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CAN COMMUNITY POLICING IMPROVE POLICE-COMMUNITY RELATIONS IN AN ELECTORAL AUTHORITARIAN REGIME? EXPERIEMENTAL EVIDENCE FROM UGANDA[*]

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Abstract

Throughout the developing world, citizens often distrust the police and hesitate to bring crimes to their attention—a situation that makes it difficult for police to effectively combat crime and violence. Community policing has been touted as one solution to this problem, but evidence on whether it can be effective in developing country contexts is sparse. We present results from a large-scale field experiment that randomly assigned a home-grown community policing intervention to police stations throughout rural Uganda. Drawing on close to 4,000 interviews with citizens, police officers, and local authorities and on administrative crime data, we show that community policing had limited effects on core outcomes such as perceptions of police, crime, and insecurity. We attribute this finding to a combination of low levels of compliance and resource constraints. Our study draws attention to the limits of community policing's potential to reduce crime and build trust in the developing world.

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1 Introduction

Reducing crime and improving personal and communal security are among the most basic functions of any modern state. The task of achieving these goals naturally falls first and foremost on a country's police force. It stands to reason that police forces are most effective in preventing and solving crimes when they establish cooperative and mutually respectful relationships with citizens (Tyler and Huo 2002). Against a backdrop of general distrust of the police, especially in areas plagued by poverty and crime (Magaloni and Rodriguez 2020), community oriented policing (COP) has been touted as a key reform to build trust and increase collaboration between officers and citizens (Skogan and Hartnett 1999; Greene and Mastrofski 1988). COP is designed to improve the frequency and quality of contact between civilians and the police through mechanisms such as foot patrols, town hall meetings, and door-to-door visits with individual households. There is a growing body of evidence from consolidated industrial democracies that COP can reduce crime (Hinkle et al. 2020; Peyton, Sierra-Arévalo and Rand 2019; Wood, Tyler and Papachristos 2020). By contrast, the effectiveness of COP in low-income countries—especially those ruled by authoritarian or electoral authoritarian regimes—is an open question, with important theoretical and policy implications that remain largely unexplored.[1]

In this study, we use a field experiment to test the effects of a homegrown COP program in Uganda. Uganda offers an important test case for the effectiveness of community policing in a developing country context. Recent studies of COP in the developing world have focused on settings where police forces are corrupt and severely resource constrained, but where they are nonetheless (largely) insulated from political interference by democratically elected governments (Blair, Karim and Morse 2019; Karim 2020). This is not the case in Uganda. As in virtually all (electoral) authoritarian regimes, the Uganda Police Force (UPF) lacks

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[1]A systematic review reported by Blair (2020a, 4) finds that with the exception of a handful of recent exceptions (notably, Blair, Karim and Morse 2019; Karim 2020), credible studies assessing the effect of community policing are nearly all from the U.S., the U.K., and Australia.

independence from political influence, and the ruling party routinely misuses UPF's coercive capability to advance its partisan goals, especially in the months preceding national elections (Curtice and Berhlendorf 2020).

Meanwhile, Ugandans of all political stripes face challenges of crime and insecurity that UPF is constitutionally mandated to address. Advocates of COP hope that establishing closer, more cooperative relationships between civilians and the police will not only improve citizens' perceptions of rank-and-file UPF officers, but will also improve rank-and-file UPF officers' responsiveness to citizens, regardless of their political affiliation, thus mitigating crime and insecurity. To our knowledge, this proposition has never been rigorously tested, in Uganda or in any other (electoral) authoritarian regime.

The program we evaluate represents a realistic best case scenario for COP in a setting like Uganda. On the one hand, the program was in some respects a best case scenario. Both UPF and the country's political leaders have formally adopted community policing as a guiding principal, though implementation of COP had been uneven and haphazard prior to our study. COP is a potentially politically sensitive reform; the program we evaluate was designed and implemented by UPF with input from Ugandan civil society groups, as well as the Ministry of Justice, thus ensuring a degree of local ownership and buy-in that we anticipated would be indispensable for success (Honig 2018). The structure of the program represents what Ugandan stakeholders believed was the most effective model given local conditions, subject to tight budget constraints.

On the other hand, given these constraints, UPF was not in a position to devote significant financial or human resources to ensure compliance among rank-and-file officers, especially in rural areas, where monitoring is difficult and principal-agent problems between leadership and the rank-and-file are severe. Moreover, beyond UPF's more general role as an instrument of the ruling party, individual UPF officers have been documented engaging in routine, widespread acts of malfeasance and petty corruption—problems that strain police/community relations throughout the Global South. Indeed, trust in the police is low

in Uganda, and UPF is consistently described as the most corrupt public institution in the country (Kewaza 2016).[2] The program was thus realistic in that it occurred against the backdrop of myriad preexisting challenges, many of which are typical of less developed countries. Whether community policing can be effective in such a setting is not clear.

The low-cost, scalable COP program we study was designed by UPF in collaboration with the Youth Integrated Development Organization (YIDO), a local civil society group with many years of experience training Ugandan police officers. The program was inspired in part by Uganda's earlier attempts at community policing, described below. YIDO trained UPF officers in sampled police stations in 13 districts spanning Uganda's four regions. These officers then conducted recurring town hall meetings and sporadic foot patrols in randomly selected treatment communities over a period of more than a year. We study the effects of the program using a combination of survey, behavioral, and administrative data.

Disappointingly, we find that COP in Uganda had little to no effect on most of our pre-registered outcomes. Most notably, we find little to no evidence that the program reduced the prevalence of crime, increased citizens' perceptions of personal safety, or improved their assessments of UPF's intentions, capacity, or responsiveness. We do find, however, that the COP program increased the frequency of interactions between civilians and the police, including suggestive evidence of an increase in crime reporting. The program also improved Ugandans' understanding of the criminal justice system. This may help explain the increase in crime reporting, since misunderstandings of criminal law may discourage victims and witnesses from reporting cases to the police (Blair, Karim and Morse 2019).

Finally, and contrary to our expectations, we find some suggestive evidence of a modest increase in the incidence of "unofficial payments" made to UPF officers. Specifically, 9.8% of respondents in treatment villages reported having made an informal payment to UPF officers in the past six months, compared to 7.3% of respondents in control villages. This raises the possibility that Uganda's COP program had the adverse unintended consequence

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[2]See, for example, the 2008, 2012, and 2015 Afrobarometer surveys.

of exacerbating petty corruption. We note, however, that the statistical significance of this result does not survive a multiple comparisons correction, and that it may be an artifact of a more benign (perhaps even beneficial) improvement in citizens' understanding of what does and does not constitute an unofficial payment under Ugandan law.

Our study's (mostly) null results run counter to our publicly pre-registered hypotheses,[3] and any attempt to explain them is inevitably post-hoc. With this caveat in mind, we note that while we do observe statistically significant differences in the frequency of police/citizen interactions between the treatment and control groups, the program nonetheless suffered from low levels of treatment compliance, compounded by routine turnover, inadequate top-down supervision, and, relatedly, weak incentives for rank-and-file officers to engage more proactively in the program. We speculate that these problems may help explain the program's generally underwhelming results, even in the face of high-level buy-in and local ownership with respect to program design and implementation.

Our study contributes to research on possible ways to improve police/community relations in settings where baseline levels of trust and cooperation are low. This research agenda is both timely and globally salient, as has been made abundantly clear by the rise of the Black Lives Matter movement and the corresponding wave of mass protests against police misconduct in countries around the world, from the U.S. to France, Australia, and Nigeria. While community policing programs are often touted as a promising means to heal past wounds and repair deeply damaged relations between citizens and the police, our results cast doubt on the efficacy of these initiatives, at least in settings similar to Uganda. Our study thus places potentially important scope conditions on the usefulness of community policing for reducing crime and building trust in the state's security apparatus.

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[3]Our pre-analysis plan (PAP) was pre-registered with the Evidence in Governance and Politics (EGAP) network prior to endline data collection, and is available at https://osf.io/df3jk.

2 Theoretical framework

Police forces are tasked with addressing domestic threats to security, ensuring the safety and rights of citizens, and promoting the rule of law. The more competently and fairly the police accomplish these tasks, the more legitimate they and the rest of the state apparatus are generally perceived to be (Sunshine and Tyler 2003). Effective, legitimate police forces build confidence among individuals, business owners, and investors that their rights will be upheld, and that they can rely on state institutions to resolve disputes without recourse to violence. A competent and trusted police force also helps protect the rights of historically marginalized groups by, for example, increasing reporting and prosecution of sexual and gender-based violence and offenses against ethnic, racial, and religious minorities—crimes that are too often neglected in weak states (Heise, Ellsberg and Gottmoeller 2002).

In many developing countries, however, the police are widely distrusted, and citizens assume that seeking redress through the state security and justice sectors will prove futile or prohibitively expensive (Blair 2020b). Many citizens also fear that engaging with these institutions will subject them to corruption and abuse (Karim 2020). As a result, they often opt to bypass the police and courts altogether, relying instead on illegal or extrajudicial mechanisms (e.g. vigilantism and mob justice) of dispute resolution (Wilke 2020), or allowing criminal cases to go unresolved, thus heightening the risk of future escalation.

Community policing programs are predicated on the idea that the efficacy of any police force depends crucially on citizen cooperation (Greene and Mastrofski 1988). If this is true in countries like the U.S. and U.K., where the concept of community policing originated, then it is especially true in most countries in the Global South, where police forces tend to operate under tight resource constraints. Citizens are a source of valuable information about where crime is happening, and who is committing it. While police forces could, in principle, gather this information on their own, doing so is challenging, time-consuming, and labor-intensive. Where citizens provide reliable information consistently and willingly, police

officers can better allocate their limited time and resources.

Citizen cooperation can take many forms: for example, reporting crimes, providing investigators with information to help them solve crimes, or agreeing to serve as witnesses when offenders are brought to justice. Citizens are also well positioned to know which streets, neighborhoods, and communities are "hot spots" for crime. This is especially valuable in developing countries where the police have limited capacity for accurate crime mapping (Blattman et al. 2020). In theory, the more citizens cooperate with the police, the easier policing should become. In the best cases, this may help sustain a mutually beneficial equilibrium in which citizen cooperation improves police effectiveness, effective policing increases citizens' trust, and trusting citizens cooperate more openly and reliably with the police.

But this equilibrium often fails to materialize, as citizens resist cooperating with the police for a myriad of complex and interrelated reasons. These include distrust of the police; lack of access to the police; lack of knowledge of the criminal justice system, and of the procedures involved in reporting to the police; concerns about police corruption, abuse, fairness, and capacity; and social norms that discourage engaging with the police (Blair 2020a). When choosing whether to share information with the police, citizens likely weigh the expected costs against the expected benefits (Blair, Karim and Morse 2019). In environments characterized by high corruption, low capacity, or predatory police behavior, citizens may simply calculate that the costs exceed the benefits. As a result, fewer crimes are reported, fewer tips are offered, and police officers lose access to an essential source of information. This, in turn, may result in less effective policing and higher levels of crime—which, in turn, may reinforce perceptions of police incompetence.

These dynamics are likely to be especially severe in (electoral) authoritarian regimes, where the police are often (rightly) perceived as instruments of the ruling party. Even authoritarian governments rely on feedback from citizens to promote social welfare, provide public goods, and ensure regime stability (Tsai 2003; 2015). But citizens who do not identify

with the ruling party may be especially reluctant to engage with the police, and may in some cases actively withhold information that they believe will be used against them and their communities. Of course, even in electoral autocracies, not all rank-and-file police officers are loyalists of the regime, and many are at least nominally committed to providing security irrespective of citizens' partisan affiliations. But the reputation of the police force as a whole may spill over onto the reputations of individual officers, diminishing citizen cooperation and hindering police effectiveness.

The goal of community policing is to break this cycle by reducing the costs and increasing the benefits of citizen cooperation (Greene and Mastrofski 1988). Costs are reduced by increasing citizens' access to the police, enhancing their trust in the police (e.g. through interpersonal interaction during foot patrols), improving their understanding of police procedures and responsibilities (e.g. through information provided during town hall meetings), and mitigating their concerns about corruption and abuse. Perceived benefits are increased by shifting citizens' perceptions of police fairness, impartiality, and capacity, even among opponents of the ruling party. Community policing may also change the behavior of police officers themselves, who may become more empathetic, or may develop a greater sense of accountability towards the citizens they serve. To the extent that community policing shifts communities towards this positive equilibrium, citizens may come to value the presence of police and develop a preference for greater government spending on police. Finally, community policing may have a direct deterrent effect on crime as a function of greater police presence and community engagement.

Especially in developing countries, police forces do not operate in isolation from other local actors. Where the police face capacity constraints, other local authorities often play an important role in facilitating police work. In Uganda, each village has an LC1 chairperson who regularly attends community meetings and often serves as liaison between the community and the police. LC1 chairpeople also head the Local Council Court (LCC), a village court that is responsible for adjudicating certain civil matters. Even though local

authorities of this kind often play an active role in dispute resolution, they typically do not have authority over criminal complaints and are required to refer such cases to the police. To the extent that local authorities are involved in the implementation of community policing initiatives, community policing may thus encourage victims and witnesses not only to report crimes directly to the police, but also to make use of local authorities as an indirect reporting channels. Moreover, where perceptions of police capacity and responsiveness improve, local authorities themselves may be more inclined to refer criminal cases to the police.

