

Meta-Analysis Pre-Analysis Plan[†]

Community Policing Metaketa Project

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1. Policy problem

Over the past quarter century, the death toll from war dramatically declined. The most recent new inter-state conflict logged by the Uppsala Conflict Data Program ended in 2012, between Sudan and South Sudan, and since 1980, deaths from civil wars have fallen by 75 percent (Pettersson and Eck 2017; Baranyi, Beaudet, and Locher 2011). Although armed conflict is now less common and less deadly, other forms of violence have surged in developing countries. Today, more than one quarter of the world's population lives in conditions of insecurity due to high levels of violence unrelated to war, including inter-personal violence, collective violence, and violence related to organized crime (Baranyi, Beaudet, and Locher 2011).

Reducing crime and insecurity in developing countries stands at the top of the global policy agenda. Indeed, the main recommendation from the World Bank Development Report in 2011 was the need for "strengthening legitimate institutions and governance to provide citizen security, justice, and jobs" in order "to break cycles of violence" (Baranyi, Beaudet, and Locher 2011).

Broadly speaking, efforts to combat crime and insecurity focus on reducing the returns to committing a crime and participating in criminal organizations and increasing the risk of arrest and sanction (see Becker (1968) for an economic theory of crime that motivates this focus on the costs and benefits). Many interventions fall into two camps. The first targets the opportunity cost of crime, by providing more profitable or enjoyable ways to spend time. High-risk youth, often men, are the focus of interventions to increase employment and incomes, including through the provision of skills training (Visher, Winterfield, and Coggeshall 2005); remedial education (Cook et al. 2014); and capital (Blattman, Jamison, and Sheridan 2017). After-school programs and athletic leagues also provide alternative outlets for the same population to pass time. The second set of interventions increases the probability of detection, arrest, and sanctions for criminals. Changes to police practices, including hot spot policing (Blattman et al. 2017), community policing (Skogan 2004), and problem-oriented policing (Braga et al. 1999); institutional reforms of police (Banerjee et al. 2012), prosecution services, and courts (Slough and Fariss 2017); neighborhood watches (Bennett, Holloway, and Farrington 2006); reforms of informal dispute resolution mechanisms (Blattman, Hartman, and Blair 2014); and many other interventions fit into this category. These two groups of interventions are not exhaustive. For example, recent studies have examined the effects of non-cognitive skill building through cognitive behavioral therapy (Heller et al. 2013).

As the primary institution in most states for enforcing laws and maintaining order, police agencies are the site of substantial innovation and reform in both practices and policies. These include stop-and-frisk policies, CCTV monitoring in high-crime areas, body camera usage, problem-oriented policing, pulling levers policing (deterrence targeted at repeat offenders), hotspot policing, police-enforced bans of weapons and curfews, changes to police education and training, and community-oriented policing. Experimental or quasi-experimental evidence exists for several of these programmatic interventions, including those related to problem-oriented policing, hotspot policing, and police enforced bans [see the Center for Evidence-Based Crime for a comprehensive assessment of existing experimental evidence].

Problem-oriented policing, one of the more widely deployed interventions, requires police to take a proactive approach to addressing high-risk areas with a mix of policing and non-policing interventions. By and large, research suggests this strategy is effective in the United States (e.g, Braga et al. 1999; White and Katz 2013; Weisburd and Mazerolle 1995; Mazerolle, Price, and Roehl 2000; Braga and Weisburd 2012; Sherman, Buerger, and Gartin 1989; Sherman et al. 1995; Wood et al. 2014). Related to problem-oriented policing, scholars also view hotspot policing, which focuses on areas where criminal activity is highly

concentrated, as an effective strategy in a U.S. context, though results are more mixed (e.g., Taylor, Koper, and Woods 2011; Bichler, Schmerler, and Enriquez 2013; Braga and Bond 2008; Di Tella and Schargrodsky 2004; Ratcliffe et al. 2011; Sherman and Weisburd 1995a; Weisburd and Telep 2014; Rosenfeld, Deckard, and Blackburn 2014; Groff et al. 2015; Piza and O'Hara 2014; Sherman and Rogan 1995; Braga and Weisburd 2010). There is also some evidence that police crackdowns, or a sudden increase in apprehension or officer presence, leads to a short-term reduction in crime (Sherman 1990).

A small but growing body of research examines how these interventions fare in weakly-institutionalized settings. Interventions may operate differently in these contexts for a variety of reasons, including a lack of trust in the police and the state more generally, low state capacity, a history of military rather than civilian policing, and less access to resources (Brogden 2002; Davis, Henderson, and Merrick 2003). Social scientists have evaluated several interventions in these settings, including officer training and education, reducing transfer rates, increasing the frequency of patrols, and specialized programs related to gender inclusion. However, the success of these diverse interventions remains mixed, likely due to their limited implementation (Higginson et al. 2015). For example, of five interventions tested by Banerjee et al. (2012) in Rajasthan, India only improved training and decoy visits had a significant effect on security outcomes. Blattman et al. (2017) found that hotspot policing in Bogota, Colombia had little effect on reducing crime. On the other hand, both Blair, Karim, and Morse (2018) in Liberia and Cooper (2018) in Papua New Guinea and concluded that the presence of community police officers improved security outcomes. However, Blair, Karim, and Morse (2018) finds that a similar intervention did not increase trust in various security and legal institutions. In an experiment on female ratio balancing in Liberia, Karim (2017) finds that it is possible to successfully establish this type of trust. Furthermore, in contrast to evidence from the United States on police enforced bans—for example, on firearms on certain high violence days—only one out of three studies in a weakly-institutionalized context found a significant reduction in homicides as a result of the police intervention (Villaveces et al. 2000; Khruakham 2011; Higginson et al. 2015). Larger scale reforms have also been attempted in these settings, with less evidence still. Mexico, among others, have moved to decentralize the police force in an effort to deter corruption, while in others, including Brazil, the state has maintained firm central control of local police forces in order to address crime through a more professionalized security apparatus (Fisman and Gatti 2002). The results of these efforts have been inconclusive, or even, decidedly counterproductive (Contreras 2012; Magaloni, Franco, and Melo 2015; Trejo and Ley 2016).

In this study, we examine the effects of community policing in developing countries. Broadly, community-oriented policing departs from traditional policing by “involv[ing] average citizens directly in the police process” to build channels of dialogue and improve security-citizen collaboration (Greene and Mastrofski 1988). Community-oriented policing is designed to engineer trust and build effective police agencies in low-trust settings (Skogan 2004). The aim is to make police forces more effective both directly, by generating information about community problems, and indirectly, by building the trust of citizens in the police. This is important because, particularly in low-and middle-income countries plagued by high violence, officers often are at an information disadvantage as compared to citizens living in the communities they patrol. Without citizen support, police may be less informed about criminal activity, and as a result, less cautious in their use of force. Rather than reducing insecurity, this could have the countervailing effect of leading to further violence and a deterioration of the security situation (Grillo 2012). At present, 85 percent of U.S. police departments and nearly 100 percent of larger departments had a community policing component (Reaves 2015).

Despite their widespread adoption in the United States and increasingly in the developing world (cf.

Wassel 2014; Muggah et al. 2016), there is limited credible evidence about whether community policing in fact increases trust in the police or reduces crime (for a review of existing evidence, see Gill et al. 2014). There is less still that assesses which components of community policing are responsible for these changes. The high-quality evidence that does exist is from the United States (the Baltimore Community Police Experiment, see Pate and Annan (1989); the Risk-Focused Policing at Places Experiment in Redlands, C.A., see Weisburd, Morris, and Ready (2008); and the Philadelphia Foot Patrol Experiment, see Ratcliffe et al. (2011)).

Evidence outside the U.S. is limited, leaving open the question of whether community policing is effective in the range of settings in which it is deployed — including post-conflict, weakly institutionalized, and low-income contexts. Indeed, evidence from outside of the United States presents a mixed picture of the effectiveness of community policing, due to definitional ambiguities and low police professionalization, among other factors (Brogden 2002; Ruteere and Pommerolle 2003; Seagrave 1996). Although most of this research is qualitative, relying on case studies and evaluations of existing programs (Arias and Ungar 2009; Marat 2016; Frühling 2007; Riccio et al. 2013; Davis, Henderson, and Merrick 2003), a few efforts assess community policing interventions quantitatively. However, in a thorough review of these studies, Higginson et al. (2015) found the results to be inconclusive (for example, the Fica Vivo program in Brazil, see Alves and Arias (2012); Safer Commune Program in Chile, see Marcano and Ruprah (2008); and Building Citizenship Culture initiative in Colombia, see Concha-Eastman (2005)).

