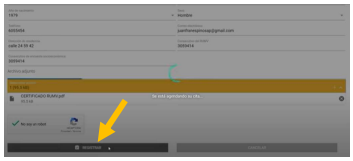


20. When you select the button, a window will appear for you to fill in your personal data.

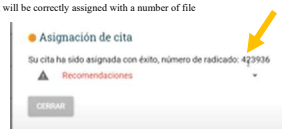


You must bear in mind that in the consecutive field of the RUMV and in the consecutive field of the socioeconomic survey, you must enter the document number generated in the pre-registration. Which I point out to you in the following image.

21. In the same window, you must upload the certificate of your registration.
22. Click I'm not a robot and follow the safety instructions. Finally, click on register and with this your appointment will be assigned.



23. Your appointment will be correctly assigned with a number of file



24. Finally, you must check your mail both in received and in unwanted messages, or in spam to see if an email with the confirmation has arrived of the appointment. There you must confirm whether or not you will attend the appointment.

B Additional Analysis

Table B.1. Intervention Effects on PPT Take-up Rates (Responses from First Contact)

Indicator Variables	Request PPT (1)	Start Registration Process (2)	Intention to Register (3)
Panel A. ITT - General Effect			
β_1[Any Video]	-0.094***	-0.107***	-0.178***
	(0.027)	(0.030)	(0.032)
FDR q-values	[0.001]	[0.001]	[0.001]
R-squared	0.010	0.011	0.027
Panel B. ITT - Dissaggregated Effect			
β_1[Awareness]	-0.069**	-0.095**	-0.151***
	(0.033)	(0.037)	(0.039)
β_2[Trust]	-0.080**	-0.061	-0.139***
	(0.033)	(0.037)	(0.039)
β_3[Step-by-Step]	-0.135***	-0.169***	-0.248***
	(0.034)	(0.038)	(0.039)
R-squared	0.014	0.018	0.035
Mean Untreated Group	0.274	0.365	0.786
Observations (All Panels)	1,130	1,130	1,130

Notes: Dependent variables: (i) Request PPT is an indicator [=1] if the individual reported having requested the PPT, or requested or attended the biometric appointment in the last survey contact. (ii) Start Registration Process is an indicator [=1] if the individual reported starting the RUMV census in the last survey contact. (iii) Intention to Register is an indicator [=1] if the individual reported the intention to start the RUMV census in the last survey contact. The experiment had 1,375 individuals registered. This table excludes from the sample 245 individuals who did not answer any of the four WhastApp surveys. Standard errors are reported in parentheses and False Discovery Rate (FDR) q-values are reported in brackets. *** significant at the 1%, ** significant at the 5%, * significant at the 10%.

C More on Attrition

Table C.1. Distribution of Attrition by Treatment Status and Different Definitions of Attrition

	All Sample	Control	Awareness Video	Trust Video	Step-by-step Video	Any Video
	(1)	(2)	(3)	(4)	(5)	(6)
Attrited Four Contacts	0.225	0.167	0.223	0.232	0.281	0.245
Lost-to-Follow-Up	0.276	0.285	0.296	0.287	0.237	0.273
Lost-to-Follow-Up and Attrited Four Contacts	0.501	0.452	0.519	0.519	0.518	0.518
Observations	1,375	347	341	345	342	1,028

Notes: Attrited Four Contacts is an indicator [=1] for the people who did not answer the survey. Lost-to-Follow-Up is a dichotomous variable if the individual responded to at least one of the follow-ups 1 through 3 and responded that he/she had not completed the registration process for the PPT or requested the biometric appointment.