Building on the extant literature, we formalize our expectations of the effects of community policing with the following hypotheses:[4]

Security of life and property

1a. Negative effect on incidence of crime

1b. Positive effect on citizen perceptions of safety (personal, land, and possessions)

Citizen perceptions of the police

2. Positive effect on citizen perceptions of police

Police perceptions of and behaviors toward citizens

3a. Positive effect on police empathy, accountability, and perceptions of the seriousness of police misconduct

3b. Negative effect on police abuse and bribery

Behavioral cooperation of citizens with the police

4a. Positive effect on citizen reporting of crime victimization

4b. Positive effect on citizen reporting of crime prevention tips

4c. Positive effect on citizen reporting of victimization by the police

Demand for government spending on police

5. Positive effect on citizen demand for government spending on police

Reporting to and referral from local authorities

6a. Positive effect on citizen reporting of crime victimization to local authorities

6b. Positive effect on local authority referrals of crime victimization to the police

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[4]Being part of EGAP's community policing Metaketa program, many of this study's hypotheses as well as measurement and estimation strategies were developed in coordination with five other studies (see https://bit.ly/3mo6ua7). By contrast, as mentioned, the design of the COP program itself was homegrown, with the explicit intention to maximize effectiveness given local conditions.

3 Crime and policing in Uganda

Due to its similarities with many other low-income countries, Uganda is an instructive setting for studying the effects of a community policing program in an electoral authoritarian setting, the most common regime type in sub-Saharan Africa. Uganda is in the mid-range of the World Bank's ranking of low-income countries in terms of economic development (as captured by GDP per capita) and human development (as captured by HDI). In addition, while baseline levels of trust in UPF leave much room for improvement, they are close to the average among African countries, as Figure 1 shows, and they are not so low as to make COP futile. These parallels suggest that lessons learned in Uganda may be applicable to other African countries, and potentially to other low-income countries more generally.[5]

3.1 Crime in Uganda

According to UPF's 2018 Annual Crime Report, the most common crime in Uganda in the year we launched our study was theft (61,533 reported cases), followed by assault (36,323 cases), sex-related crimes (17,521 cases), economic crimes (15,099 cases)—including public and private sector fraud and other white collar crimes—and child-related crimes (11,589 cases), especially child neglect. Aggregating across all categories, the crime rate in Uganda (59 reported crimes per 100,000 inhabitants) is similar to Tanzania (59) and Kenya (62), and somewhat lower than South Africa (77).[6]

The distribution of crime by category in the 288 villages in our sample is similar to the distribution nationwide. At baseline, we asked our survey respondents if they or any member of their household had been a victim of a crime in the past six months. By far

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[5]We note, however, that at least in 2014 (the last year with comparable data), the size of Uganda's police force, 122 police personnel per 100,000 residents, was lower than the average among African countries (209 per 100,000). Data on comparative crime rates in sub-Saharan Africa are spotty and unreliable, but according to UNODC, the homicide rate in Uganda (11.2 per 100,000) is somewhat above the mean in Africa, while serious assaults (14 per 100,000) are below the mean. See https://dataunodc.un.org/crime for police personnel and global crime data.

[6]For global crime rate statistics, see https://bit.ly/3eCIc8X.
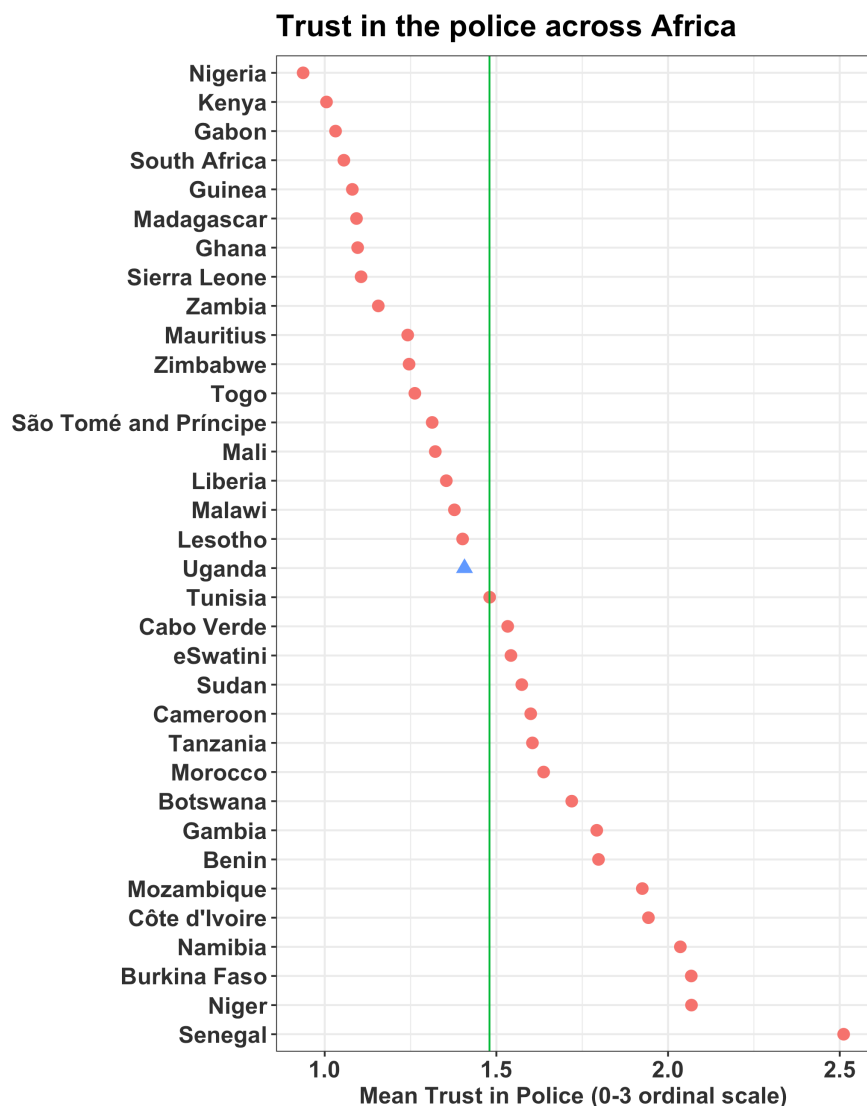
Figure 1: Trust in the police across Africa. Nationally representative samples in 34 African countries were asked "How much do you trust the police?" Responses were recoded on a four point scale: 0 "Not at all;" 1 "Just a little;" 2 "Somewhat;" and 3 "A lot." Data source: AfroBarometer (merged) round 7.

the most common crime was theft and burglary (19.6% of respondents), followed by child neglect (11.4%), assault (7.8%), and armed robbery (1.8%). We also asked respondents about crimes that they may have witnessed or heard about elsewhere in the village. A majority of respondents (65.1%) had witnessed or heard about at least one crime in the village in the past six months, and in all 288 villages there was at least one respondent who had witnessed or heard about at least one crime in the past six months, with an average of 4.1 reports per village.

3.2 Police organizational structure

UPF is a centralized, hierarchical police force under the leadership of the Inspector General of the Police (IGP), a cabinet-level position, handpicked by (and loyal to) the president. Community policing falls under the Directorate of Political Commissariat, one of 18 Directorates that report directly to the IGP and are headed by Assistant IGPs (AIGPs) who are also political loyalists. In March 2018, while our study was still in the field, Uganda's incumbent IGP was replaced in an unexpected reshuffle. Unfortunately for our study, the new IGP did not show a high level of interest in programs he inherited from his predecessor.

Outside Kampala, where UPF headquarters is located, the force is divided into regional and district units. UPF's 27 regions do not map onto either political or administrative units. Regions are further subdivided into districts, which coincide with the highest-level political unit within Uganda's decentralized government system. Each district has a central police station that provides supervision and enhanced capacity to sub-district police stations and posts (i.e. beats). While beat-level officers can investigate misdemeanors, only stations have the expertise to investigate more serious felonies such as rape, assault, armed robbery, and murder.

Uganda is a developing country with a per capita GDP of less than \$700 USD, and UPF operates under tight resource constraints. As one indicator of these constraints, at the start of our study UPF's Kampala headquarters did not posses updated information on the exact location or number of personnel assigned to police stations around the country. To fill this gap, in summer of 2017 the research team dispatched enumerators to collect detailed information on each police unit in the study area. This included geocoded information on the location of police units and the scope of their jurisdictions. Our baseline survey with police officers provided additional information about personnel and resources, as summarized in Table 1. In our study area, the average Ugandan police station supervises 1.3 posts (with a minimum of 0 and a maximum of 8), and covers about 39 villages. The average number of

	Police Stations ($N = 31$)			Police Posts ($N = 41$)		
	Mean	Min	Max	Mean	Min	Max
Number of officers	5.5	2	26	3.3	2	13
Number of motor cycles	1.1	0	2	0.5	0	1
Receive monthly fuel allowance	10%	-	-	0%	-	-
Crime registration book available	55%	-	-	29%	-	-
Station diary in good condition	90%	-	-	78%	-	-

Table 1: Resources available at police stations and posts in study sample at baseline

officers deployed to stations and posts is 5 and 3, respectively. Only 10% of police stations receive a monthly fuel allowance; none of the police posts do. The average police station in our sample has 1 motorbike; the average police post has 0.5. None of the police units has a functioning computer.

3.3   Police–community relations in Uganda

Police–community relations in Uganda have long been strained by political bias and excessive use of force against civilians. While Uganda holds periodic elections, their credibility has deteriorated over time.[7]   Since 1986, the country has been ruled by the same party (the National Resistance Movement, or NRM) and president (Yoweri Museveni). And while the NRM ruling party undoubtedly enjoys pockets of popular support, to retain power it resorts to manipulation of state resources, intimidation by security forces, and politicized prosecutions of opposition leaders.

The UPF thus serves a dual purpose (Curtice and Berhlendorf 2020). On the one hand, like any police force, UPF is responsible for protecting the life and property of Ugandan citizens, and for maintaining security and enforcing the laws (The Police Act 1994, Article 4). On the other hand, UPF has also been made responsible for quelling dissent and unrest, and intimidating the political opposition—especially during election periods—in the service

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[7]In 2019, Freedom House dropped Uganda's status from Partly Free to Not Free; see https://bit.ly/3fzCnu3.

of Museveni and the NRM (Kagoro 2015).[8] Indeed, international human rights watchdog groups have documented numerous cases of police abuse, including arbitrary arrests and attacks on non-violent public demonstrations, especially targeting opposition parties and their supporters.[9] UPF also engages in more routine acts of malfeasance. In our baseline survey, 57% of respondents agreed with the statement that the police are corrupt and are primarily interested in pursuing their "personal interests" rather than serving their communities.

3.4 History of community policing in Uganda

Against this backdrop of strained police–community relations, community policing was first introduced in Uganda in 1989, with the Kampala Police Station designated as a pilot site. The UPF ostensibly expanded community policing throughout the country in 1993, but did not introduce any formal mechanisms to ensure nationwide implementation, and take-up was inconsistent. While UPF drafted a community policing manual in 2011, it was not widely implemented beyond rudimentary training at the district level. In a qualitative evaluation conducted in 2013, Irish Aid concluded that "while there is strong political will and leadership by the [IGP] to implement community policing across the [UPF], the UPF has yet to develop a roll-out plan, a re-training program and a means of monitoring implementation" (Carton et al. 2013, 4).[10] A 2017 UPF report entitled "Strategy for Community Policing" similarly laments that the principles of community policing have yet to be translated into practice.

Nonetheless, interest in community policing remains high within the UPF and among other government stakeholders, especially the Office of the Prime Minister (OPM) and the Ministry of Justice. President Museveni reaffirmed the country's commitment to community policing at the UPF's centenary celebrations in October 2014, following implementation of

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[8]UPF, now formally subjected to the Ministry of Internal Affairs, was created in 1906 by the British Colonial State. Many of the traits of the "Uganda Police Constabulary," in particular oppressive and reactive policing strategies, continue to manifest in the post-colonial era (Mohmeded 2017).

[9]See Amnesty International, Uganda 2017/2018 Country Report, available at https://bit.ly/2UCZoCI.

[10]The Irish Aid evaluation team found draft versions of a UPF Community Policing Strategy dated 2008 and 2011, but "the drafts were not officially printed and it is unclear what is the status of the drafts or whether they are approved and are formal policy. What is clear is that the drafts have not been widely circulated and there is little awareness of these documents amongst the rank and file."

a more structured community policing pilot project in the Muyenga suburb of Kampala beginning in 2010. The "Muyenga model" was subsequently expanded to cover four additional locations (Jinja, Wakiso, Oyam, and Mubende). As late as 2017, the Muyenga model was endorsed by the leadership of the UPF, given its apparent success (Carton et al. 2013).[11]

As part of this pilot, UPF engaged in more frequent motorcycle and foot patrols, recruited and trained civilians to serve on community watch teams, and held occasional meetings with citizens and local leaders to exchange information about local conditions and develop strategies to address local problems related to crime, conflict, and disorder. The Muyenga model also included a monthly health clinic and a computer training program for local youths.[12] But despite many (anecdotal) accounts of success, in 2018 the Muyenga police station was demolished, and UPF distanced itself from the project, most likely because of personal confrontations between UPF and Muyenga's local council chairperson.[13]

The visibility of the Muyenga pilot, combined with a 2011 Irish Aid-funded program to support community policing in Uganda, ensured that, at the start of our study, stakeholders in the UPF and the Ugandan government had a relatively clear idea of what community policing entails, and were already largely supportive of it. But dissatisfaction with the Muyenga pilot that surfaced in 2018 also made community policing a somewhat sensitive subject for some high-ranking officials within the UPF hierarchy. This sensitivity, together with leadership rotation, posed a challenge as we managed our relationships with UPF and our implementing partners. While UPF leadership continued to express its enthusiasm for community policing throughout the project, that rhetorical commitment was not always matched by a practical commitment of time or resources to ensure that COP principles were

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[11]See, for example, p. 12 of UPF's 2017 report "Strategy for Community Policing," available at https://bit.ly/3cIeDTu. See also a post on UPF's website from 2014, "Uganda Police Force on a fast positive stride," available at https://bit.ly/33i50ru, which cites the Muyenga pilot as a model for community policing in Uganda.