2. Metaketa approach

The coordinated research project on community policing we describe here aims to develop credible evidence based on “gold standard” experimental methods that are also portable in the sense that they can be applied in new contexts. The Metaketa approach strengthens the scope for knowledge accumulation by conducting collaborative, coordinated research in six contexts using (1) a comparable intervention evaluating the citizen-police components of a community-oriented policing program; (2) an intervention(s) specific to each context that assesses other aspects of community-oriented policing or other ways to build trusted and effective police services; and (3) a control condition that represents status quo policing practices that does not include the two citizen-police elements of community-oriented policing.

Metaketes are integrated research programs, where multiple teams of researchers work on projects in parallel to generate generalizable answers to major questions of scholarly and policy importance. The core pillars of the Metaketa approach are:

1. Major themes: Metaketes tackle major questions of scholarly and policy relevance, with a focus on consolidation of knowledge rather than theoretical innovation.
2. Strong designs: all studies employ randomized interventions to identify causal effects.
3. Collaboration and autonomy: teams work on parallel projects and collaborate on core features of research design, although projects may produce conflicting results.
4. Comparable interventions and measures: by design, differences in findings should be attributable to contextual factors rather than to differences in design.
5. Analytic transparency: research teams share a common commitment to analytic transparency, including design registration and pre-analysis, open data and materials, and third-party analysis prior to publication.
6. Formal synthesis: the meta-analysis of the studies is based on ex-ante planning and integrated

publication to avoid file-drawer bias.

The Community Policing Metaketa was launched in Summer 2017 and will run until Spring 2020. The objectives are to implement a series of experimental projects that assess the effects of community policing programs in developing countries. This Metaketa is administered by the Evidence in Governance and Politics (EGAP) network, housed at the University of California, Berkeley. Metaketa IV: Community Policing is overseen by a three-person academic committee (Graeme Blair, Fotini Christia, and Jeremy Weinstein). The projects are conducted by expert academic teams in each country in partnership with a local police agency (enumerated in Table 1).

Project Title	Location	Investigators	Police Agency Partner
Can Trust Be Built Through Citizen Monitoring of Police Activity?	Brazil	Emile Badran (Igarape); Thiemo Fetzer (University of Warwick); Robert Muggah (Igarape); Barbara Silva (Igarape); Pedro CL Souza (PUC-Rio)	Polícia Militar de Santa Catarina
Community Policing and Public Trust: A Multi-Country Initiative	Colombia	Eric Arias (New York University); Rebecca Hanson (University of Florida); Dorothy Kronick (University of Pennsylvania)	Medellin Metropolitan Police
Building Trust and Improving Police Effectiveness: A Field Experiment in Urban Liberia	Liberia	Ben Morse and Lily Tsai (Massachusetts Institute of Technology)	Liberian National Police
Community Policing, Dispute Resolution, and Public Trust in Punjab, Pakistan	Pakistan	Ali Cheema (Lahore University); Ali Hasanain (Lahore University); Jacob Shapiro (Princeton University)	Sheikhupura and Nankana District Police
Evaluating Community Policing in the Philippines - Communication, Trust, and Service Provision	Philippines	Dotan Haim, Matthew Nanes, and Nico Ravanilla (University of California – San Diego)	Philippines National Police
Community Policing and Public Trust: A Field Experiment in Uganda	Uganda	Rob Blair (Brown University); Guy Grossman (University of Pennsylvania); Ben Kachero (Office of the Prime Minister, Uganda)	Uganda Police Force

Table 1: Summary of Academic Teams and Policy Agency Partners.

3. Interventions

A wide range of individual programs are labeled community policing, ranging from organizing officers into local beat patrols; town-hall meetings between police and citizens; citizen crime reporting hotlines; frequent confidence-building patrols; citizen ombudspersons; home visits by police; neighborhood watches; and non-police responses such as building code enforcement. Yet four principles are common to many programs identified by experts as exemplars: (1) implementation of beat patrols in which officers are assigned to patrol small neighborhoods or

villages, (2) decentralization of decision-making authority to those beat officers and their supervisors, (3) community engagement programs to solicit information on community problems from citizens and transmit information about police programs to citizens; and (4) problem-oriented policing programs, in which police address problems identified through community engagement programs directly with dedicated budgets for small projects and/or indirectly with the assistance of other public or private agencies (Skogan 2004; Problem-Oriented Policing 2018).

We coordinate six dimensions of the interventions across studies: the level of community presence of police; training and support to community watch teams; formal meetings between the police and community members; hotlines for reporting; citizen feedback mechanisms; and the budget and authority of officers to conduct problem oriented policing activities. Table 2 and Table 3 summarize the interventions from each study on each dimension.

	Condition	Community presence	Training and support to community watch teams	Formal meetings with community members
Brazil	Control	No relevant community presence beyond existing patrol beats	Support to Rede de Vizinhos groups; very few currently exist	No existing community policing program
	Treatment	Rede de Vizinhos meetings held twice per year; frequent real-time interaction through WhatsApp groups	Information campaign to encourage formation of additional Rede de Vizinhos groups; police liaison assigned to groups that form	Meetings held twice a year in communities that form Rede de Vizinhos groups, focused on developing action plan
Colombia	Control	Beats are patrolled by a total of 6 officers (groups of 2, by 8 hour shift); expected to engage with citizens, but inconsistent	No community watch teams in Medellin	Some existing community meetings; frequency unclear but supposed to be monthly; only high-ranking police officers
	Treatment	Beats are patrolled by a total of 6 officers (groups of 2, by 8 hour shift); expected to engage with citizens, but inconsistent	No community watch teams in Medellin	Bi-monthly meetings with lower-ranking police officers
Liberia	Control	Limited proactive patrolling; Generally limited to incident response	Communities already self-organize community watch teams	Community meetings are rare
	Treatment	Monthly visits of 4-6 officers	Lectures on how to organize a watch team during town hall meetings	Monthly community meeting around organized topics
Pakistan	Control	Existing beats are patrolled by 3-4 policeman in a patrol car, little patrolling in rural areas	No support or training will be provided	No formal meetings with community groups
	Treatment	Institute saturated patrolling	Revive neighborhood watch leaders	Fortnightly beat-level meetings, focus on problem-solving
Philippines	Control	Officers have regular beat patrols and are expected to visit each village at least once a month, but patrolling is inconsistent, especially in rural areas	Officers provide tanods basic training on conducting foot patrol when requested by the barangay council	Sporadic "pulong-pulong" (community gatherings) usually after an incident of harassment or attack by insurgents

	Condition	Community presence	Training and support to community watch teams	Formal meetings with community members
	Treatment	Officers speak with at least ten citizens per day	Training to more effectively collect and organize information on community public safety needs	"Soup and sandals" program in treatment barangays if community leaders decide to implement the program; Culminating activity to report to the community the activities and accomplishments of the POP task force (POP teams) in the past 6 months
Uganda	Control	Expectation is one foot patrol a night, but reality is that foot patrols happen very infrequently	There are some existing community watch teams, but it is not clear how widely they are adopted	No regular mechanism for town hall meetings
	Treatment	Plan for increased patrolling, including proactive daytime patrols; officers will conduct at least 1 foot patrol per village per month	Plan to create community watch teams, but details TBD	Frequent village meetings to identify problems

Table 2: Intervention Summary I

	Condition	Hotline for reporting	Citizen feedback mechanism	Problem oriented policing (budgets, authority)
Brazil	Control	Telephone and on-line reporting	Telephone and on-line reporting	Support to RdV groups; very few currently exist
	Treatment	Telephone and on-line reporting	Telephone and on-line reporting	Brainstorming on joint action plan, mobilization of other government agencies, no additional resources
Colombia	Control	Cell phone app and emergency line available to all communities	Cell phone app and emergency line available to all communities	Decentralized patrolling by officers trained in POP available to all communities
	Treatment	Creation of WhatsApp mechanism for more regular engagement	Creation of WhatsApp mechanism for more regular engagement; feedback in future meetings	At each meeting, review commitments made by officers and citizens to address concrete problems
Liberia	Control	Exists but is frequently out of service	No effective mechanism for citizen feedback	No formal problem-oriented community policing program

	Condition	Hotline for reporting	Citizen feedback mechanism	Problem oriented policing (budgets, authority)
	Treatment	Exists but is frequently out of service	Question and answer sessions during community meetings	No formal problem-oriented community policing program. Informally, community policing officers report findings from patrols and town hall meetings to their superiors; superiors potentially modify policing strategy in response
Pakistan	Control	Existing Rescue 15 line available for reporting, not anonymous	Existing system for a wide range of government services	No institutionalized problem-oriented policing program currently implemented
	Treatment	Encouragement to use existing police 15 helpline	Solicitation of cell-based feedback on police performance (TBD)	Identify local problems with community input; no additional resources
Philippines	Control	Decentralized municipal hotlines and a new provincial hotline, both of which had very low usage	Essentially nothing in place	Weakly institutionalized community committee on peace-keeping; little interaction between Police and community leaders; no oversight from police; virtually no budget to deal with community safety needs
	Treatment	Encouragement to use provincial SMS hotline; improved, centralized police procedure to respond to messages	Systematic collection of citizen feedback by community safety leaders to be shared at monthly meetings	Creation of task force to identify community problems, develop plan of action, small additional resources, regular meetings
Uganda	Control	No existing toll free number for reporting		
	Treatment	Provide phone numbers for Station and Post commanders to citizenry during community meetings	Provide phone numbers for Station and Post commanders to citizenry during community meetings and provide the District Police Commander contact, in addition to the existing contacts for Professional Standards Unit	Officers will not receive any additional resources, though some may be provided on an ad hoc basis

Table 3: Intervention Summary II

As the tables suggest, the interventions are not identical across contexts. The exact elements of each intervention reflect the needs and priorities of each police agency, as well as their existing approach to policing. Interventions were developed in close consultation between the research teams and the police agencies, with a focus on identifying ways to strengthen the community- and problem-oriented elements of each agency's current strategies.