Table C.2. Characterizing Attrition

	Attrited Four Contacts (1)	Lost-to-Follow-Up (2)	Lost-to-Follow-Up or Attrited Four Contacts (3)
Age	-0.002	0.001	-0.001
	(0.002)	(0.002)	(0.003)
Male [=1]	0.090*	0.032	0.122*
	(0.054)	(0.058)	(0.064)
Ed. Level: Primary or Less [=1]	0.074	-0.162**	-0.087
	(0.076)	(0.082)	(0.090)
Ed. Level: General or diversified school [=1]	-0.076	-0.021	-0.097
	(0.065)	(0.070)	(0.077)
Number of household members	-0.004	-0.019	-0.023
	(0.013)	(0.014)	(0.016)
Personal Income (Sin*)	-0.004	0.002	-0.002
	(0.005)	(0.006)	(0.006)
Activity spent the most time: Working [=1]	0.003	-0.019	-0.016
	(0.057)	(0.061)	(0.068)
Internet Access more than 4 hour per day [=1]	-0.005	-0.015	-0.020
	(0.048)	(0.052)	(0.058)
Trust in Colombian Government (SD)	0.001	-0.005	-0.003
	(0.026)	(0.028)	(0.031)
Personal use Whatsapp [=1]	-0.116**	-0.023	-0.139**
	(0.058)	(0.062)	(0.069)
Facebook or Instagram account [=1]	0.039	-0.010	0.029
	(0.054)	(0.058)	(0.065)
Twitter account [=1]	-0.060	0.046	-0.014
	(0.088)	(0.095)	(0.105)
E-mail account [=1]	-0.095	0.096	0.002
	(0.067)	(0.072)	(0.080)
Social desirability index (SD)	0.007	0.087***	0.094**
	(0.031)	(0.033)	(0.037)
Age x 1[Any Video Treatment]	0.002	-0.003	-0.001
	(0.002)	(0.003)	(0.003)
Male [=1] x 1[Any Video Treatment]	-0.054	0.012	-0.042
	(0.061)	(0.066)	(0.073)
Ed. Level: Primary or Less [=1] x 1[Any Video Treatment]	-0.022	0.163*	0.141
	(0.087)	(0.094)	(0.104)
Ed. Level: General or diversified school [=1] x 1[Any Video Treatment]	0.059	0.016	0.075
	(0.074)	(0.080)	(0.088)
Number of household members x 1[Any Video Treatment]	-0.000	0.021	0.021
	(0.015)	(0.016)	(0.018)
Personal Income (Sin*) x 1[Any Video Treatment]	0.007	-0.006	0.001
	(0.006)	(0.007)	(0.007)
Activity spent the most time: Working [=1] x 1[Any Video Treatment]	-0.033	0.010	-0.023
	(0.066)	(0.071)	(0.079)
Internet Access more than 4 hour per day [=1] x 1[Any Video Treatment]	-0.001	0.012	0.011
	(0.056)	(0.061)	(0.067)
Trust in Colombian Government (SD) x 1[Any Video Treatment]	0.010	0.008	0.018
	(0.029)	(0.031)	(0.035)
Personal use WhatsApp [=1] x 1[Any Video Treatment]	0.077	0.031	0.108
	(0.066)	(0.071)	(0.078)
Facebook or Instagram account [=1] x 1[Any Video Treatment]	-0.032	0.052	0.020
	(0.062)	(0.067)	(0.074)
Twitter account [=1] x 1[Any Video Treatment]	0.014	-0.032	-0.018
	(0.102)	(0.110)	(0.121)
E-mail account [=1] x 1[Any Video Treatment]	0.057	-0.132	-0.075
	(0.077)	(0.083)	(0.092)
Social desirability index (SD) x 1[Any Video Treatment]	0.008	-0.068*	-0.060
	(0.036)	(0.039)	(0.043)
Any Video Treatment [=1]	-0.105	-0.043	-0.149
	(0.160)	(0.172)	(0.191)
R-squared	0.035	0.024	0.044
Observations	1,375	1,375	1,375
Mean Dependent Variable	0.225	0.276	0.502

Notes: Attrited Four Contacts is an indicator [=1] for the people who did not answer the survey. Lost-to-Follow-Up is a dichotomous variable if the individual responded to at least one of the follow-ups 1 through 3 and responded that he/she had not completed the registration process for the PPT or requested the biometric appointment.