[12]See "We can reduce crime in Uganda through community policing," The Daily Monitor, October 14, 2014, available at https://bit.ly/2wqDvib.

[13]There was a general consensus among our counterparts in Uganda that the closing of the Muyenga police station was not a repudiation of community policing more generally, but rather a response to idiosyncratic political confrontations between the chairperson and the local police station leadership.

more widely adopted.

4   Description of the program

The community policing program we study was designed to create opportunities for more positive, mutually respectful interactions between civilians and the UPF. At the start of the intervention, we helped convene a working group comprising senior UPF officers and representatives of YIDO, a civil society organization connected to UPF. The working group's efforts resulted in an updated manual detailing requirements and standard operating procedures for community policing. The updated standard operating procedures were designed to be realistic, scalable, and sustainable, such that officers would be more likely to comply with them. Compared with earlier community policing initiatives, the updated manual is more closely tailored to the structure and resource constraints of the UPF.

YIDO conducted a series of 2-day training sessions for all participating UPF officers to introduce the new COP model and ensure standardized implementation across study sites. Officers were expected to participate in the training as part of their routine activities, and therefore were not compensated in cash or kind. Participating UPF officers did, however, receive certificates of completion. The components of the intervention were "homegrown" in the sense that they were the result of recurring discussions between YIDO and UPF. The research team played no role in writing the new standard operating procedures, which reflect what dedicated Ugandan police officers and civil society organizations believed would be most effective.

The program consisted of three core components:

1. Town hall meetings. The purpose of town hall meetings was to establish more constant police presence in communities; educate citizens about police roles, responsibilities, obligations, and constraints; build rapport between citizens and UPF; create opportunities for citizens to ask questions and get immediate responses from UPF officers;

encourage reporting of crimes to UPF; and brainstorm local solutions to local problems. The target was for town hall meetings to take place once every two months, for a total of 4 meetings per community during the study period.

2. Door-to-door visits. Door-to-door visits were intended to create opportunities for more interpersonal interaction and direct dialogue between citizens and UPF officers than is typically possible in the context of a town hall meeting. The target was for door-to-door visits to take place once a month, for a total of 8 visits per community during the study period.

3. Formation of Community Watch Teams (CWTs). CWTs were tasked with monitoring crime, establishing a more direct line of communication between civilians and the police, and creating a cadre of residents that better understand police procedures and resources. This, in turn, was expected to increase the speed of crime reporting to UPF, and increase the likelihood that crimes would be reported in the first place. CWTs were also expected to help reduce UPF's caseload by referring petty crimes and non-violent domestic disputes to the local council (LC), the lowest level of communal government in Uganda. Importantly, the CWTs were explicitly forbidden to effect arrests or adjudicate criminal cases on their own.

In addition, UPF officers were expected to disseminate information about UPF oversight and accountability mechanisms to citizens. UPF has developed a Professional Standards Unit (PSU) and a set of formal procedures for reporting abuses committed by UPF officers. While citizens often complain about police misconduct, few are aware of the existence of these mechanisms. To increase oversight and accountability, citizens were provided with contact information for officers at the supervising station and the PSU, instructed on the procedures involved in reporting acts of abuse, and encouraged to use those procedures when such acts occur.

In practice, we believe the most important component of the intervention was the

town hall meetings. While UPF conducted door-to-door visits in some communities, they did so infrequently, and—to the best of our knowledge—typically as a reactive response to criminal complaints, rather than a proactive attempt to build trust with civilians. The town hall meetings also became the primary mechanism for disseminating information about UPF oversight and accountability mechanisms. While CWTs were organized in most communities, our impression is that they generally remained dormant in the absence of additional training and resources.

A total of 353 town hall meetings were held as part of the intervention between June 2, 2018 and November 17, 2019. The number of attendees ranged widely, from a low of five to a high of 224. Men tended to outnumber women, with a male-to-female ratio greater than 1 in roughly 75% of all meetings. The LC1 chairperson was present at roughly 93% of all meetings; women's group and youth group representatives were present at 41% and 25% of all meetings, respectively. Importantly, in many cases communities organized meetings to discuss recruitment and standard operating procedures for CWTs even without UPF facilitation. Our best estimate is that police were physically present at roughly two-thirds of all meetings.

Topics of discussion ranged widely as well. Perhaps unsurprisingly, the most common topics related to the formation and functioning of CWTs. According to qualitative field reports compiled by our implementing partners, this topic was discussed in over half of all meetings. Other topics were variable and sometimes only indirectly related to issues of conflict, crime, and violence: truancy and the need to educate local youths (discussed in roughly one-third of all meetings); drug and alcohol abuse (roughly one-quarter of all meetings); health and sanitation (roughly one-fifth of all meetings); domestic abuse and sexual and gender-based violence (roughly one-fifth of all meetings); gambling (roughly one-seventh of all meetings); and a variety of other topics from traffic accidents to savings groups to stray dogs.

5 Research design

5.1 Site selection

Uganda is divided into 134 districts, each of which is composed of (on average) 12 sub-counties. Each sub-county contains about 4-6 parishes, each of which comprises a cluster of 7-10 proximate villages with a common trading center, a health center, and shared governance structures. Each UPF district division is responsible for supervising police stations at the sub-county level, and police posts at the parish level. Posts are analogous to beats in the US, with 2-4 police officers deployed to each post. Criminal complaints are first recorded at the post level, at which point they are either dismissed, investigated by police officers at the post itself (for petty crimes), or referred up to the station level (for more serious cases).

UPF purposively selected 13 districts for inclusion in the study: Mbarara, Lira, Mbale, Gulu, Mityana, Kamuli, Jinja, Tororo, Iganga, Kabale, Rakai, Arua, and Ntungamo. UPF applied two inclusion criteria in selecting these districts: equal representation of Uganda's four regions (north, central, east, and west), and, within each region, relatively high crime rates, as displayed in Figure 2. Of the 23 highest-crime districts in the country, two were excluded because they were too close to Kampala and thus peri-urban;[14] six were excluded because they were located in regions that were over-represented in the sample;[15] and two were excluded due to high levels of political instability, and correspondingly high military presence.[16] UPF determined that community policing would not be an appropriate strategy in these districts.

We then listed all police stations and posts within each of the 13 districts that UPF selected. Given UPF's financial and logistical constraints, we considered it unlikely that community policing would affect any of our outcomes of interest in urban locations. We

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[14]Luwero and Mpigi.

[15]Masindi, Mubende, Kamwenge (central region), Soroti, Palissa (eastern region), and Amuru (northern region).

[16]Masaka and Kasese.
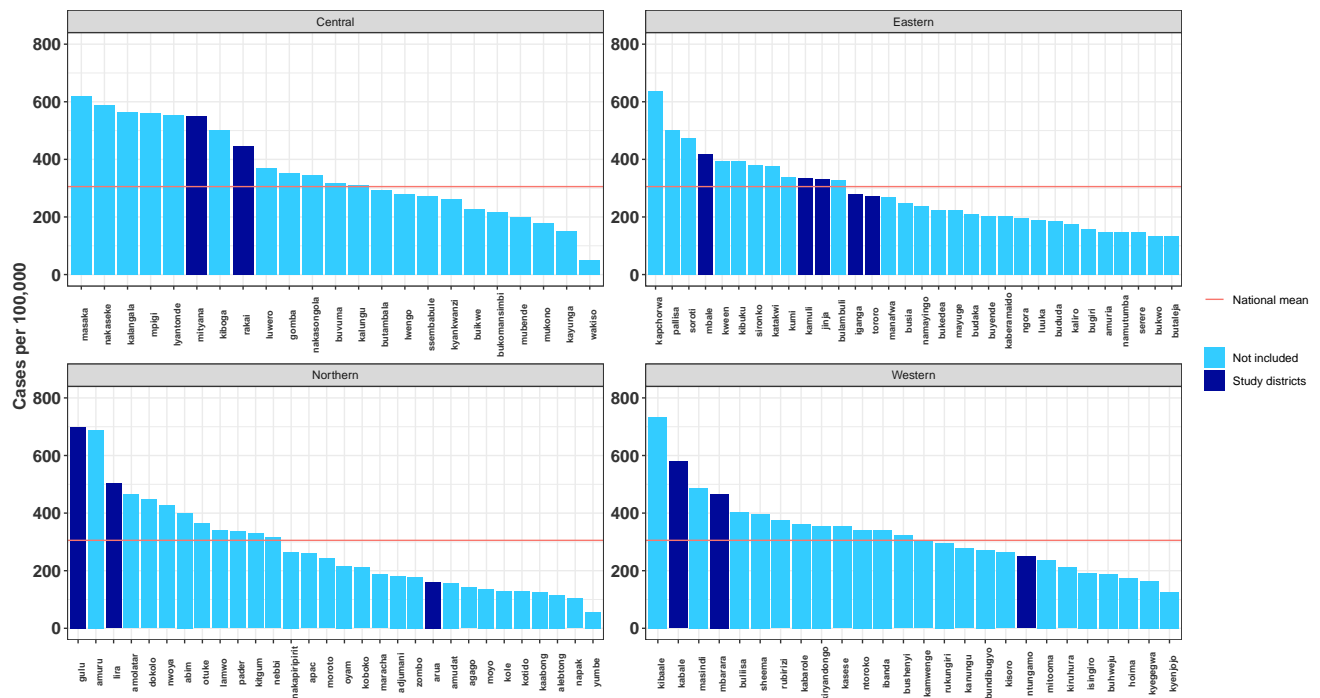
Figure 2: Recorded criminal cases per capita based on UPF's 2015 crime statistics that were shared with the research team in 2017. District population figures are derived from Uganda's 2014 census. Study area districts are in dark blue. Horizontal red line is the country's global mean cases per capita.

therefore excluded central police stations (located in district capitals), and police stations covering parishes with populations greater than 90,000 (i.e., urban). In addition, we excluded police posts with peculiar jurisdictions: for example, those protecting universities, hospitals, or bus stations. Finally, we excluded posts that had only one officer assigned to them. We then randomly selected one post per station.[17] In places where the station had only one post under its jurisdiction (18 stations), we selected that one; in places where the station had no posts, we selected the station itself (32 stations). The result was a sample of 72 relatively rural, relatively high-crime police posts and stations spanning four regions of the country. For simplicity we refer to these as "police stations" from here on.

For each police station in our sample, we identified four villages for subsequent data collection. While some stations cover multiple parishes, we chose to focus on the parishes in which the 72 stations in our sample are physically located. We did this because we assumed

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[17]There are 16 police stations with 2 posts, 3 stations with 4 posts, an 3 stations with 5 posts.

UPF officers would face logistical constraints when traveling to more distant villages, and we wanted to maximize the likelihood of exposure to the intervention among the villages in our sample. We asked UPF to provide a list of villages (1) located in the same parish as the station and (2) under the jurisdiction of the corresponding station. Within each jurisdiction, we randomly selected four villages from this list. In parishes with fewer than four villages, we selected the closest village from an adjacent parish that still fell under the jurisdiction of the same station.

5.2 Randomization

The unit of randomization was the police station. We block randomized within each of the four regions of Uganda in order to maximize the degree of similarity between treatment and control units.[18] To do this, we used the 2014 census to construct 11 blocking variables at the station level:[19] population; % male; average age; % literate; average household size; average years of education; average number of meals eaten per day; % involved in an occupation other than subsistence agriculture; a standardized household asset index;[20] a standardized household quality index;[21] and a standardized index of social services available.[22]

We also constructed six additional blocking variables capturing the number of posts, parishes, villages, and police officers under the jurisdiction of the station, as well as distance to Kampala and distance to the district capital.[23] We organize stations into blocks of four using the Mahalanobis distance between covariates, then randomly assigned two stations to

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[18]To ensure balance within regions, we recoded the northernmost station in the eastern region as belonging to the northern region, and the two central-most stations in the western region as belonging to the central region.

[19]Census data was collected at the parish level. We aggregate up to the station level, weighting by parish population (for variables recorded as percentages).

[20]Our standardized household asset index comprises a set of 15 assets, including bicycles, televisions, shoes, and blankets.

[21]Our standardized household quality index is composed of the materials used for the respondent's roof, walls, and floor, as well as the number of rooms in the household, and an indicator for whether the household has a toilet.

[22]Our standardized index of social services includes number of public and private health clinics, number of public and private schools, and an estimate for the distance to the nearest potable water source.