Two elements are nearly common across all six sites. First, in each country, the intervention will increase the frequency of formal meetings between police and community members with the goal of identifying problems and

building trust. Second, treatment areas will benefit from focused, problem-oriented policing with decentralized authorities and/or budgets to facilitate police efforts to follow-up on community concerns. In some cases, these efforts will involve dedicated task forces and local police with the responsibility to address issues raised by community members; in other contexts, decentralized authority will be paired with additional resources to facilitate this work.

Given the different baseline conditions across the country contexts, other aspects of the core intervention vary. For example, while Brazil and Colombia already have a strong community presence, police agencies in the other countries have committed to substantially increase their physical presence in treatment communities. In Brazil, Pakistan, the Philippines, and Uganda, there will be a focus on building out community watch teams, while in Liberia and Colombia they already exist. Likewise, some countries already have hotlines and reporting structures in place, while in other contexts, they will be created as part of the intervention.

Although it might be ideal to launch identical interventions across contexts, that is unrealistic in the context of actual police work. Instead, the teams have focused on working with each police department to identify specific and concrete ways they can increase their commitment to community- and problem-oriented policing. The result is a set of interventions with a few core features in common, and complementary elements that differ across contexts.

4. Theoretical framework

Police agencies adopting community policing expect that the effectiveness of the police will be improved, followed by improvement in crime levels and public safety. Our starting point is that the efficacy of policing depends in important ways on citizen cooperation. Citizens are a critical source of valuable information about where crime is happening, who is committing it, and the concerns they have about suspicious people or activities. Citizen cooperation may take the form of tips and leads, reporting crimes that have occurred, and sharing information about areas that are most at-risk for future events. This kind of information - when provided consistently and willingly - helps the police allocate their time and attention in ways that will prevent crime and improve public safety. Community policing may also more directly affect police behavior, by increasing the risks to abusing their positions and victimizing citizens or simply by improving intentions toward citizens.

However, one challenge to effective policing is that citizens may not trust the police and are therefore unwilling to provide the essential information that police officers need to do their job. The lack of cooperation may be a function of many different factors: a general distrust of state institutions, negative prior experiences with the police or justice system, a lack of visibility or access to police officers, or even a lack of understanding about the role of police in their community. Traditional models of policing, in which officers remain distant from the communities they serve and react largely when crimes are committed, may only exacerbate distrust. As a result, citizens may shy away – or even explicitly avoid – interactions with police, robbing law enforcement institutions of a critical input to crime prevention and response.

One way to think about this dilemma is through the lens of costs and benefits. When citizens consider whether to cooperate with the police, they weigh the costs of this cooperation against the expected returns. For example, individuals may not know how or on what issues to engage the police, may need to travel long distances to reach police stations, or lack access to telephones to contact police officers. Citizens may also be concerned with police corruption or uncertain about police capacity or willingness to act to improve public safety in their community. They could also fear retaliation if it becomes known that they have provided information to the police. On the benefits side, citizens have prior expectations about the intentions and efficacy of the police; in environments of high corruption, low capacity, or predatory police behavior, citizens may simply calculate that the costs of engaging the police far exceed the benefits. As a result, fewer crimes are reported, tips are not offered, and police officers lose access to an essential source of information. This may result in less effective policing and higher levels of crime, reinforcing a perception of police incompetence and reinforcing a sub-optimal equilibrium.

Advocates of community policing aim to break this cycle by reducing the costs and increasing the benefits of citizen cooperation. Costs are brought down by significantly increasing the visibility and accessibility of police officers,

and creating an environment in which it becomes accepted to engage and work closely with the security forces. Formal meetings and regular lines of communication, either in person or through mobile apps, reinforce this new norm. Potential benefits are increased by changing perceptions about both the intentions and capacity of the police. Community policing fosters a set of interactions in which police officers work actively to reduce ignorance about the law and criminal justice system, persuade citizens of their genuine interest in community concerns, foster opportunities for cooperation, and demonstrate their continuing engagement and presence, thereby increasing perceptions of efficacy. Efficacy in this context may be a function both of police becoming better informed and more responsive, as well as by changing the behavior of police officers who become more empathetic or sense greater accountability to the citizens they serve. There also may be a deterrent effect on crime rates as a function of greater police presence and community cooperation. Community policing initiatives could also increase the frequency of citizen interactions with police which could change citizen norms about crime reporting as well as increased collective action around crime prevention.

A decreased crime rate resulting from increased citizen cooperation due to an improved police-community relationship relies on an assumption of a benevolent police force whose legitimacy and efficacy citizens will recognize upon increased interaction. Yet community policing may also increase police intentions and efficacy directly, for example due to increased interaction and learning about citizen attitudes and intentions. By increasing reporting of police abuse, community policing may also increase accountability from police supervisors who can sanction corrupt or physically abusive officers. These shifts could directly change crime outcomes. Two observable implications emerge. First, if changes in crime are due to the direct effects on police intentions and not on increases in cooperation, we should observe no change in cooperation rates, but improvements in police attitudes and intentions toward citizens as well as decreases in crime. Second, if both cooperation and police intention mechanisms are at work, we would expect to see citizen cooperation increase, police intentions improve, and crime reduce, but will not know which is at work. If we observe movement in police intentions toward citizens, but no movement in citizen perceptions of police intentions, this would be evidence of a possible direct effect of police intentions.

In this informal model of police-community interaction, a set of distinct causal mechanisms link community policing to changes in outcomes such as the level of trust in the police, levels of observed cooperation, and crime rates:

1. Reductions in the cost of providing information
 - Search costs and physical costs
 - Fears of retaliation
2. Increasing returns to cooperation
 - Understanding of the roles and responsibilities of the police
 - Improving perceptions of police intention and capabilities through persuasion or demonstration
 - Increasing police attention with respect to specific problem areas or community concerns (as a function of authorities, information, and/or resources) and increased empathy towards civilians
 - Reducing crime from increase in police presence and community policing

4.1 Hypotheses

We describe our hypotheses motivated by the common community policing intervention.

Primary Outcome Family 1: Security of Life and Property

- 1a. Negative effect on incidence of crime
- 1b. Positive effect on perceptions of safety (personal, land, and possessions)

Primary Outcome Family 2: Citizen Perceptions of the Police

2. Positive effect on citizen perceptions of police

Primary Outcome Family 3: Police Perceptions of and Behaviors Toward Citizens

- 3a. Positive effect on perceptions of police empathy, accountability, and abuse and corruption concerns

3b. Negative effect reporting of police abuse and bribery

Primary Outcome Family 4: Behavioral Cooperation of Citizens with the Police

4a. Positive effect on reporting of crime victimization

4b. Positive effect on reporting of crime prevention tips

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

Mechanism Family 1: Perceived Costs to Citizens Cooperating with the Police

M1a. Positive effect on beliefs about police intentions

M1b. Positive effect on knowledge of criminal justice system

M1c. Positive effect on norms of citizens cooperation with police

Mechanism Family 2: Perceived Returns to Citizens Cooperating with the Police

M2a. Positive effect on beliefs about police capacity

M2b. Positive effect on perceptions of responsiveness to citizen feedback

Secondary Outcome Family 1: Trust in the State

S1. Positive effect on trust in the state

Secondary Outcome Family 2: Communal Trust

S2. Positive effect on communal trust

Compliance with Treatment: Citizen Interactions with Police

C. Positive effect on rate of citizen interactions with police

4.1.1 Alternative hypotheses

The information-based characterization of police and community relations has been the basis for innovative models of community policing, but there are four reasons to expect that the intervention may fail to improve outcomes.