[23]We also used these latter six variables to impute missing values on the former 11 (census-based) variables.

the treatment group and two to control in each block of four.

5.3 Compliance

We encountered a number of challenges during implementation that may have weakened the impact of the program, and that would likely weaken the impact of any future community policing intervention in Uganda. First, police officers tend to rotate in and out of rural police stations very frequently. Unfortunately we were unable to (re)train officers on community policing protocols with every one of these rotations, which was especially problematic given that newly deployed officers in most cases did not have an existing rapport with the communities in their jurisdiction. Second, while 92% of all treatment communities held at least one town hall meeting over the course of the intervention, only 69% held two, and only 34% held four or more. The share of treatment communities that reported door-to-door visits was even lower.

Potential sources of treatment non-compliance are myriad, though we believe the crux of the problem lies in the resource constraints under which UPF operates: officers had to exert more effort to participate in the program, with no additional funding. Of course, given that COP was technically already nationwide policy, the tasks required of officers as part of the intervention fell squarely within the scope of their existing duties. Nonetheless, prior to the intervention, our impression is that UPF officers in rural areas only rarely visited the communities under their jurisdictions, and then typically only when crimes were committed.

Given these dynamics, it is perhaps unsurprising that compliance was spotty, even among officers who made a good faith effort to participate. These dynamics were further compounded by principal-agent problems between rank-and-file officers in the field and their superior officers at district or regional headquarters. Without reliable mechanisms for monitoring and sanctioning officers who shirk, those who did not want to make a good faith effort had little reason to do so. These challenges—frequent rotation of police officers, resource constraints, and principal-agent problems—are typical of police forces across the developing

world.

Despite these challenges, the program increased the rate of interactions between civilians and the police. Residents of treatment communities were 45% more likely to recall at least one town hall meeting with police officers in their community during the preceding six months, from a base rate of 31% in control villages (Figure 3). They were also 19% more likely to report the existence of an active CWT in their community, and more likely to report observing CWT patrols. However, they were no more likely to report police patrols in their community. This is consistent with data we collected from LC1 chairpersons to monitor treatment compliance while the program was in the field, and with the research team's (anecdotal) impressions of the program.

5.4   Data and outcome measurement

Administrative data

We collected data on our key outcomes of interest from multiple sources. Ultimately, the goal of community policing is to reduce crime and violence and thus improve citizen security. We measured crime and violence as reported to the police using UPF administrative data.[24] Before the intervention began, we collected baseline data on all crimes reported to all UPF stations in our sample from March 1 to May 27, 2018. These data include the type of crime, the date and location of the crime, the gender of the victim and perpetrator (when available), and the outcome of the resulting case (when available). We collected the same data at endline, after the intervention was complete. These data span the period from July 15, 2019 to January 15, 2020.[25]

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[24]Because UPF leadership knew which stations and posts were assigned to treatment and which were assigned to control, it is possible that they could have instructed officers to falsify their records to make it look like crime was decreasing in treatment communities. Given the UPF's resource constraints and its inability to closely monitor the behavior of rural police officers, we view this as extremely unlikely.

[25]Data collection in four police stations took place in December, 2019. Data for all other police stations were collected starting in late January, 2020. Data for the first four police stations span the period from June 1 to December 1, 2019.

Figure 3: Compliance: share of respondents who have heard of a community meeting in the past six months, by treatment group at both baseline (top) and endline (bottom panel).
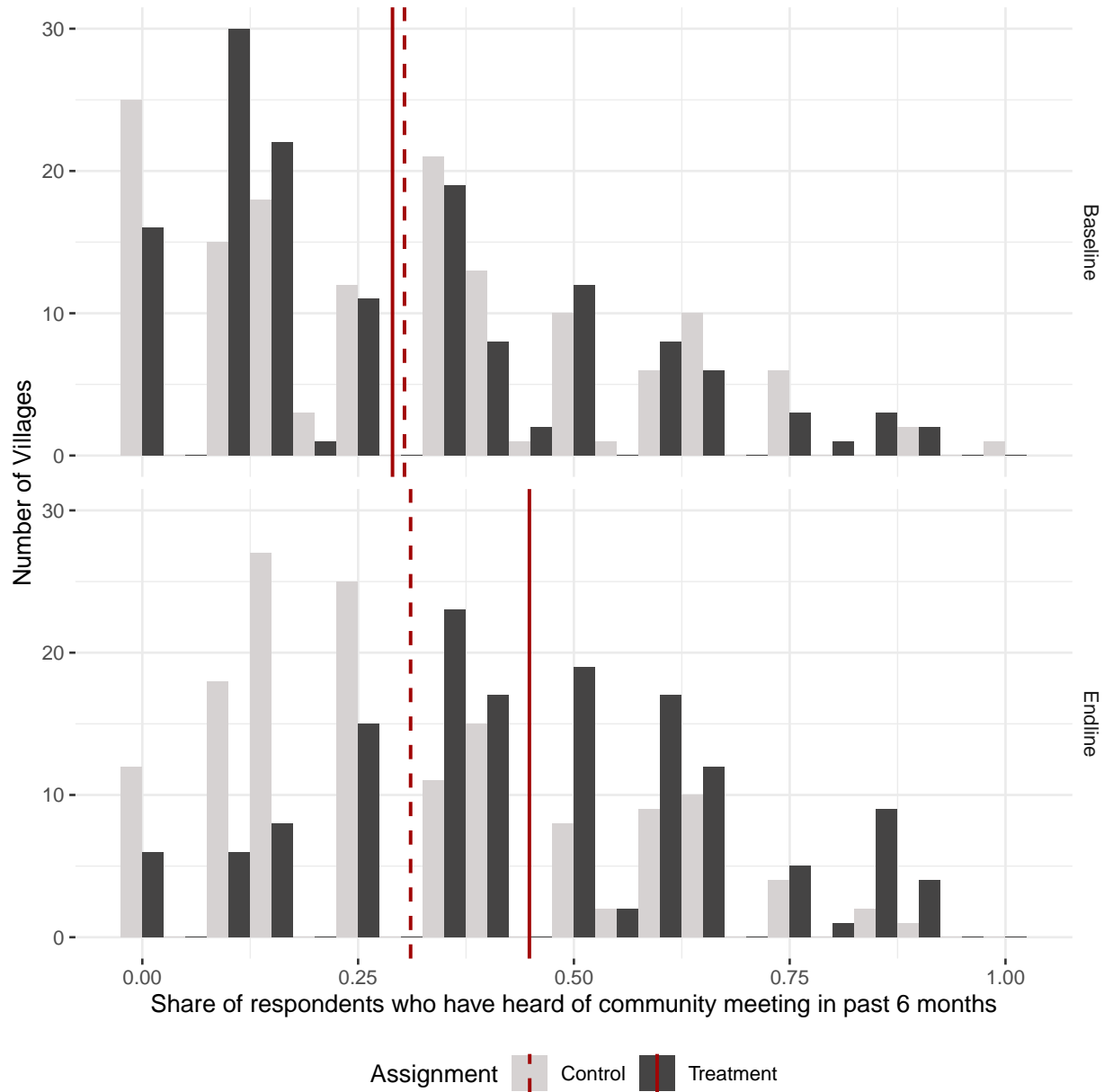
Citizen survey

Community policing is also intended to change the attitudes and behaviors of citizens, who may express greater trust in the police, more favorable opinions of the intentions and capacity of the police, and more willingness to cooperate with the police in criminal investigations and

other activities. They may also report lower levels of crime victimization. We test for these possibilities using baseline and endline surveys, both of which were conducted in person by local enumerators from the Uganda office of Innovations for Poverty Action (IPA), a research NGO.

The baseline took place between June and July 2018. We randomly selected 12 households in each village in our sample.[26] To ensure gender balance, we sampled six men and six women per village. Due to budget constraints, we replaced households in which the randomly selected respondent was unavailable to be surveyed at any point during the same day.[27] The result was a stratified random sample with 3,456 respondents in total. Wherever possible we interviewed the same respondents at endline, replacing them only when they were unavailable or had died or moved away. In total, we replaced 510 citizens out of 3,456 citizen respondents, for an attrition rate of about 15%. As can be seen in Tables SI-3 and SI-4 in the appendix, we find no evidence that our treatment had an effect on rates or patterns of attrition.

Police officer survey

In addition to reducing crime and improving citizens' perceptions of the police, community policing aims to inform police officers about citizens' priorities, challenges, and concerns, and in this way encourage them to become more empathetic toward the communities they serve. Community policing may also increase officers' sense of accountability to civilians. Ideally these attitudinal changes result in behavioral changes as well, with officers becoming more respectful towards citizens not just in the context of COP-related activities (e.g. town hall meetings), but during more routine activities as well.

We measure officers' attitudes and behaviors using baseline and endline surveys of officers deployed to the stations in our sample. The baseline took place between June and

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[26]In each community, mobilizers worked with the LC1 and the village health team to create a roster of all households in the community. From this roster, we randomly selected 12 households for surveying, as well as 24 replacements numbered 13 to 36.

[27]Replacement households were selected in order from the list of 24.

July 2018. In each of the 72 police stations and posts, we interviewed the Officer in Charge (O/C) and, whenever possible, the Community Liaison Officer (CLO) and Child and Family Protection Unit (CFPU) officer. Among the more junior officers, we randomly selected as many as needed to reach a quota of 5 respondents per station or post, for a total of 217 officers. We sought to interview the same officers at endline, though by that point many had been reassigned to different locations. Among the 198 officers we interviewed at endline, only 44 were also interviewed at baseline (for an attrition rate of 80%). The rest were randomly selected replacement officers. Again, rates and patterns of attrition do not seem to be affected by treatment (see Tables SI-3 and SI-4 in the appendix).

Survey with local authorities

We measure the attitudes of local authorities using a survey with LC1 chairpeople. LC1 chairpeople were only interviewed at endline. We managed to interview the LC1 chairperson in each of our 288 study villages—a response rate of 100%. In some cases, the LC1 chairperson had also been interviewed as part of the citizen survey.

Table 5.4 provides descriptive statistics of (non-standardized) baseline measures for a subset of our outcomes of interest. We run all our analyses on outcome measures that have been standardized by subtracting the mean and dividing by the standard deviation at baseline (or by the standard deviation in the control group if no baseline measure is available). To combine outcomes into indices, we first impute missing values in constituent outcomes, separately within treatment and control groups based on a linear model with all other constituent outcomes of the index and block fixed effects as predictors. Finally, we take the average of all constituent items. Analyses of separate items rely on listwise deletion.

Table 2:
Baseline Summary

Outcome Family	Outcome	Mean	SD	Min	Max	N
Compliance (C)	Foot patrol frequency	1.39	0.97	1	5	3444
	Community meeting awareness	0.30	0.46	0	1	3440
	Active neighborhood watch team	0.15	0.35	0	1	3384
Crime victimization (C)	Violent crimes (personal)	0.15	1.03	0	50	3456
	Non-violent crimes (personal)	0.50	2.03	0	70	3456
Crime victimization (A)	Violent crimes	52.06	51.59	1	349	72
	Non-violent crimes	93.56	77.28	6	364	72
Perceived future insecurity (C)	Feared violent crime	0.76	1.03	0	3	3380
	Fear non-violent crime	0.80	1.01	0	3	3373
	Feared walking	1.02	1.32	0	4	3451
Overall perceptions of police (C)	Trust in police	2.38	1.38	0	4	3432
	Trust in service of police	2.30	1.32	0	4	3432
	Not intimidated police	1.23	0.92	0	2	3453
Police empathy and accountability (O)	Police takes complaints seriously	2.71	0.63	0	3	217
	Empathy (complaints)	1.77	1.06	0	3	217
	Empathy (reports)	2.56	0.72	0	3	217
Experience of police abuse (C)	Police abuse	0.08	0.28	0	1	3448
	Bribe frequency	1.13	0.43	1	4	3452
	Bribe amount (USD)	1.97	13.32	0	458	3454
Crime reporting (C)	Violent crimes reported (personal)	0.04	0.19	0	2	3456
	Non-violent crimes reported (personal)	0.06	0.23	0	2	3456
	Burglary resolution	0.63	0.48	0	1	3456
	Domestic abuse resolution	0.33	0.47	0	1	3456
	Armed robbery resolution	0.86	0.34	0	1	3456
Crime tips (C)	Contacted police for suspicious activity	0.15	0.36	0	1	3452
	Gave information to police	0.13	0.34	0	1	3452
Police abuse reporting (C)	Reported drinking on duty	2.18	1.15	1	4	3430
	Reported police beating	2.66	1.09	1	4	3437
	Reported police abuse	0.02	0.14	0	1	3447
Perceived police intentions (C)	Police are not corrupt	1.52	1.50	0	4	3406
	Police serve equally	2.14	1.39	0	4	3414
	Police will investigate	2.97	1.04	0	4	3428
	Police will be fair	1.89	1.29	0	4	3399
Knowledge of criminal justice (C)	Legal Knowledge (suspect)	0.45	0.50	0	1	3312
	Legal Knowledge (lawyer)	0.68	0.47	0	1	2865

	Legal Knowledge (fees)	0.70	0.46	0	1	3277
	Legal Knowledge (domestic abuse)	0.86	0.35	0	1	3442
	Legal knowledge (drop case)	0.17	0.38	0	1	3382
	Police Knowledge (followup)	0.23	0.42	0	1	3276
	Police Knowledge (where is station)	0.98	0.15	0	1	3456
	Police knowledge (phone number)	0.21	0.41	0	1	3456
Norms of cooperation with police (C)	Reporting norm (theft)	3.08	1.10	0	4	3449
	Reporting norm (domestic abuse)	2.65	1.27	0	4	3446
	Obey police norm	1.43	1.36	0	4	3435
Perceived police capacity (C)	Police timeliness	2.33	1.33	0	4	3356
	Police investigation capacity	2.56	1.24	0	4	3399
Perceived police responsiveness (C)	Police responsive to complaints	2.50	1.32	0	4	3420
	Police consider opinions	3.07	1.36	1	5	3408

Letters in parentheses denote the data source. C stands for surveys with citizens; A for administrative crime records obtained from police stations; O for surveys with police officers, and L for surveys with local authorities. Baseline measures are only available for a subset of outcome measures.

5.5 Estimation and hypothesis testing

Below, we use the following pre-registered specification to estimate the sample intent-to-treat effect (ITT) of the COP program:

$$\boldsymbol{Y} = \alpha + \tau \boldsymbol{z} + \boldsymbol{X}\boldsymbol{\beta} + \boldsymbol{B}\boldsymbol{\gamma} + \boldsymbol{\epsilon},$$

where α denotes the intercept, τ denotes the sample ITT, $\boldsymbol{z}$ is an indicator denoting assignment to the COP intervention, $\boldsymbol{X}$ is a matrix of covariates and $\boldsymbol{\beta}$ the vector of associated coefficients, $\boldsymbol{B}$ is a matrix of block indicators with coefficient vector $\boldsymbol{\gamma}$, and $\boldsymbol{\epsilon}$ is a vector of error terms. The matrix of covariates $\boldsymbol{X}$ consists of a baseline measurement of the outcome and an indicator for missing values in the baseline measurement, which have been imputed as zeros.

In some cases, covariates are omitted because no baseline measure of the outcome has been collected. Where the outcome is an index, the baseline measure consists of an index of all constituent items of the outcome index for which baseline measures are available. Analyses that are based on data from surveys with citizens, local authorities, and police officers use respondents as the unit of analysis and allow for clustering of standard errors at the level of police stations. For analyses of administrative data, the unit of analysis is the police station and standard errors are heteroskedasticity robust. In keeping with our PAP, we use the Benjamini and Hochberg (1995) adjustment to adjust the p-values that result from tests of our eleven main hypotheses for multiple comparisons. In the appendix, we present analyses that disaggregate outcome indices into their constituent outcomes (see Table SI-2). Here, we adjust all p-values from hypothesis tests that pertain to constituent items of the same outcome index, focusing again on main hypotheses only.

6 Results

We present our study's main results in Figure 4, and in the online appendix in tabular form (Table SI-1).

6.1 Primary hypotheses

In general, we find no evidence that the community policing program affected most of the outcomes we measured. Most importantly, we do not find evidence that the program reduced the incidence of crime as captured by our survey (H1a). This finding is robust to aggregating multiple types of crime into a single index (as in the figure), to distinguishing between violent and non-violent crime, and to disaggregating crime by type (as in Table SI-2). This conclusion also holds for property destruction and violent disputes over land use or boundaries. Unlike crime incidence, the program appears to have increased the number of crimes recorded by the UPF, though we interpret this as an increase in crime reporting rather than an increase in crime incidence, for reasons we discuss below.

Given that our program had no discernible effect on crime incidence—an objective indicator of personal safety—it is perhaps unsurprising that we find no evidence that the program improved subjective perceptions of personal safety either (H1b). This result again holds for the index, and for all components of the index (see Figure 4 as well as Tables SI-1 and SI-2 in the appendix). Nor do we find evidence that the program improved perceptions of the police (H2). Residents of treatment communities were no more likely to trust the police, no more likely to express satisfaction with the services the police provide, and no less likely to feel intimidated by police presence in their community (see Table SI-2).

We similarly do not find evidence that the program improved empathy, accountability, or perceptions of the seriousness of police misconduct among police officers themselves (H3a). Indeed, if anything police officers in treatment stations expressed a diminished sense of their own accountability: the coefficients on the index and its component parts are almost

uniformly negative, and in some cases they are nearly statistically significant at conventional levels. This is especially true for index components related to corruption and accountability. Perhaps relatedly, there is some suggestive evidence that the program increased the incidence of police abuse (H3b), a result driven by a small increase in the reported frequency with which respondents made unofficial payments to police. We discuss this finding in further detail below.

We find no evidence that the program increased crime reporting among victims and witnesses as measured in our survey (H4a). Interpretation of this result is somewhat ambiguous, since many items in our index conflate respondents who were not victims of crime with those who were victims but chose not to report to the police. That said, we also do not find any evidence of a treatment effect on constituent items that ask respondents whether they would want the police or another actor to resolve a hypothetical case of crime.

We similarly do not find evidence that the program increased direct reporting of crime prevention tips (Hypothesis 4b), though we do find some suggestive evidence that residents of treatment communities reported more tips indirectly, for example by reporting tips to the local council chairperson (LC1) in the expectation that they would be referred to the police (see outcomes "Share info indirectly" and "Assist investigation indirectly" in Table SI-2 in the appendix). That said, we do not find any evidence that our treatment increased the perception among local authorities that citizens would report crimes to them (H6a). Neither does our treatment appear to affect the willingness of local authorities to refer cases to the police (H6b). However, our estimates are suggestive of increased reporting of police misconduct to the UPF (H4c), a result driven in particular by an increase in reports of misconduct in the UPF's own records. Perhaps unsurprisingly in light of the other results, we also do not find any evidence of an increase in citizens' demand for government spending on policing (H5).

Figure 4: Estimated Effects of Community Policing
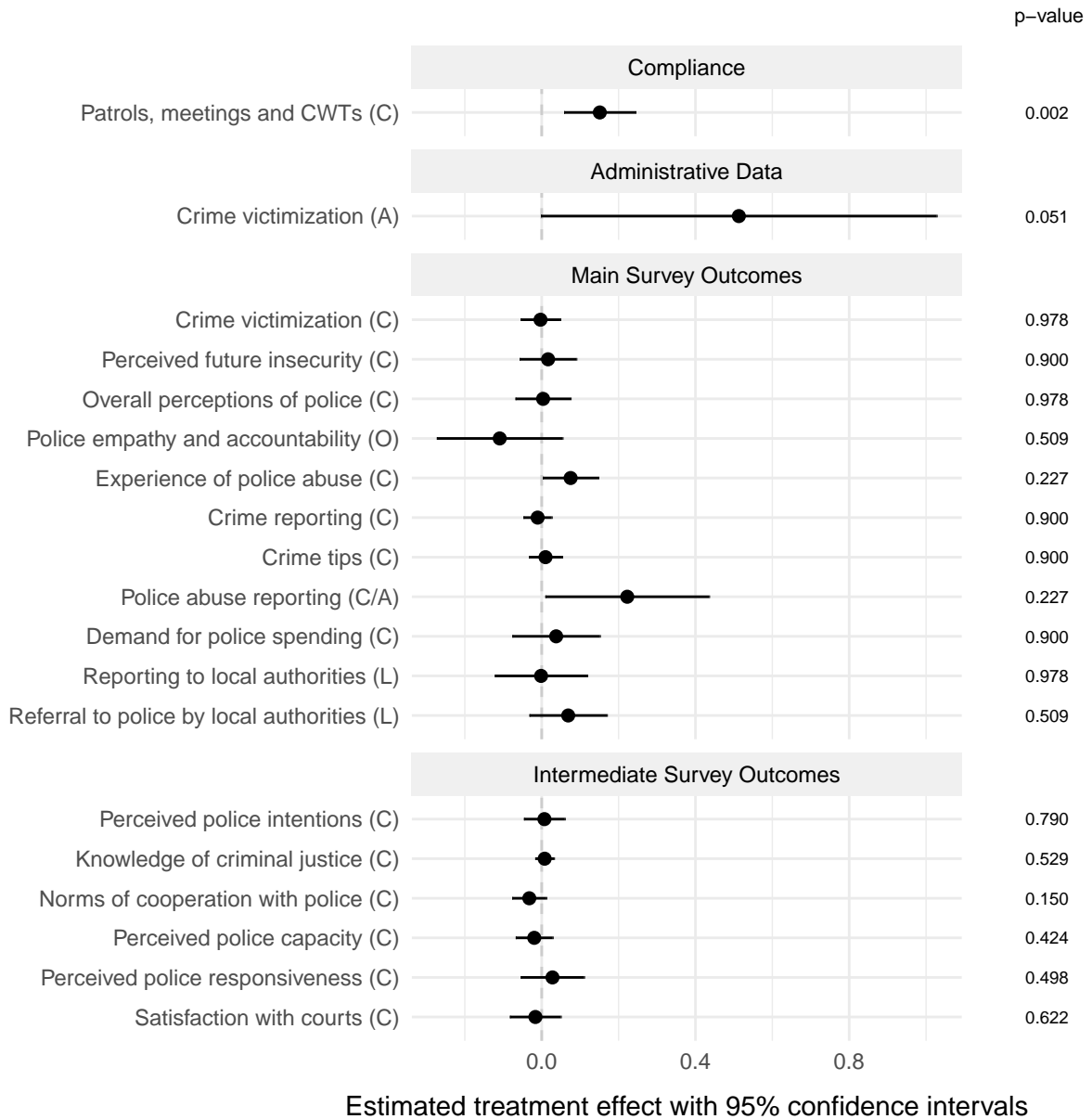
Estimated treatment effect with 95% confidence intervals

Letters in parentheses denote the source of outcome and covariate data. *C* stands for surveys with citizens; *A* for administrative crime records obtained from police stations; *O* for surveys with police officers; and *L* for surveys with local authorities. *p*-values for analyses involving main survey outcomes are adjusted using the pre-registered Benjamini and Hochberg (1995) adjustment.

6.2 Mechanism outcomes

Figure 4 also reports results for pre-registered hypothesized mechanisms. Consistent with our finding that the COP program does not appear to have affected citizens' trust in or satisfaction with the police, we also do not find evidence that the program improved beliefs about police intentions. The program does, however, seem to have enhanced citizens' knowledge of the criminal justice system. This result is driven in particular by an apparent improvement in citizens' understanding of the rules and procedures involved with reporting crimes to the police (see Table SI-2 in the appendix). Specifically, residents of treatment communities were more likely to know that the police are not required to investigate witnesses as suspects, more likely to know that the police are not allowed to charge fees to register cases, and more likely to know that the police will record criminal complaints even if they are reported by phone (rather than in person). Increased knowledge of the criminal justice system may have facilitated crime reporting, as we discuss in Section 7. Importantly, the positive treatment effect on knowledge cannot be attributed to social desirability bias: either respondents knew the correct answers to the questions we asked them, or they did not.

In addition, we do not find that the program strengthened norms of citizen cooperation with the police. Indeed, if anything it appears to have weakened them: residents of treatment communities were (marginally) more likely to anticipate social sanctions for reporting burglaries to the police, and (also marginally) less likely to believe victims or bystanders will report armed robberies (see Table SI-2 in the appendix). That said, the treatment effect estimate for the index remains small and statistically insignificant. We also find no evidence that the program improved beliefs about police capacity, or police responsiveness to citizen feedback. Finally, we find no evidence that the program increased trust in the courts.[28] This is unsurprising given our finding that the program did not increase trust in the police.

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[28]Unfortunately, we were unable to ask respondents about trust in the state, since the UPF deemed these questions too politically sensitive.

7 Discussion

As shown above, we do not find evidence that the COP program in Uganda affected most of our hypothesized outcomes. Perhaps most importantly, we do not find evidence that it reduced the incidence of crime as measured in our survey (H1a), enhanced citizens' sense of safety (H1b), or increased trust in or satisfaction with the police (H2). The community policing program also did not improve perceptions of police intentions, police capacity, or officers' responsiveness to citizen feedback. Nor do we find evidence that it strengthened police officers' own sense of empathy or perceived accountability towards citizens (H3a).

Interestingly, we do find some suggestive evidence that the program increased the incidence of crime as captured in UPF's records (Figure 4). This result is unlikely to be an artifact of outliers: treatment effect estimates change little when the most outlying observations are excluded from the analysis. Nor is it likely to be an artifact of better record keeping in treatment police stations: we find no evidence that treatment police stations were more likely to maintain a crime log, or that they kept their crime logs in better condition than control group police stations. The effect does not appear to be an artifact of seasonality either, as it holds even when we exclude police stations that were visited first.[29]

How, then, to explain this discrepancy between the survey and the UPF crime data? It is of course possible that the discrepancy is due to sampling variability. Another possibility is that the positive treatment effect on crime in the UPF data is due to an increase in crime reporting, rather than an increase in crime itself. Most crimes in Uganda are never reported to the police, especially in rural areas. In our baseline survey, for example, only 26% of respondents who indicated that their household had been the victim of a burglary over the past 6 months said that they reported the burglary to the police. Since we observe no corresponding increase in crime in the survey data, and no decrease in perceptions of

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[29]Since endline data collection took place over a relatively protracted period, crime rates, and correspondingly crime reporting, could have been affected by the specific date administrative data was collected from a given police station.

personal safety, we interpret the increase in the UPF data as evidence that residents of treatment communities were more likely to report whatever crimes did occur to the police.