First, without a significant improvement in the capacity of police forces (higher quality recruits, more resources, greater numbers, etc.), a shift toward community policing risks raising expectations that cannot be met in practice. If this were the case, we might find that community policing decreases perceptions of trustworthiness and efficacy by revealing the limits of what the police and justice system are able to deliver without impacting levels of crime (Hypothesis A1). We will be able to see if heightened expectations are driving effects by looking at whether subjective measures of police efficiency suggest increased dissatisfaction with the force, while objective levels of crime show no change. On the flip side, if the intervention improves citizen satisfaction with the police, we may still see an increase in crime rates that is at least partly attributed to an increase in the rate of reporting rather than an increase in actual crime (Hypothesis A2). A third possibility is that community policing may improve perceptions of trustworthiness and efficacy in the short term, but when police practices do not in fact improve to match, those perceptions would revert. In this case, given the short duration in which we observe outcomes, we may only see improvements in citizen perceptions of police intentions and behaviors, with resulting increases in behavioral cooperation and even reductions in crime.¹

Second, to the extent that police forces are afflicted by corruption or predatory behavior, community policing may create new opportunities for police officers to seek bribes, extort from community members, or commit other abuses. If the information and accountability mechanisms embedded in community policing are insufficiently powerful to change the incentives of police officers, greater interaction could further reinforce a low cooperation equilibrium, decrease trust in the police, increase the level of police abuse, and worsen the crime situation. An increase in objective measures of police predation and abuse coupled with a decrease in subjective measures of perceptions of police efficacy would allow us to establish if such an effect is at work (Hypothesis A4).

¹We do not label this hypothesis, because we will not evaluate it.

Third, if information is not the primary impediment to effective policing, it might be the case that community policing generates greater engagement with citizens, without actually impacting levels of crime, perceptions of efficacy, or trust in the police. This could yield some benefits in terms of the frequency of interaction and sense of accessibility, without actually addressing the security issues that concern citizens the most. We would be able to identify such an effect if we see an increase in measures of interaction between citizens and police, while we find no effect on subjective measures of efficacy and on objective measures of crime (Hypothesis A5).

Fourth, we may see a decrease in the rate of criminal incidents in areas that receive the intervention not because of an actual significant reduction in crime and violence, but rather because of a displacement effect of criminal activity to control areas that are not beneficiaries of increased community policing. If such displacement is at work, we would see an increase in crime rates in control areas rather than a decrease in treatment areas as compared to baseline crime levels (Hypothesis A6).

These alternative hypotheses are enumerated in detail below:

- A1. Negative effect on perceptions of police, and no change in crime victimization.
- A2. Positive effect on perceptions of police, no change in crime victimization, and positive effect on reported crimes.
- A3. Negative effect on perceptions of police and positive effect on victimization by the police.
- A4. Positive effect on interactions with police, no change in perceptions of police, and no change in crime victimization.
- A5. No displacement of crime to control areas, measured as a negative change between baseline and endline in crime victimization in treated areas accompanied by a positive change between baseline and endline in crime victimization control areas.

In setting up our hypotheses, we highlight that there is considerable heterogeneity in the bundle of interventions in the common community policing arm across our cases, as described in Section 3., given the nature of working with real police agencies. Natural heterogeneity also exists in measurement, due to among other reasons variation in the language of interviews and in the quality and coding rules of police administrative data. As a result, we raise two cautions: null results may be due to heterogeneity in the treatments or measurement across contexts, and not to a lack of effects of community policing per se. Second, we will interpret differences in effects across countries with caution, because they may be due to variation in the effectiveness of community policing or to these differences in treatment and measurement. However, we emphasize on the treatment variation side that there is true variation in the way in which community policing programs are implemented across contexts and to the extent we observe variation in effects this will be informative in itself. Still, we will not be able to separate those differences fully from differences in measurement across countries, despite our extensive efforts to harmonize our instruments.

Through additional data collection during implementation, we will be able to look more closely at compliance and offer more evidence to elucidate the aforementioned mechanisms. We do not register our hypotheses for these data, and will present our analyses of them as exploratory. In addition to attendance sheets at town hall meetings that include information on gender, age and community role of people in attendance, we will also be collecting information on participants' level of engagement in the discussion, as well as on overall group dynamics (e.g. whether the police or civilians dominated the discussion; if women participated actively etc). In addition, we will be fielding monitoring instruments that collect information on the number of people, gender, age and role of those involved in community policing activities, as well as on the frequency and outcomes of those activities independently or in collaboration with the police. We will also use the rosters of police officers on patrol including information on where, when and how many are getting dispatched. For teams that use hotlines and mobile apps, the content of the messaging will also be analyzed to provide additional evidence on the underlying causal mechanisms.

5. Tests

Each hypothesis described above is linked to a set of outcomes used to evaluate it. The outcomes, and the components of index variables denoted by `_idx`, are described in detail in the survey questionnaire and codebook in Table 10 in the appendix.

Hypothesis	Primary outcome index	Outcome measures	Data source
1a.	<code>crime_victim_idx</code> ²	<code>crime_num</code> , <code>violentcrime_num</code> , <code>ccrime_num</code> , <code>cviolentcrime_num</code> <code>acrime_num</code> , <code>aviolentcrime_num</code>	Citizen survey Administrative data
1b.	<code>future_insecurity_idx</code>	<code>future_insecurity_idx</code>	Citizen survey
2.	<code>satis_idx</code>	<code>satis_idx</code>	Citizen survey
3a.	<code>officer_attitude_idx</code>	<code>empathy_idx</code> , <code>accountability_idx</code> , <code>abuse_idx</code> , <code>corrupt_idx</code>	Officer survey
3b.	<code>police_abuse_idx</code>	<code>policeabuse_any</code> , <code>policeabuse_num</code> , <code>policeabuse_report</code> , <code>bribe_freq</code> , <code>bribe_amt</code>	Citizen survey
4a.	<code>crime_reporting_idx</code> ³	<code>crime_report_num</code> , <code>violentcrime_report_num</code> , <code>ccrime_report_num</code> , <code>cviolentcrime_report_num</code> , <code>crimeres_idx</code> <code>acrime_hline</code> , <code>aviolent_hline</code> , <code>anonviolent_hline</code> , <code>acrime_station</code> , <code>aviolent_station</code> , <code>anonviolent_station</code>	Citizen survey Administrative data
4b.	<code>tips_idx</code>	<code>crime_tips_idx</code> <code>atips_hline</code> , <code>atips_box</code>	Citizen survey Administrative data
4c.	<code>police_abuse_idx</code> ⁴	<code>dutydrink_report</code> , <code>policebeating_report</code> <code>apolvtm_hline</code> , <code>apolvtm_cmtbox</code> , <code>apolvtm_station</code>	Citizen survey Administrative data
M1a.	<code>intentions_idx</code>	<code>polcaseserious</code> , <code>polcasefair</code> , <code>polint_idx</code>	Citizen survey
M1b.	<code>know_idx</code>	<code>know_law_idx</code> , <code>know_report_idx</code>	Citizen survey
M1c.	<code>norm_idx</code>	<code>norm_idx</code>	Citizen survey
M2a.	<code>police_capacity_idx</code>	<code>polcap_timely</code> , <code>polcap_investigate</code>	Citizen survey
M2b.	<code>responsive_act</code>	<code>responsive_act</code>	Citizen survey
S1.	<code>legit_trust</code>	<code>legit_trust</code>	Citizen survey
S2.	<code>trust_community</code>	<code>trust_community</code>	Citizen survey
C.	<code>compliance_idx</code>	<code>compliance_idx</code>	Citizen survey

²The crime victimization index only includes variables measured in the citizen survey (`ccrime_num`, `cviolentcrime_num`, `acrime_num`, and `aviolentcrime_num`), our primary source for data on crime victimization. See discussion in the outcomes section. We include in this table our secondary measures for Hypothesis 1a (`acrime_num` and `aviolentcrime_num`), which come from police administrative data on crime. Effects for these measures are not presented in the primary results.

³The crime reporting index only includes variables measured in the citizen survey (`crime_report_num`, `violentcrime_report_num`, `ccrime_report_num`, `cviolentcrime_report_num`, `crimeres_idx`), our primary source for data on crime victimization and reporting. See discussion in the outcomes section. We include in this table our secondary measures for Hypothesis 4a (`acrime_hline`, `aviolent_hline`, `anonviolent_hline`, `acrime_station`, `aviolent_station`, `anonviolent_station`), which come from police administrative data on crime. Effects for these measures are not presented in the primary results.

⁴The police abuse index is index of both citizen survey data and administrative data on police abuse, i.e. all of the outcome measures for Hypothesis 4c.

The tests of the alternative hypotheses rely on indices and outcome measures also used to test the hypotheses, so we do not present results for them separately. In the table below, we indicate which indices and outcome measures are used we will use to test the alternative hypotheses.

Hypothesis	Outcome measures	Data source
A1.	satis_idx (perceptions) and crime_num, violentcrime_num (victimization)	Citizen survey
A2.	satis_idx (perceptions), crime_num, violentcrime_num (crime victimization)	Citizen survey
	acrime_num, aviolen crime_num (reported crimes)	Administrative data
A3.	Negative effect on perceptions of police satis_idx (perceptions)	Citizen survey
	apolvtm_hline, apolvtm_cmtbox, apolvtm_station (victimization by police)	Administrative data
A4.	compliance_idx (interactions with police), satis_idx (perceptions), and crime_num, violentcrime_num (victimization)	Citizen survey
A5.	crime_num, violentcrime_num	Citizen survey

6. Study research designs

In this section, we describe the research designs of each of the six studies. We discuss each element of the design in text and then present the code that is used either to implement it (for sampling, treatment assignment, and estimation) or simulate it for the purposes of characterizing the designs before implementing them (for the population and potential outcomes). Table 6 summarizes the key elements of each design.

	Brazil	Colombia	Liberia	Pakistan	Philippines	Uganda
Crime data units	Neighborhoods	Point data	Communities	Beats	Barangays	Police posts
Survey primary units	Neighborhoods	Micro-neighborhood	Communities	Beats	Barangays	Villages
Level of assignment	Neighborhoods	Police quadrants (beats)	Communities	Beats	Barangays	Police stations
Assignment strategy	Two-arm (control, CP encouragement)	Factorial (control, CP, alt., CP + alt.)	Two-arm (control, CP)	Three-arm (control, CP, alt.)	Two-arm (control, CP) with addl. cross-randomization	Five-arm (control, CP, alt., CP + alt., excluded)
Blocking	X	✓	✓	Station	✓	✓
Baseline survey	✓	✓	✓	✓	✓	✓
Midline survey	X	X	X	X	✓ Post-CEP treatment	X
Endline survey	✓	✓	✓	✓	✓	✓

Table 6: Summary of research designs

In what follows, we describe each element of the research design for the six studies in detail. The purpose is to pre-register the details of the sampling, assignment, and measurement for each study and also to enable evaluation of the choices of estimation strategy, especially in relation to the sampling and assignment designs. When useful, we

include the computer code used to conduct the steps in the design. The code uses the `DeclareDesign` software for characterizing and diagnosing the properties of research designs. The complete code for each study, including simulated elements used to approximate the data generating process before data collection, is included in the replication materials. The purpose of registering the specific code for each step of the research procedure is to reduce our researcher degrees of freedom in conducting and analyzing the studies. It also enables readers to understand the exact procedures we use, which are often difficult to communicate in writing. We use `DeclareDesign` to simulate the outcome data in order to specify the analyses we will conduct, including the figures, before data is collected (G. Blair et al. 2018).

6.1 Study population

In each study, we will conduct three sets of analyses, one at the administrative unit level based on administrative data from the police, one at the citizen level based on surveys of citizens, and one at the police officer level based on officer surveys.

In what follows, we describe the study population for each analysis. We outline the organization of the police in each case, which informs the choices of sampling and treatment assignment designs. Then we characterize the study population for the crime, citizen survey, and police officer survey analyses, for the purposes of simulating data for the registered report that follows. The registered report prespecifies the exact code for analyzing the data.

6.1.1 Brazil

Police organization. We will work with the Military Police of Santa Catarina (PMSC) with the following police organizations and hierarchy:

- Batalhões : Police headquarters (34 units)
- Companhias : Larger police precincts subordinated to one Batalhão (+50 units)
- Pelotões : Smaller police precincts subordinated to one Batalhão (+100 units)
- Guarnições : Beat level police unit, consisting of 3 to 10 officers (+500 units)
- Policing Sectors: A specific geographic area where one or more guarnições are assigned to monitor. The number of officers per policing sector varies according to the amount of crime incidents occurring within the sector.

Administrative units. We examine the common arm intervention in Brazil in 206 urban neighborhoods in Santa Catarina state. We subdivide urban agglomerations into smaller spatial subdivisions using enumeration units from the most recent 2010 census. We proceed as follows to build these neighborhoods. The 2010 census subdivides Santa Catarina state into 12,227 census tracts. For each of the census tracts, we compute the population density and the share of built-up area, using classified Landsat imagery at a 38 x 38 m pixel resolution. We then select the census tracts that are characterized by a) high population density and b) a high share of built-up area, and compute their centroids. We draw two circles around those centroids, of 1km and 3km radiuses. The 1km-radius circle is the area that constitutes the unit where treatment will be administered and outcomes measured. The census tracts within the wider 3km radius constitutes the neighborhood. We leave the space between the 1km and 3km as buffer zone to avoid spillovers of the information campaign. As a result from this approach, we have constructed a total of 206 neighborhoods, comprising a population of 4.08 million (65% of the total state population of 6.25 million as per the 2010 census). The centroid census tracts have, on average, 83% built up area and a population density of 156.70 people her hectare. The 131 neighborhoods in large municipalities are selected for conducting the survey. The study will be conducted over 18 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 9.

```
fabricate(  
  # 206 neighborhoods  
  neighborhoods = add_level(  
    N = 206,  
    # size indicator used for survey sampling  
    large_municipality = sample(c(rep(0, 75), rep(1, 131)), N)),
```

```

months = add_level(
  N = 18,
  month = c(month.abb, month.abb[1:6]),
  pretreatment = c(rep(0, 3), # baseline survey period from Jan - Mar 18
                   rep(1, 15)), # intervention through endline in May 19
  nest = FALSE
),

# construct neighborhood-month panel
neighborhood_months = cross_levels(
  by = join(neighborhoods, months)
)
)

```

Citizens. We approximate the populations of each neighborhood as between 1,000 and 2,000 individuals. (We approximate this process in the code used to simulate the design in the replication materials.)

```

fabricate(
  # 206 neighborhoods
  neighborhoods = add_level(
    N = 206,
    # size indicator used for survey sampling
    large_municipality = sample(c(rep(0, 75), rep(1, 131)), N),
    # approximate neighborhood population between 1000 and 2000 citizens
    neighborhood_population = sample(1000:2000, N, replace = TRUE)),
  citizens = add_level(N = neighborhood_population)
)

```

Police officers. We approximate the population of officers participating in the Rede de Vizinhos program as 500 officers across Santa Catarina state. (We approximate this process in the code used to simulate the design in the replication materials.)

6.1.2 Colombia

Police organization. The police in Colombia are organized following Art. 198, Law 1801/2016:

- National Police (1 total)
- Medellin Metropolitan Police (1), subdivision of the National Police
- Police station (14 total)⁵
- Police quadrant (akin to U.S. police beat) (412 total)

Administrative units. In Colombia, our unit of intervention will be police *cuadrantes* (beats). For each beat, we will construct a “micro-neighborhood” around the centroid of the beat, i.e. small geographic spaces consisting of one or a few street segments and the surrounding areas. We describe the population of 347 micro-neighborhoods. The study will be conducted over six months. We simulate crime data for each month below. Further details on the timeline are provided in Table 9.

```

fabricate(
  # 347 micro-neighborhoods, each consisting of a
  # street segment and surrounding buildings and public places
  cuadrantes = add_level(

```

⁵Note that this administrative unit nearly corresponds with the 16 comunas of Medellin.

```

N = 347,
# covariates: battery of social, economic, and crime-rate variables
social_index = rnorm(N),
economic_index = rnorm(
  N, mean = .1 * social_index),
crime_level_cuadrante = rnorm(
  N, mean = -.1 * economic_index +
  -.05 * social_index)
),

# we simulate crime data for each month of the study for each cuadrante
months = add_level(
  N = 6,
  month = month.abb[1:6],
  pretreatment = c(0, # baseline survey period April-June 2018
  rep(1, 5)), # intervention through endline in February 2019
  nest = FALSE
),

# construct cuadrante-month panel
micro_neighborhood_months = cross_levels(
  by = join(cuadrantes, months),
  crime_level = rnorm(N, mean = crime_level_cuadrante, sd = 0.5)
)
)

```

Citizens. We approximate the population of each cuadrante at between 4,000 and 5,000:

```

fabricate(
  # 347 micro-neighborhoods, each consisting of a
  # street segment and surrounding buildings and public places
  cuadrantes = add_level(
    N = 347,
    # pretreatment covariates: battery of social, economic, and crime-rate variables
    social_index = rnorm(N),
    economic_index = rnorm(
      N, mean = .1 * social_index),
    crime_level_cuadrante = rnorm(
      N, mean = -.1 * economic_index - .05 * social_index),
    # draw the crime level at baseline for blocking
    crime_level = rnorm(N, mean = crime_level_cuadrante, sd = .5),
    cuadrantes_population = sample(4000:5000, N, replace = TRUE)
  ),

  citizens = add_level(N = cuadrantes_population)
)

```

Police officers. We approximate the population of officers as 6 officers in each of the 347 cuadrantes. (We approximate this process in the code used to simulate the design in the replication materials.)⁶

⁶The officer survey for Colombia study is still pending approval.