While we do not observe a corresponding increase in crime reporting in the survey, recall that the interpretation of this result is ambiguous, since many of our items conflate respondents who did not report crimes with those who were not victims of crime in the first place. And while we find no evidence of a change in norms of citizen cooperation with the police, it is possible that residents of treatment communities became more willing to report despite heightened concerns about social sanctions. Indeed, in an experimental evaluation of a similar community policing intervention in Liberia, Blair, Karim and Morse (2019) find that residents of treatment communities reported crimes at higher rates despite being more rather than less fearful of social sanctions from their neighbors for engaging with the police. Our results are consistent with these findings.

This apparent increase in crime reporting is somewhat puzzling, given that we find no evidence of treatment effects on trust in the police or perceptions of police intentions and capacity. Criminologists have long argued that citizens will only report crimes to the police if they perceive the police as "procedurally legitimate," meaning that they trust the police to treat them fairly and respectfully when they report (Tyler and Huo 2002; Tyler and Fagan 2008). This implies that if we observe an increase in crime reporting, then we should also observe an increase in trust in the police. But we do not.

One potential solution to this puzzle lies in the program's positive effect on both citizens' rate of interaction with police officers and their knowledge of the criminal justice system. As discussed in Section 6, residents of treatment communities expressed greater understanding of the rules and procedures associated with reporting crimes to the police. Misunderstanding of these rules and procedures can be an obstacle to reporting, for example if victims believe they will have to pay a fee or travel to the nearest police station to file a criminal complaint, or if witnesses believe they will be investigated as suspects if they share information with the police. The program may have increased reporting in part by

correcting these misunderstandings. At the same time, more frequent interaction with police officers may have reduced at least some of the costs associated with reporting.

Consistent with this interpretation, we find that crime reporting in the UPF data is positively correlated with knowledge of the criminal justice system in the survey, and that changes in crime reporting are positively correlated with changes in knowledge as well, at least in the treatment group. These results are descriptive and correlational, but they nonetheless lend some credence to our intuition that crime reporting is increasing with knowledge of the criminal justice system. This combination of results is again consistent with Blair, Karim and Morse (2019), who find that an increase in crime reporting in treatment communities was accompanied by an improvement in understanding of the rules and procedures associated with reporting crimes, but no change in perceptions of the police.

Perhaps our most unexpected finding is that the COP program in Uganda increased unofficial payments to the police. Specifically, 9.8% of respondents in treatment villages reported having made an informal payment to UPF officers in the past six months, compared to 7.3% of respondents in control villages. This raises the possibility that Uganda's COP program had the adverse unintended consequence of exacerbating petty corruption. We note, however, that the statistical significance of this result does not survive a multiple comparisons correction.

One potential explanation for this finding (assuming it is not simply a type-I error) is the increased frequency of interactions between civilians and police officers that occurred as a result of the intervention. Some of these interactions were a direct (even mechanical) result of the intervention itself, which induced contact between civilians and the police in the context of town hall meetings. Other interactions may have occurred as an indirect result of the program. For example, if residents of treatment communities were more likely to report crimes to the police, then they were (presumably) also more likely to interact with whichever officers responded to their complaints. Increased interactions between civilians and the police may have created opportunities for bribe-seeking that would not have arisen

in the absence of the program.

But there are other plausible (and less nefarious) explanations as well. As discussed above, Ugandan police officers operate under severe resource constraints, creating a pervasive culture of "fees for service" for registering cases and responding to criminal complaints. These are not necessarily obscene requests: in order to facilitate investigations and other activities, UPF officers are known to ask citizens to buy fuel, stationary, and other necessities, without which they would be incapable of doing their jobs. The combination of increased knowledge, increased crime reporting, and increased unofficial payments suggests the possibility that officers continued to solicit fees for service as before, but that residents of treatment villages were more likely to view these fees as "unofficial payments." In other words, the intervention may have failed to eliminate fees for service (much less the conditions that make those fees necessary), at the same time that it taught citizens to recognize that such payments are unofficial—i.e., not sanctioned or condoned by official police policy.

The increase in unofficial payments may, in turn, help explain why COP did not improve perceptions of the police: if community policing increased the frequency of interactions between civilians and the UPF, but UPF officers used those interactions to solicit unofficial payments, then it is perhaps unsurprising that perceptions did not improve. But again, this is only one potential explanation for the program's null effects on perceptions of the police and other outcomes. Another possible explanation lies in the frequent rotation of police officers into and out of treatment police stations. Of the 72 stations in our sample, more than half (38) experienced a 100% respondent turnover rate between baseline and endline—meaning that none of the officers surveyed at baseline were still assigned to the station at endline—and most witnessed at least some respondent turnover.[30] It is possible that lessons from the COP training that all treatment group officers received at the start of the program were not transmitted as officers rotated in and out. It is also possible that frequent rotation prevented officers from establishing a rapport with citizens.

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[30]Note, however, that we did not survey all officers at each station at baseline. So a 100% turnover rate among our respondents may not indicate a 100% turnover rate among all officers at the station.

Another potential explanation lies in low treatment compliance. According to monitoring data that we collected over the course of the intervention, 132 of the 144 villages assigned to treatment reported at least one town hall meeting between civilians and the police. But only 99 villages reported two meetings, only 69 reported three meetings, and only 49 reported four or more. While this degree of saturation was sufficient to generate statistically significant treatment effects on our index of compliance, it may not have been enough to change attitudes or behaviors, especially over such a long period of time. Compliance with the other components of the program was even lower: only 23 villages reported a door-to-door visit, and none reported more than one. Only 13 villages reported a nighttime patrol, and only one reported more than one. Again, this may not have been enough to change residents' minds about the police.

Given the structure of the program, it is perhaps unsurprising that treatment compliance was low. Uganda's community policing program demanded that officers expend extra effort traveling to villages and meeting with civilians, but provided no new resources to offset the financial and opportunity costs that officers incurred in the process. Moreover, despite the resources we invested in monitoring the intervention, the data we collected was inevitably incomplete, and even when it revealed evidence of noncompliance, UPF leadership generally did not sanction officers who were caught shirking.

Finally, the weak or null effects of the intervention on crime and perceptions of the police may also be a result of the relatively long lag between the intervention, which ended between March and June 2019 (depending on the community),[31] and the endline survey, which began in December 2019 and continued until February 2020.[32] It is possible that the intervention had beneficial effects on some outcomes in the short term, which decayed to nulls over time.

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[31]The last town hall meeting we are aware of was scheduled for June 8, 2019. It is possible that additional meetings occurred after this date, but we are doubtful. To the best of our knowledge, only two town hall meetings were scheduled in June 2019. In most communities, the last meeting was scheduled in March or April. Some communities held no meetings in 2019 at all.

[32]Acquiring government approval to conduct research on public opinion of policing in Uganda is a slow and arduous process, and our endline was delayed by several months as a result.

8   Conclusion

Community policing programs have been shown to be an effective model for improving strained relations and building trust and cooperation between citizens and the police. However, much of the existing evidence has originated from a small number of rich consolidated democracies. Using the case of Uganda, we study the effects of a homegrown community policing program in a low-income country setting, where the police reports directly to an electoral authoritarian regime. The program we study was designed and implemented by the Uganda Police Force in tight collaboration with local civil society groups, and had strong buy-in from powerful actors within the government.

Notwithstanding local ownership and several "inside" champions, we find no evidence that the program has achieved many of its goals. While we do find that the program increased citizen knowledge of the law and police procedures, and may have also increased crime reporting, the program did not change citizens' perceptions of the police, nor their trust in the police. As a result, there is no evidence that the program reduced crime or increased citizens' sense of security. Above we have discussed several possible explanations for these disappointing results, including high officer turnover, weak top-down monitoring, which itself led to weak incentives for overworked rank-and-file officers who were asked to "do more" but were not compensated for their additional efforts. Indeed, it is quite possible that the treatment itself—again, designed by the UPF—was too weak to increase trust in an institution that has long been perceived as untrustworthy.

Admittedly, treatment compliance was relatively low, but even if it had been much higher, there is no guarantee that COP would have changed citizens' attitudes or behaviors in a discernible way. This underscores the importance of careful monitoring and robust incentives and sanctions to maximize compliance and minimize the risk of misconduct. Absent these mechanisms, community policing may only reinforce existing police–community relations. Having said that, it is quite possible that the ability of police forces to maximize

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compliance is endogenous to initial conditions. A better understanding of how COP program design is affected by the status quo is an important avenue for future research.

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ONLINE APPENDIX

— Supporting Information for "Can Community Policing Improve Police-Community Relations in an Electoral Authoritarian Regime?" —

A Research Design: Additional Information

Spillover

Our research design assumes the absence of spillover from treatment to control communities. Criminologists typically distinguish between two types of spillover in the study of policing: displacement and diffusion. Displacement occurs when increased police presence in one location induces (potential) criminals to commit crimes in another location instead. Diffusion occurs when increased police presence in one location deters (potential) criminals in other locations as well.[33] Recent research suggests that diffusion is more common than displacement (Bowers et al. 2011; Guerette and Bowers 2009; Telep et al. 2014), though this is still a matter of debate (Getmanski, Grossman and Wright 2019; Chalfin and McCrary 2017).

Spillover would bias our treatment effect estimates. Fortunately, there are reasons to believe this problem is likely to be relatively minor in our case. Because we randomized at the post (or station) level, and because most posts have jurisdiction over an entire parish (or, in the case of stations, an entire sub-county), treatment and control communities are almost always located in different parishes. Indeed, in seven of the 12 districts in our study, all sample villages in the district are assigned either to treatment or to control.

Even in the remaining districts, our sample consists of police stations, posts, and villages that are generally quite far apart from one another. On average, stations in our sample are located approximately 14 km from one another. More to the point, the average distance between control stations and the nearest treatment station in our sample is 16 km.

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[33]Diffusion of other outcomes is of course possible as well. For example, residents of a treatment community could share their increased knowledge of the criminal justice system with residents of control communities.

(The shortest distance is 0.82 km.) The villages in our sample are located 1.5 km apart on average, and the average distance between control villages and the nearest treatment village is 14.2 km. (The shortest distance is 1.2 km.) 97% of treatment police stations are located at least 1 km from the nearest control station, 94% are located at least 2 km away, and 89% are located at least 3 km away. Similarly, 100% of treatment villages are located at least 1 km from the nearest control village, 93% are located at least 2 km away, and 87% are located at least 3 km away. These are long distances in rural Uganda, where roads are rough and few citizens have access to a vehicle. This should reduce the risk of bias from spillover effects.

Monitoring data

We used several mechanisms to monitor treatment compliance throughout implementation of the COP program. To monitor town hall meetings, we provided UPF officers at each post with a schedule to record the date and location of each meeting, as well as contact information for the LC1 chairperson and any other individual(s) responsible for mobilizing residents to attend the meetings. We also sent a staff member from IPA Uganda to attend all meetings and take detailed notes, including the date, time, and location of the meeting, the number of attendees, the topics discussed, and any questions asked and answers given. After each meeting, we asked officers to complete a separate form with the same information for purposes of validation, though compliance with this latter monitoring mechanism was low.

To monitor the activity of the CWTs, we provided them with a form that they were expected to complete and return to YIDO at the end of each month. The form included details on any incidents to which the CWT responded in the previous month, including whether or not the incident was reported to the police, whether or not the police responded, how long it took the police to respond, whether an arrest was made, and how satisfied the victim was with the police's response. Compliance with this latter monitoring mechanism

was low. We also collected data on the names, age, and gender of all CWT members, as well as contact information for the leaders of each CWT.

B Ethics

The intervention we evaluate involved increased police presence in and around rural Ugandan communities. This had important ethical implications in a setting in which the police have a reputation for petty corruption and bribe-seeking, and for intimidating and abusing the political opposition. Indeed, one goal of the intervention was to foster greater empathy and understanding between civilians and police officers, which we hoped would mitigate the incidence of corruption and abuse. While UPF has a reputation for advancing the interests of the ruling party, it is important to note that not all UPF officers are politicized, especially the rank and file. Politicization is much less of a problem in rural areas than in urban centers, where clashes between security forces and the political opposition tend to be most common, especially around election time.

To guard against the risk that increased contact would exacerbate abuse, we developed a robust monitoring and reporting system, described in detail above, which allowed us to observe many (though not all) of the interactions between civilians and police officers that occurred in the context of the intervention. It is possible, however, that "fee for service" requests and other forms of petty corruption may have occurred without our monitors noticing.

UPF's program involved strengthening the role that CWTs play in providing security for their communities. This component of the program had important ethical implications as well, especially given Uganda's experience with Crime Preventers, some of whom became embroiled in scandals involving political intimidation, vigilantism, and human rights abuses. In their efforts to organize CWTs, YIDO and UPF repeatedly emphasized that CWTs have no legal authority to arrest, adjudicate crimes, or otherwise act as substitutes for the po-

lice. YIDO and the UPF also explicitly distinguished CWTs from Crime Preventers, and framed the CWT initiative as an attempt to strengthen police/community partnerships while avoiding the adverse unintended consequences of the Crime Preventers program.

Given the promising track record of COP in settings (like the U.S.) where relations between police forces and historically marginalized communities are severely strained, we (as well as many other local stakeholders) believed that community policing in Uganda had a genuine potential to build citizens' trust in, and willingness to cooperate with, the UPF, especially in rural areas where the UPF's overtly political role tends to be more muted.

C Additional Results

Table SI-1:
Estimated Effects of Community Policing

Outcome	Estimate	S.E.	Conf. Int.	p-value	Adj. p-value
Patrols, meetings and CWTs (C)	0.151	0.046	(0.058, 0.244)	0.002	
Crime victimization (C)	-0.003	0.026	(-0.055, 0.049)	0.905	0.978
Crime victimization (A)	0.513	0.257	(-0.002, 1.028)	0.051	
Perceived future insecurity (C)	0.017	0.037	(-0.057, 0.090)	0.654	0.900
Overall perceptions of police (C)	0.004	0.036	(-0.068, 0.075)	0.920	0.978
Police empathy and accountability (O)	-0.109	0.081	(-0.273, 0.054)	0.185	0.509
Experience of police abuse (C)	0.075	0.036	(0.003, 0.147)	0.041	0.227
Crime reporting (C)	-0.011	0.018	(-0.047, 0.026)	0.568	0.900
Crime tips (C)	0.010	0.022	(-0.033, 0.053)	0.648	0.900
Police abuse reporting (C/A)	0.223	0.106	(0.010, 0.436)	0.041	0.227
Demand for police spending (C)	0.038	0.057	(-0.076, 0.152)	0.511	0.900
Reporting to local authorities (L)	-0.002	0.060	(-0.122, 0.119)	0.978	0.978
Referral to police by local authorities (L)	0.069	0.050	(-0.032, 0.170)	0.176	0.509
Perceived police intentions (C)	0.007	0.026	(-0.046, 0.060)	0.790	
Knowledge of criminal justice (C)	0.008	0.012	(-0.017, 0.032)	0.529	
Norms of cooperation with police (C)	-0.032	0.022	(-0.077, 0.012)	0.150	
Perceived police capacity (C)	-0.019	0.024	(-0.067, 0.029)	0.424	
Perceived police responsiveness (C)	0.028	0.041	(-0.054, 0.110)	0.498	
Satisfaction with courts (C)	-0.016	0.033	(-0.083, 0.050)	0.622	

Letters in parentheses denote the source of outcome and covariate data. C stands for surveys with citizens; A for administrative crime records obtained from police stations; O for surveys with police officers, and L for surveys with local authorities. p-values for analyses involving main survey outcomes are adjusted using the pre-registered Benjamini and Hochberg adjustment.

Table SI-2:
Estimates Effects of Community Policing - Constituent Outcomes

Index	Outcome	Estimate	S.E.	Conf. Int.	p-value	Adj. p-value
Patrols, meetings and CWTs (C)	Foot patrol frequency	-0.039	0.069	(-0.177, 0.099)	0.574	
Patrols, meetings and CWTs (C)	Vehicle patrol frequency	0.056	0.061	(-0.067, 0.179)	0.365	
Patrols, meetings and CWTs (C)	Community meeting awareness	0.311	0.070	(0.171, 0.451)	0.000	
Patrols, meetings and CWTs (C)	Active neighborhood watch team	0.203	0.076	(0.051, 0.356)	0.010	
Patrols, meetings and CWTs (C)	Watch team patrols	0.180	0.083	(0.014, 0.346)	0.034	
Crime victimization (A)	Violent crimes	0.554	0.248	(0.056, 1.051)	0.030	
Crime victimization (A)	Non-violent crimes	0.448	0.292	(-0.139, 1.035)	0.132	
Violent crimes (A)	Armed robbery	0.556	0.431	(-0.308, 1.420)	0.203	
Violent crimes (A)	Assault	0.554	0.238	(0.077, 1.031)	0.024	
Violent crimes (A)	Sexual violence	0.363	0.286	(-0.212, 0.937)	0.211	
Violent crimes (A)	Domestic abuse	0.114	0.235	(-0.357, 0.585)	0.629	
Violent crimes (A)	Murder	0.690	0.357	(-0.026, 1.406)	0.059	
Violent crimes (A)	Other violent crimes	0.770	0.451	(-0.135, 1.676)	0.094	
Non-violent crimes (A)	Burglary	0.681	0.378	(-0.077, 1.440)	0.077	
Non-violent crimes (A)	Other non-violent crimes	0.010	0.327	(-0.646, 0.665)	0.977	
Crime victimization (C)	Violent crimes (personal)	0.011	0.020	(-0.029, 0.052)	0.575	0.929
Crime victimization (C)	Non-violent crimes (personal)	0.002	0.019	(-0.036, 0.040)	0.922	0.929
Crime victimization (C)	Violent crimes (comm.)	0.005	0.059	(-0.112, 0.123)	0.929	0.929
Crime victimization (C)	Non-violent crimes (comm.)	-0.056	0.045	(-0.147, 0.034)	0.217	0.929
Crime victimization (C)	Land conflict property (personal)	0.019	0.060	(-0.101, 0.140)	0.748	0.929
Crime victimization (C)	Land conflict violent (personal)	0.008	0.041	(-0.074, 0.091)	0.839	0.929
Crime victimization (C)	Land conflict violent (comm.)	-0.013	0.043	(-0.099, 0.074)	0.772	0.929
Violent crimes (personal) (C)	Armed robbery (personal)	0.032	0.025	(-0.019, 0.083)	0.215	
Violent crimes (personal) (C)	Simple assault (personal)	0.000	0.019	(-0.037, 0.037)	0.999	
Violent crimes (personal) (C)	Other violent crimes (personal)	0.019	0.033	(-0.047, 0.085)	0.574	
Non-violent crimes (personal) (C)	Burglary (personal)	0.003	0.019	(-0.034, 0.040)	0.868	
Non-violent crimes (personal) (C)	Other non-violent crimes (personal)	-0.028	0.040	(-0.107, 0.052)	0.488	
Violent crimes (comm.) (C)	Armed robbery (comm.)	0.037	0.047	(-0.057, 0.131)	0.434	
Violent crimes (comm.) (C)	Aggravated assault (comm.)	0.016	0.026	(-0.035, 0.068)	0.528	
Violent crimes (comm.) (C)	Simple assault (comm.)	0.025	0.034	(-0.044, 0.094)	0.476	
Violent crimes (comm.) (C)	Sexual assault (comm.)	0.021	0.055	(-0.089, 0.131)	0.705	
Violent crimes (comm.) (C)	Domestic abuse (comm.)	-0.021	0.069	(-0.160, 0.118)	0.762	
Violent crimes (comm.) (C)	Murder (comm.)	-0.042	0.092	(-0.226, 0.141)	0.645	
Violent crimes (comm.) (C)	Other violent crimes (comm.)	-0.012	0.018	(-0.048, 0.023)	0.488	
Non-violent crimes (comm.) (C)	Burglary (comm.)	-0.060	0.046	(-0.151, 0.032)	0.195	

Non-violent crimes (comm.) (C)	Other non-violent crimes (comm.)	0.058	0.040	(-0.023, 0.139)	0.157	
Perceived future insecurity (C)	Feared violent crime	0.046	0.051	(-0.056, 0.148)	0.373	0.833
Perceived future insecurity (C)	Fear non-violent crime	0.070	0.056	(-0.042, 0.182)	0.213	0.833
Perceived future insecurity (C)	Feared walking	0.012	0.037	(-0.062, 0.086)	0.745	0.833
Perceived future insecurity (C)	Unsafe walking at night	-0.011	0.051	(-0.112, 0.091)	0.833	0.833
Perceived future insecurity (C)	Unsafe home at night	-0.011	0.043	(-0.097, 0.075)	0.801	0.833
Overall perceptions of police (C)	Trust in police	0.025	0.050	(-0.075, 0.124)	0.623	0.879
Overall perceptions of police (C)	Trust in service of police	-0.008	0.051	(-0.110, 0.095)	0.879	0.879
Overall perceptions of police (C)	Not intimidated police	-0.015	0.041	(-0.098, 0.068)	0.716	0.879
Police empathy and accountability (O)	Police corruption idx.	-0.179	0.120	(-0.421, 0.063)	0.144	0.300
Police empathy and accountability (O)	Police abuse idx.	-0.037	0.158	(-0.356, 0.282)	0.818	0.818
Police empathy and accountability (O)	Police accountability idx.	-0.125	0.085	(-0.297, 0.047)	0.150	0.300
Police empathy and accountability (O)	Empathy idx.	-0.106	0.112	(-0.331, 0.119)	0.348	0.464
Police corruption idx. (O)	Hypothetical 2: own misconduct (corruption)	-0.108	0.163	(-0.437, 0.221)	0.511	
Police corruption idx. (O)	Hypothetical 2: others' misconduct (corruption)	-0.132	0.195	(-0.526, 0.261)	0.501	
Police corruption idx. (O)	Hypothetical 3: own misconduct (corruption)	-0.296	0.136	(-0.570, -0.023)	0.035	
Police corruption idx. (O)	Hypothetical 3: others' misconduct (corruption)	-0.206	0.135	(-0.477, 0.066)	0.134	
Police abuse idx. (O)	Hypothetical 5: own misconduct	-0.095	0.137	(-0.372, 0.182)	0.494	
Police abuse idx. (O)	Hypothetical 5: others' misconduct	0.018	0.197	(-0.378, 0.415)	0.926	
Police accountability idx. (O)	Police takes complaints seriously	-0.270	0.126	(-0.523, -0.016)	0.037	
Police accountability idx. (O)	Hypothetical 2: disciplinary punishment	-0.121	0.171	(-0.466, 0.225)	0.485	
Police accountability idx. (O)	Hypothetical 2: report fellow officer	-0.208	0.184	(-0.579, 0.162)	0.263	
Police accountability idx. (O)	Hypothetical 2: reports by other officers	-0.153	0.159	(-0.473, 0.168)	0.342	
Police accountability idx. (O)	Hypothetical 3: disciplinary punishment	-0.067	0.133	(-0.334, 0.201)	0.618	
Police accountability idx. (O)	Hypothetical 3: report fellow officer	-0.242	0.165	(-0.574, 0.090)	0.149	
Police accountability idx. (O)	Hypothetical 3: reports by other officers	-0.133	0.204	(-0.544, 0.279)	0.519	
Police accountability idx. (O)	Hypothetical 5: disciplinary punishment	-0.095	0.142	(-0.381, 0.192)	0.509	
Police accountability idx. (O)	Hypothetical 5: report fellow officer	0.003	0.219	(-0.439, 0.445)	0.991	
Police accountability idx. (O)	Hypothetical 5: reports by other officers	-0.045	0.160	(-0.367, 0.277)	0.778	
Empathy idx. (O)	Empathy (complaints)	0.101	0.123	(-0.147, 0.350)	0.416	
Empathy idx. (O)	Empathy (reports)	-0.311	0.170	(-0.655, 0.033)	0.075	
Experience of police abuse (C)	Police abuse	0.015	0.041	(-0.068, 0.098)	0.723	0.723
Experience of police abuse (C)	Bribe frequency	0.083	0.041	(0.002, 0.165)	0.045	0.134
Experience of police abuse (C)	Bribe amount	0.121	0.080	(-0.040, 0.282)	0.137	0.205
Crime reporting (C)	Violent crimes reported (personal)	-0.002	0.036	(-0.073, 0.069)	0.950	0.997
Crime reporting (C)	Non-violent crimes reported (personal)	0.062	0.039	(-0.017, 0.141)	0.120	0.842
Crime reporting (C)	Violent crimes reported (comm.)	0.020	0.064	(-0.107, 0.148)	0.752	0.967
Crime reporting (C)	Non-violent crime reported (comm.)	0.005	0.049	(-0.093, 0.103)	0.919	0.997
Crime reporting (C)	Resolution of crime index	-0.010	0.029	(-0.068, 0.048)	0.731	0.967