6.1.3 Liberia

Police organization. We work with the Liberian National Police. Monrovia is divided into ten LNP police zones. Each zone covers anywhere from 30 to 50 communities. Communities are subdivided into blocks, which are akin to neighborhoods.

Administrative units. We study the intervention in the city of Monrovia, the capital. We simulate police administrative data on crime by simulating the 10 police zones, within which there are between 30 and 50 communities, within which there are approximately 7 blocks. The study will be conducted over 17 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 9.

```
fabricate(  
  # 10 police zones within Monrovia  
  police_zones = add_level(  
    N = 10, crime_level_zone = rnorm(N)),  
  # between 30 and 50 communities per zone  
  communities = add_level(  
    N = sample(30:50, size = 10, replace = TRUE),  
    crime_level_community = rnorm(N, mean = crime_level_zone)),  
  # approx 3500 individuals per community, 500 per block  
  # => 7 blocks per community  
  community_blocks = add_level(  
    N = 7, crime_level_block = rnorm(N, mean = crime_level_community)),  
  
  # we simulate crime data for each month of the study for each community block  
  months = add_level(  
    N = 17,  
    month = c(month.abb, month.abb[1:5]),  
    pretreatment = c(rep(0, 7), # baseline survey fielded July '17, intervention begins Feb '18  
                     rep(1, 10)), # intervention through endline in Nov '18  
    nest = FALSE  
  ),  
  
  # construct neighborhood-month panel  
  block_months = cross_levels(  
    by = join(community_blocks, months),  
    crime_level = rnorm(N, mean = crime_level_block, sd = 0.5)  
  )  
)
```

Citizens. There are approximately 3,500 people living in each community. We approximate the population of blocks at 500 each:

```
fabricate(  
  # 10 police zones within Monrovia  
  police_zones = add_level(  
    N = 10, crime_level_zone = rnorm(N)),  
  
  # between 30 and 50 communities per zone  
  communities = add_level(  
    N = sample(30:50, size = 10, replace = TRUE),  
    crime_level_community = rnorm(N, mean = crime_level_zone)),  
  
  # approx 3500 individuals per community  
  # => 7 blocks per community
```

```

community_blocks = add_level(
  N = 7, crime_level_block = rnorm(N, mean = crime_level_community),
  crime_level = rnorm(N, mean = crime_level_block, sd = .5),
  crime_level_endline = rnorm(N, mean = crime_level_block, sd = .5)),
# 500 citizens per block approximately
citizens = add_level(N = 500)
)

```

Police officers. We approximate the population of officers as follows, with between four and five officers per station:

```

fabricate(
  # 10 police zones within Monrovia
  police_zones = add_level(
    N = 10),
  # survey officers in headquarter station (where intervention is run)
  # and same number of officers for comparison from 2nd-largest station in zone
  stations = add_level(
    N = 2,
    headquarters_station = c(0, 1)
  ),
  # 4-5 officers per station
  officer = add_level(
    N = sample(4:5, N, replace = TRUE))
)

```

6.1.4 Pakistan

Police organization. Policing is a provincial subject in Pakistan, with the Provincial Police Officer (PPO), of the rank of Inspector General (IG) heading operations in a province. Punjab province is comprised of nine policing regions, including Sheikhupura Region. The region is headed by the Regional Police Officer (RPO), and is further divided into three districts, Sheikhupura, Nankana and Kasur. Each district is headed by a District Police Officer (DPO). Sheikhupura, Kasur and Nankana districts are divided into circles headed by a Superintendent of Police (SP), assisted by a Deputy Superintendent of Police (DSP). Sheikhupura region has a total of 11 circles. A circle comprises of two or more Police stations, each police station being headed by a Station House Officer of the rank of Inspector. All criminal complaints are registered and investigated at the police station level. Rural police stations cover on average between 35-40 villages per police station and are headed by the Station House Officer (SHO) who reports to the DPO. The SHO is responsible for devising and implementing the operations strategy which is monitored by DPOs and the RPO. The Sheikhupura region has a total of 48 Police stations, with 16 stations in Sheikhupura, 11 in Nankana and 21 in Kasur. The precinct of a Police station is divided into check posts and patrolling beats, which are manned by Sub-Inspectors, Assistant Sub-Inspectors (ASI's), and Constables. Each Police stations in these three districts have 3-9 beats. There is great variation in the size of beats, which can consist of between 1-26 villages. Each beat has 2-3 police officers with a patrol car at their disposal, and they are the main unit of community interface and patrol in rural areas.

Administrative units. Our study site will be Sheikhupura and Nankana districts in Sheikhupura Region. Some pre-testing and piloting of intervention materials will take place Kasur. Sheikhupura and Nankana districts have a combined population size of 4.6 million people. These two districts consist of 27 police stations and 151 beats consisting of 1053 villages and 516 urban neighborhoods. Sheikhupura and Nankana have roughly 340 police officers at the Sub-Inspector (SI) and Assistant Sub-Inspector (ASI) rank. The study will be conducted over 13 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 9.

```

fabricate(
  # 27 police stations in Sheikhupura Region

```

```

districts = add_level(
  N = 2,
  district_name = c("Sheikhupura", "Nankana"),
  N_stations = c(16, 11)
),

stations = add_level(
  N = N_stations,
  N_beats = beats_per_station),

beats = add_level(N = N_beats),

# we simulate crime data for each month of the study for each beat
months = add_level(
  N = 17,
  month = c(month.abb, month.abb[1]),
  # baseline survey fielded February-March 2018, intervention begins April 1, 2018
  # intervention through endline in April 2018 - June 2019
  pretreatment = c(rep(0, 2),
                    rep(1, 15)),
  nest = FALSE
),

# construct neighborhood-month panel
block_months = cross_levels(
  by = join(beats, months)
)
)

```

Citizens. We approximate the population of beats as covering between 1,000 and 2,000 people within each beat. We simulate two independent survey rounds, baseline and endline, because the Pakistan study interviews two independent samples of the population at these two waves.

```

fabricate(
  # 27 police stations in Sheikhupura Region

  districts = add_level(
    N = 2,
    district_name = c("Sheikhupura", "Nankana"),
    N_stations = c(16, 11)
  ),

  stations = add_level(
    N = N_stations,
    N_beats = beats_per_station),

  beats = add_level(
    N = N_beats,
    beat_population = sample(1000:2000, N, replace = TRUE)),

  # 1000 - 2000 citizens per beat
  citizen_ID = add_level(N = beat_population),

  # two independent survey waves

```

```

survey_wave = add_level(
  N = 2,
  endline = 0:1,
  pretreatment = 1*(endline == 0),
  beat_wave = paste(beats, endline, sep = "-"))
)

```

Police officers. We approximate the population of officers as follows, with 1 officer per police station:

```

fabricate(
  # 27 police stations in Sheikhpura Region
  districts = add_level(
    N = 2,
    district_name = c("Sheikhpura", "Nankana"),
    N_stations = c(16, 11)
  ),

  stations = add_level(
    N = N_stations,
    N_beats = beats_per_station),

  beats = add_level(N = N_beats),

  officer = add_level(N = 1)
)

```

6.1.5 Philippines

Police organization. The Philippines National Police is organized in three hierarchical levels: Provincial, Municipal, and Barangay. The Provincial office includes the police chief, administrative staff, and special duty officers. The 15 Municipal offices include all rank-and- file officers along with a Municipal Police Chief and administrative staff. In Sorsogon City (the provincial capital), there are three district offices that serve similar functions to the municipal office. 541 barangays (of which 298 are eligible for our study) employ community Tanod officers.