Crime reporting (C)	Would report armed robbery	-0.079	0.046	(-0.172, 0.013)	0.092	0.842
Crime reporting (C)	Would report burglary	-0.057	0.054	(-0.165, 0.052)	0.298	0.967
Crime reporting (C)	Would report theft	-0.025	0.059	(-0.143, 0.093)	0.671	0.967
Crime reporting (C)	Would report domestic violence	0.003	0.060	(-0.117, 0.123)	0.960	0.997
Crime reporting (C)	Armed robbery reported (personal)	-0.068	0.066	(-0.200, 0.064)	0.309	0.967
Crime reporting (C)	Burglary reported (personal)	-0.055	0.058	(-0.172, 0.062)	0.353	0.967
Crime reporting (C)	First report theft	-0.018	0.053	(-0.124, 0.087)	0.731	0.967
Crime reporting (C)	Animal theft resolution	-0.044	0.051	(-0.147, 0.059)	0.398	0.967
Crime reporting (C)	First report domestic violence	-0.009	0.054	(-0.116, 0.099)	0.869	0.997
Crime reporting (C)	First report land conflict	-0.053	0.034	(-0.122, 0.015)	0.125	0.842
Crime reporting (C)	Land conflict resolution	-0.035	0.048	(-0.131, 0.062)	0.473	0.967
Crime reporting (C)	Share info burlgary	-0.042	0.039	(-0.121, 0.037)	0.290	0.967
Crime reporting (C)	Share info theft	-0.028	0.041	(-0.111, 0.055)	0.501	0.967
Crime reporting (C)	Share info dom. viol.	0.011	0.045	(-0.079, 0.101)	0.806	0.989
Crime reporting (C)	Aggravated assault reported (personal)	-0.041	0.029	(-0.100, 0.018)	0.166	0.894
Crime reporting (C)	Defilement reported (personal)	-0.014	0.042	(-0.097, 0.070)	0.745	0.967
Crime reporting (C)	Rape reported (personal)	0.000	0.038	(-0.077, 0.077)	1.000	1.000
Crime reporting (C)	Physical abuse reported (personal)	0.114	0.048	(0.017, 0.211)	0.022	0.601
Crime reporting (C)	Verbal abuse reported (personal)	0.011	0.032	(-0.054, 0.076)	0.731	0.967
Crime reporting (C)	Verbal abuse reported (comm.)	-0.013	0.034	(-0.082, 0.055)	0.704	0.967
Crime reporting (C)	Mob violence reported (comm.)	0.049	0.059	(-0.070, 0.167)	0.415	0.967
Crime reporting (C)	Riot reported (comm.)	0.032	0.061	(-0.091, 0.154)	0.606	0.967
Violence crimes rep. (personal) (C)	Armed robbery reported (personal)	0.000	0.039	(-0.079, 0.078)	0.994	
Violence crimes rep. (personal) (C)	Simple assault reported (personal)	-0.004	0.028	(-0.060, 0.052)	0.884	
Violence crimes rep. (personal) (C)	Other violent crimes reported (personal)	0.000	0.037	(-0.073, 0.073)	0.996	
Non-violence crimes rep. (personal) (C)	Burglary reported (personal)	0.081	0.040	(0.001, 0.160)	0.048	
Non-violence crimes rep. (personal) (C)	Other non-violent crimes reported (personal)	-0.043	0.030	(-0.103, 0.018)	0.162	
Violence crimes rep. (comm.) (C)	Armed robbery reported (comm.)	0.039	0.052	(-0.065, 0.143)	0.453	
Violence crimes rep. (comm.) (C)	Aggravated assault reported (comm.)	0.011	0.037	(-0.064, 0.085)	0.776	
Violence crimes rep. (comm.) (C)	Simple assault reported (comm.)	0.011	0.035	(-0.060, 0.081)	0.761	
Violence crimes rep. (comm.) (C)	Sexual assault reported (comm.)	0.062	0.068	(-0.074, 0.198)	0.366	
Violence crimes rep. (comm.) (C)	Domestic physical abuse reported (comm.)	-0.016	0.041	(-0.098, 0.066)	0.702	
Violence crimes rep. (comm.) (C)	Murder reported (comm.)	-0.024	0.085	(-0.195, 0.148)	0.784	
Violence crimes rep. (comm.) (C)	Other violent crime reported (comm.)	0.006	0.017	(-0.028, 0.041)	0.715	
Non-violence crimes rep. (comm.) (C)	Burglary reported (comm.)	-0.002	0.050	(-0.102, 0.097)	0.960	
Non-violence crimes rep. (comm.) (C)	Other non-violent crime reported (comm.)	0.038	0.040	(-0.042, 0.117)	0.347	
Resolution of crime index (C)	Burglary resolution	-0.040	0.039	(-0.118, 0.038)	0.309	
Resolution of crime index (C)	Domestic abuse resolution	0.060	0.054	(-0.049, 0.169)	0.278	
Resolution of crime index (C)	Armed robbery resolution	-0.051	0.034	(-0.118, 0.017)	0.140	

Crime tips (C)	Contacted police for suspicious activity	0.006	0.039	(-0.072, 0.083)	0.883	0.883
Crime tips (C)	Gave information to police	-0.014	0.034	(-0.083, 0.054)	0.672	0.883
Crime tips (C)	Share info indirectly	0.077	0.036	(0.005, 0.149)	0.037	0.077
Crime tips (C)	Assist investigation indirectly	0.088	0.036	(0.016, 0.161)	0.017	0.077
Crime tips (C)	Share info armed robbery	-0.005	0.034	(-0.073, 0.063)	0.876	0.883
Crime tips (C)	Share info theft	-0.088	0.041	(-0.171, -0.005)	0.039	0.077
Police abuse reporting (C/A)	Reported drinking on duty	0.023	0.048	(-0.073, 0.119)	0.628	0.628
Police abuse reporting (C/A)	Reported police beating	0.042	0.051	(-0.060, 0.145)	0.412	0.628
Police abuse reporting (C/A)	Reported police abuse	0.003	0.005	(-0.008, 0.014)	0.605	0.628
Police abuse reporting (C/A)	Police misconduct	0.833	0.408	(0.016, 1.651)	0.046	0.184
Reporting to local authorities (L)	Would refer land dispute	0.091	0.128	(-0.165, 0.347)	0.481	0.721
Reporting to local authorities (L)	Would refer violent land dispute	-0.086	0.101	(-0.288, 0.116)	0.399	0.721
Reporting to local authorities (L)	Would refer chicken theft	0.046	0.129	(-0.213, 0.304)	0.724	0.724
Referral to police by local authorities (L)	Would refer motor bike theft	0.153	0.125	(-0.098, 0.405)	0.225	0.395
Referral to police by local authorities (L)	Would refer grave domestic assault	0.107	0.095	(-0.083, 0.298)	0.263	0.395
Referral to police by local authorities (L)	Would refer domestic violence	-0.016	0.114	(-0.246, 0.213)	0.887	1.000
Referral to police by local authorities (L)	Likely asked to adjudicate land dispute	-0.198	0.104	(-0.407, 0.012)	0.064	0.191
Referral to police by local authorities (L)	Likely asked to adjudicate chicken theft	0.000	0.108	(-0.217, 0.217)	1.000	1.000
Referral to police by local authorities (L)	Likely asked to intervene in domestic violence	0.195	0.088	(0.019, 0.372)	0.031	0.184
Perceived police intentions (C)	Police will investigate	-0.063	0.048	(-0.158, 0.033)	0.192	
Perceived police intentions (C)	Police will be fair	0.017	0.051	(-0.085, 0.119)	0.738	
Perceived police intentions (C)	Political interest idx.	-0.004	0.034	(-0.072, 0.065)	0.917	
Perceived police intentions (C)	Police take job seriously	0.053	0.052	(-0.052, 0.157)	0.319	
Perceived police intentions (C)	Police care	0.058	0.048	(-0.038, 0.154)	0.229	
Perceived police intentions (C)	Police are committed	0.025	0.037	(-0.049, 0.100)	0.497	
Perceived police intentions (C)	Police investigate without pay	-0.033	0.042	(-0.117, 0.050)	0.429	
Perceived police intentions (C)	Facilitation is unacceptable	0.011	0.029	(-0.047, 0.070)	0.702	
Perceived police intentions (C)	Criminal pay to go free unlikely	-0.028	0.048	(-0.125, 0.069)	0.564	
Perceived police intentions (C)	Police treat men and women equally	0.030	0.046	(-0.062, 0.121)	0.520	
Perceived police intentions (C)	Police treat rich and poor equally	0.030	0.048	(-0.067, 0.126)	0.539	
Perceived police intentions (C)	Police take burglary seriously	-0.033	0.059	(-0.152, 0.086)	0.581	
Perceived police intentions (C)	Police fair burglary	0.037	0.049	(-0.061, 0.134)	0.458	
Perceived police intentions (C)	Police take theft seriously	-0.031	0.052	(-0.136, 0.074)	0.554	
Perceived police intentions (C)	Police fair theft	0.005	0.046	(-0.088, 0.098)	0.921	
Perceived police intentions (C)	Police take dom. viol. seriously	-0.080	0.044	(-0.168, 0.008)	0.075	
Perceived police intentions (C)	Police fair dom. viol.	0.041	0.042	(-0.043, 0.126)	0.331	
Perceived police intentions (C)	Right amount of force	-0.023	0.049	(-0.121, 0.075)	0.637	
Perceived police intentions (C)	Punish for reporting unlikely	0.008	0.033	(-0.058, 0.075)	0.805	
Political interest idx. (C)	Police are not corrupt	-0.037	0.032	(-0.101, 0.027)	0.249	

Political interest idx. (C)	Police serve equally	0.032	0.046	(-0.061, 0.125)	0.494
Knowledge of criminal justice (C)	Legal knowledge idx.	0.042	0.020	(0.001, 0.083)	0.044
Knowledge of criminal justice (C)	Reporting knowledge idx.	0.043	0.034	(-0.025, 0.111)	0.209
Knowledge of criminal justice (C)	Legal knowledge (report misconduct)	0.020	0.039	(-0.057, 0.097)	0.606
Knowledge of criminal justice (C)	Legal knowledge (drop case)	0.045	0.038	(-0.031, 0.120)	0.243
Knowledge of criminal justice (C)	Legal knowledge (defilement)	0.067	0.055	(-0.044, 0.178)	0.232
Knowledge of criminal justice (C)	Legal knowledge (LC1 chairperson)	-0.031	0.055	(-0.141, 0.079)	0.572
Knowledge of criminal justice (C)	Legal knowledge (child labor)	-0.055	0.040	(-0.135, 0.025)	0.173
Knowledge of criminal justice (C)	Legal knowledge (mob violence)	-0.040	0.045	(-0.131, 0.051)	0.381
Knowledge of criminal justice (C)	Police knowledge (phone number)	-0.018	0.027	(-0.072, 0.037)	0.518
Legal knowledge idx. (C)	Legal Knowledge (suspect)	0.079	0.040	(-0.000, 0.159)	0.051
Legal knowledge idx. (C)	Legal Knowledge (lawyer)	0.018	0.035	(-0.051, 0.088)	0.595
Legal knowledge idx. (C)	Legal Knowledge (fees)	0.107	0.051	(0.004, 0.210)	0.042
Legal knowledge idx. (C)	Legal Knowledge (vaw)	-0.033	0.036	(-0.106, 0.040)	0.369
Reporting knowledge idx. (C)	Police Knowledge (followup)	0.063	0.035	(-0.006, 0.132)	0.074
Reporting knowledge idx. (C)	Police Knowledge (where is station)	0.023	0.052	(-0.082, 0.127)	0.666
Norms of cooperation with police (C)	Reporting norm (theft)	-0.091	0.053	(-0.197, 0.016)	0.093
Norms of cooperation with police (C)	Reporting norm (domestic abuse)	0.020	0.047	(-0.075, 0.115)	0.673
Norms of cooperation with police (C)	Obey police norm	0.001	0.045	(-0.090, 0.091)	0.989
Norms of cooperation with police (C)	Bystander report armed robbery	-0.099	0.046	(-0.192, -0.006)	0.037
Norms of cooperation with police (C)	Bystander report burglary	-0.065	0.043	(-0.151, 0.020)	0.130
Norms of cooperation with police (C)	Bystander report animal theft	-0.035	0.045	(-0.126, 0.056)	0.449
Norms of cooperation with police (C)	Bystander report dom. viol.	0.045	0.045	(-0.045, 0.135)	0.318
Perceived police capacity (C)	Police timeliness	-0.041	0.037	(-0.115, 0.033)	0.276
Perceived police capacity (C)	Police investigation capacity	-0.028	0.034	(-0.095, 0.040)	0.414
Perceived police capacity (C)	Police aware of challenges	0.002	0.046	(-0.090, 0.095)	0.959
Perceived police responsiveness (C)	Police responsive to complaints	0.015	0.046	(-0.077, 0.107)	0.746
Perceived police responsiveness (C)	Police consider opinions	0.031	0.042	(-0.053, 0.115)	0.461
Satisfaction with courts (C)	Courts punish timely	-0.011	0.046	(-0.104, 0.081)	0.806
Satisfaction with courts (C)	Courts punish appropriately	-0.021	0.039	(-0.099, 0.058)	0.601

Letters in parentheses denote the source of outcome and covariate data. C stands for surveys with citizens; A for administrative crime records obtained from police stations; O for surveys with police officers, and L for surveys with local authorities. For main outcomes, p-values for all constituent items of a given index are adjusted using the pre-registered Benjamini and Hochberg adjustment.

D Attrition

	Replaced	
	Citizens	Officers
	(1)	(2)
Community Policing	−0.015	−0.007
	(0.014)	(0.057)
Control Mean	0.155	0.802
p-value	0.303	0.893
Stations	72	71
Block FE	yes	yes
Observations	3,456	217

*p<0.1; **p<0.05; ***p<0.01

Table SI-3: Estimated effect of community policing on whether respondents were replaced

The dependent variable is an indicator for whether a respondent was replaced. Estimates stem from a specification that regresses the indicator for replacement on a treatment assignment indicator and block fixed effects. Standard errors allow for clustering on the police station level. The first column pertains to citizens and the second to police officers.

	p-value	N
Citizens	0.342	3456
Officers	0.793	217

Table SI-4: F-test of treatment-by-covariate interactions in models of attrition

P-values come from an F-test that compares the following two models. The full model regresses an indicator for whether a respondent was replaced on an indicator for treatment assignment and all treatment-by-covariate interactions using a selection of baseline covariates. The nested model restricts all interaction terms to be zero. Both the general and the nested model also include indicators for missing values in the baseline measures, where those exist. These missing values have been imputed with zeros. Row 1 pertains to citizens. The set of eight baseline covariates used for this test has been pre-registered. Row 2 pertains to officers. No selection of covariates has been pre-registered for the officer test. The set of covariates used for the officer test includes age, gender as well as the four sub-indices that make up the main outcome index "Police empathy and accountability" (see table SI-2).