Administrative units. We use data on barangays actual past crime rates to approximate the study data:

municipality	barangay	urban_rural	population_2010	crime_count
1	1	Rural	724	NA
1	2	Rural	466	NA
1	3	Rural	828	3
1	4	Rural	406	NA
1	5	Rural	594	NA
1	6	Rural	868	NA

With this data, we simulate the barangay-month population data. The study will be conducted over 16 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 9.

```

fabricate(
  data = barangays,

  municipality = modify_level(
    crime_rate_municipality =
      rnorm(N, mean = crime_rate_municipality_baseline, sd = crime_rate_sd)
  )
)

```

```

),

barangay = modify_level(
  # armed forces of phillipines 9th infantry declared 298 barangays in
  # Sorsogon Province to be safe from insurgency activity for research
  afp_declared_safe =
    sample(c(rep(1, 298), rep(0, (541 - 298))), N, replace = FALSE),
  crime_rate_barangay =
    rnorm(N, mean = max(0, crime_rate_municipality +
                        (crime_rate_baseline - crime_rate_municipality_baseline)),
          sd = crime_rate_sd)),

# we simulate crime data for each month of the study for each barangay
months = add_level(
  N = 16,
  month = c(month.abb, month.abb[1:4]),
  pretreatment = c(rep(1, 1), # baseline survey in ~ March 2017
                    rep(.5, 4), # CEP intervention March 2017 - July 2017
                    rep(0, 11)), # intervention through endline in June 2018

  nest = FALSE
),

# construct barangay-month panel
barangay_months = cross_levels(
  by = join(barangay, months),
  crime_rate =
    ifelse(months == "01" & !is.na(crime_rate_baseline), crime_rate_baseline,
           rnorm(N, mean = crime_rate_barangay, sd = crime_rate_sd))
)
)

```

Citizens. We approximate the population of each barangay to be 1,000:

```

fabricate(
  data = barangays,

  municipality = modify_level(
    crime_rate_municipality =
      rnorm(N, mean = crime_rate_municipality_baseline, sd = crime_rate_sd)
  ),

  barangay = modify_level(
    # armed forces of phillipines 9th infantry declared 298 barangays in
    # Sorsogon Province to be safe from insurgency activity for research
    afp_declared_safe =
      sample(c(rep(1, 298), rep(0, (541 - 298))), N, replace = FALSE),
    crime_rate_barangay =
      rnorm(N, mean = max(0, crime_rate_municipality +
                          (crime_rate_baseline - crime_rate_municipality_baseline)),
            sd = crime_rate_sd),
    crime_rate = ifelse(!is.na(crime_rate_baseline), crime_rate_baseline,
                        rnorm(N, mean = crime_rate_barangay, sd = crime_rate_sd)),
    crime_rate_endline = ifelse(!is.na(crime_rate_baseline), crime_rate_baseline,
                                rnorm(N, mean = crime_rate_barangay, sd = crime_rate_sd))),

```

```

# represent the set of citizens per barangay as 1000
citizens = add_level(N = 1000)
)

```

Police officers. We approximate the population of officers as follows. Officers are assigned to multiple study units. The approximately 800 officers in the province will be surveyed, including all officers that will take part in the community policing teams (198 officers).

```

fabricate(N = 800, on_community_policing_team = sample(c(rep(1,
198), rep(0, (800 - 198))))))

```

6.1.6 Uganda

Police organization. The Uganda Police Force is organized with district level central police stations; each district has one. Central police stations supervise sub-county level stations. Some sub-county level stations supervise police posts covering a few parishes; some have no posts under them.

Administrative units. The unit of intervention is the police unit. We first selected 72 police stations. Where available we selected 1 post under the jurisdiction of each station; for stations that don't have a post under them, we use the station itself, for a total of 72 units (some posts, others stations). Administrative data and officer surveys are collected at the unit level.

We draw on administrative data on police posts and stations:

district_id	station_id	population_predict	number_villages_station
203	227	34495.08	24
203	240	29976.14	11
203	231	31244.12	15
203	228	30433.83	9
203	234	33953.21	23
203	235	34759.82	23

From this data, we simulate the station-month data. The study will be conducted over 19 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 9.

```

fabricate(
  data = stations,

  # we simulate crime data for each month of the study for each station
  months = add_level(
    N = 19,
    month = c(month.abb[11:12], month.abb, month.abb[1:5]),
    pretreatment = c(rep(0, 2), # baseline survey fielded July 17, intervention begins Feb 18
                     rep(1, 17)), # intervention through endline in Nov 18

    nest = FALSE
  ),

  # construct neighborhood-month panel
  station_months = cross_levels(
    by = join(station_id, months)
  )
)

```

Citizens. We simulate citizens within villages using the empirical distribution of estimated population per village from administrative data:

```
fabricate(  
  data = stations,  
  
  villages = add_level(  
    # select number of villages to simulate based on the number from the post-level dataset  
    # of villages per post (excluding those with fewer than 4, which are urban areas)  
    N = sample(round(villages_per_post[villages_per_post >= 4]), length(station_id), replace = TRUE)  
  ),  
  
  citizens = add_level(  
    # simulate population based on population est from station-level dataset  
    N = sample(village_population_estimates, length(villages), replace = TRUE),  
    female = draw_binary(prob = .5, N = N),  
    village_gender_strata = paste0(villages, female))  
)
```

Police officers. We approximate the population of officers as follows. There are always an officer-in-charge, a liaison officer, and a child and family protection officer as well as 1-2 officers beyond those three.

```
fabricate(  
  data = stations,  
  
  officer = add_level(  
    N = sample(3:5, length(station_id), replace = TRUE),  
    position = recycle(  
      c("officer-in-charge", "liaison-officer", "child-family-protection-officer",  
        "officer", "officer"))  
  )  
)
```

6.2 Outcome measurement

We construct four sets of outcome measures in each study: *crime*, *citizen attitudes toward the police*, *citizen cooperation with the police*, and *police behavior*. We draw on three sets of data. First, we conduct surveys of citizens. Second, through our policy agency partners, we obtain police administrative data including on crime and citizen behaviors such as reporting crime tips. Third, we conduct surveys of police officers.

In measuring effects on crime, we interpret police administrative data with extreme caution. If community policing decreases crime while increasing crime reporting, the net effect on crime rates as captured by police data could be positive, negative or null, depending on the relative size of the two effects. The ambiguity will be especially high in settings with low baseline rates of crime reporting, which characterizes many of the developing country contexts and weakly institutionalized settings we work in. As a result, we report effects on administrative measures of crime outcomes, but interpret them with caution and in relation to the effects on crime reporting rates and crime rates measured from the citizen surveys.

Crime reporting also presents a special problem for estimation, which is that examining the treatment effects of community policing on reporting is not straightforward. To avoid post-treatment bias by analyzing reporting conditional on crime victimization, we examine two sets of average treatment effects: the effect of treatment on crime victimization rates; and the effect of treatment on a recoded reporting variable where zero represents either not being victimized or being victimized and not reporting and a one representing victimization and reporting. The second effects are, for the reasons enumerated above, admit ambiguous interpretations. However, interpreted in light of the effects on victimization the two are together informative.

In this section, we describe in general the modes of data collection and refer to the questions from the hypothesis list and the questionnaire. In Table 10, we include the question wording and/or coding rules for each of the outcomes, organized by hypothesis.

We do not collect a small number of outcomes in a few of the studies. In Brazil, we do not collect the survey outcome `know_law_suspect`, a component of the `know_law_idx` index. We construct the index for Brazil without this component. In Colombia, we do not collect the `dutydrink_report` variable, because officers are often in uniform off duty. In addition, in Colombia several outcomes were not collected in the baseline. For these questions, analysis differs from the other studies; indices are constructed in relation to the control group in the endline rather than the baseline, and we do not control for the baseline outcome. In the Philippines study, the police administrative data variables `atips_box` and `apolvtm_cmtbox` are not collected. In Liberia, those two administrative data variables are not collected, in addition to `atips_hline`.

6.2.1 Administrative data

In each study, three main sets of outcomes are constructed from police administrative data provided through agreements with our partner police agencies. We collect reported crime incidence; crime prevention tips; and reports of abuse by the police. Three sets of administrative data are collected: reports to police telephone or text message hotlines; reports submitted to police comment boxes;⁷ and reports made at police stations.

The hypotheses section describes the primary and secondary outcomes we focus on in our analyses. The complete coding rules and questionnaires can be found in Table 10.

6.2.2 Surveys of citizens

In each study, a survey of citizens is conducted at two times, a pre-treatment baseline survey and a post-treatment endline survey. In the Philippines study, an additional survey wave was collected at midline, after the community engagement intervention was implemented and before the problem-oriented policing intervention commenced. Surveys are in all cases conducted in person.

The wording of questions and answer options for items used in the meta analysis are presented in Table 10. In each study, we translate the questionnaire into local language(s) and pretest the question wordings. We adjust the wording of question and answer options to fit local contexts when necessary. The full survey questionnaires including these minor changes for each study will be posted in the replication archive upon submission of the meta analysis.

6.2.3 Surveys of police officers

We collect surveys of officers in each setting with differing sampling designs. Where possible, we survey a random sample of officers from treated and control areas. However, in several designs some officers work in multiple jurisdictions making separation of officers that work in treated and control areas impossible. In these cases, we rely on before-after comparisons based on baseline, endline, and in the case of the Philippines study midline surveys.

6.2.4 Index creation

Many of our outcomes are indices of several variables. We construct indices by standardizing each outcome variable to the mean and standard deviation of the variable at baseline and then taking the mean across the variables in the index for each respondent. Through this process, the variables are standardized in the same way at baseline and endline, as well as at midline for the Philippines study.

For example, for the `polint_idx` index of two outcome variables, `polint_corrupt` and `polint_quality`, we construct the index using this code:

⁷Not collected in Colombia.

```
polint_idx = ( (polint_corrupt - mean(polint_corrupt_baseline)) /
              sd(polint_corrupt_baseline) +
              (polint_quality - mean(polint_quality_baseline)) /
              sd(polint_quality_baseline) ) / 2
```

6.3 Sampling procedures

In each study, there are two relevant units of analysis, an administrative unit for which we measure crime incidence from administrative data and citizens for which we measure individual-level outcomes of citizens. In what follows, we describe how these two units are sampled from the relevant populations described above. In some cases, we study all neighborhoods in the study area and there is no sampling of administrative units. In others, we sample from a sample frame of all units. In all of the studies, there is a second level of sampling from those units that selects individual citizens.

6.3.1 Brazil

Administrative units. We study the population of 200 neighborhoods in Santa Catarina state in Brazil delineated as described above. For crime and officer survey outcomes, there is no sampling of administrative units. For the citizen survey outcomes, neighborhoods in large municipalities are selected.

```
mutate(selected_for_survey = large_municipality)
```

Citizens. Within each neighborhood, 12 citizens are randomly sampled at baseline and form a panel for the baseline and endline survey.

```
declare_sampling(strata = neighborhoods, n = 12, sampling_variable = "S_citizens")
```

6.3.2 Colombia

Administrative units. We study the population of 347 police quadrants (beats) in Medellin delineated as described above. (There is no sampling of administrative units.)

Citizens. Within each micro-neighborhood associated with a beat, citizens are randomly sampled at baseline and form a panel for the baseline and endline survey.

```
declare_sampling(strata = cuadrantes, n = 15, sampling_variable = "S_citizens")
```

Police officers. One officer from each cuadrante is sampled for the officer survey.

6.3.3 Liberia

Administrative units. The Liberian National Police will select the top 100 crime areas to participate in the study, 10 per police zone. (We approximate this process in the code used to simulate the design in the replication materials.)

Citizens. Within each community, 18 citizens are randomly sampled at baseline and form a panel for the baseline and endline survey.

```
declare_sampling(strata = communities, n = 18, sampling_variable = "S_citizens")
```

6.3.4 Pakistan

Administrative units. We draw two independent samples of beats and combine them. First, within each of the 27 police stations we randomly sample three beats for a total of 81 sampled beats. Second, *excluding those 81 beats* we conduct a probability-proportional-to-size sample of 27 additional beats across all stations in Sheikhpura and Nankana districts, based on AsiaPop grid-cell data on population. See Section ?? for details on the procedure, which jointly samples units and assigns them to treatment. Sampled units are selected via `filter(S2 != 88)` after the second treatment assignment.

Citizens. We draw a random sample of 3,456 individuals in the 108 sampled beats, stratified by beat with 32 sampled per beat. We then independently draw an additional sample of 864 respondents (8 per beat) with the same beat-stratified method.

We use probability-proportional-to-size sampling for sampling respondents within beats. We take the AsiaPop 100-meter grid cell population data, aggregate to 500x500 meter grid cells, and draw a population-proportional-to-size sample of four grid cells within each beat. We then choose a random starting point within each sampled grid, and then use a modified right-hand-rule from the starting point for eight houses. This yields a sample of 3,456 individuals in the 108 sampled beats. We repeat this exercise, sampling one grid cell within each beat and eight households within each cell, to draw an additional sample of 864 respondents to be used as replacements.

```
declare_sampling(strata = beat_wave, n = 40, sampling_variable = "S_citizen")
```

6.3.5 Philippines

Administrative units. The Armed Forces of the Philippines 9th Infantry Division declared 298 barangays in Sorsogon Province to be safe enough for our enumerators to operate. We conduct the evaluation in all 298 of these barangays, many of which still have considerable insurgent presence.

We sample 87 barangays to receive the baseline survey, which is also used as a blocking covariate:

```
declare_assignment(m = 87, clusters = barangay, assignment_variable = baseline_surveyed)
```

Citizens. Within each barangay, citizens are randomly sampled from the full roster of certified voters at baseline and form a panel for the baseline and endline survey.

```
declare_sampling(strata = barangay, n = 10, sampling_variable = "S_citizens")
```

6.3.6 Uganda

Administrative units. Out of the 116 districts of Uganda, UPF selected 13 for the study. We listed all police stations in the 13 districts and non-randomly selected 72, dropping the most urban ones. We then selected 1 police unit under the jurisdiction of the station, using the procedure above. We focus the study on the parish where the unit is physically located. Out of all the villages in that parish we randomly select 4.

```
declare_sampling(strata = station_id, cluster = villages,
  n = 4, sampling_variable = "S_villages")
```

Citizens. From each village, we randomly select 12 citizens, 7 women and 5 men.

```
declare_sampling(strata = village_gender_strata, n = c(5,
  7), sampling_variable = "S_citizens")
```

6.4 Treatment assignment procedures

6.4.1 Brazil

The randomization design for the Brazil study differs substantially from the other five studies. In Brazil, an encouragement design is used. The first stage is a random assignment of micro-neighborhoods to receive Facebook ads encouraging citizens to join Rede de Vizinhos groups. The endogenous second stage, the received treatment, is joining the group. We assign half of neighborhoods to treatment and half to control.

```
declare_assignment(clusters = neighborhoods, m = 103)
```

We represent the second stage of treatment received in potential outcomes as a function of treatment assignment. The second stage is received at the neighborhood level as noted here; treatment (encouragement) is assigned to neighborhoods as is a Rede de Vizinhos group forming.

```
declare_potential_outcomes(groupformed_Z_0 = draw_binary(0.1,  
  N), groupformed_Z_1 = draw_binary(0.5, N), level = neighborhoods)
```

6.4.2 Colombia

In Colombia, we employ a factorial design with block randomization at the police quadrant (beat) level. Beats are blocked into groups of four similar beats based on a battery of social, economic, and crime-rate variables. (We approximate this process in the code in the replication materials.)

Within each group of four, beats are assigned to receive the common arm (community policing), the alternative arm, both, or control with equal probabilities, i.e. $1/4$.

```
declare_assignment(clusters = cuadrantes, blocks = block_ID,  
  prob_each = rep(1/4, 4), conditions = c(0, 1, 2,  
  3))
```

6.4.3 Liberia

In Liberia, communities are assigned to the common arm treatment or control via block randomization. Pairs of similar communities are stratified by police zone and blocked based on crime levels. (We approximate this process in the code in the replication materials.) Within each pair, one community is assigned to treatment and one to control with equal probability, i.e. $1/2$.

```
declare_assignment(clusters = communities, blocks = block_ID)
```

6.4.4 Pakistan

We randomly assign beats through two independent randomizations. First, we randomly assign the stratified sample of 3 beats per station using randomization blocked on beat: one beat assigned to control, one to the common arm, and one to the alternative arm. We then randomize the sample of 27 additional beats into the three conditions using complete random assignment with nine beats assigned to each condition. Note that the assignment process includes the sampling process.

```
declare_assignment(clusters = beats, blocks = stations,  
  block_m_each = cbind(matrix(rep(1, 3), ncol = 3,  
    nrow = 27), beats_per_station - 3), conditions = c(0,  
  1, 2, 99), assignment_variable = S1)
```

```
declare_assignment(clusters = beats, blocks = S1, block_m_each = rbind(c(rep(0,
  3), 27, 0), c(rep(0, 3), 27, 0), c(rep(0, 3), 27,
  0), c(rep(9, 3), 0, 43)), conditions = c(0, 1,
  2, 99, 88), assignment_variable = S2)
```

The treatment variable then is calculated by combining the two indicators: $Z = \text{ifelse}(S1 == 99, S2, S1)$.

The joint probabilities of assignment to treatment must be calculated adjusting for the details of both of the above processes, i.e. $Z_{\text{multistage_assignment_prob}} = \text{ifelse}(S1 == 99, S1_{\text{cond_prob}} * S2_{\text{cond_prob}}, S1_{\text{cond_prob}})$. We include the code for calculating them in `add_block_probs` in the replication materials.

6.4.5 Philippines

In the Philippines study, the intervention proceeded in two waves based on a single randomization at baseline. Barangays are blocked into groups of three similar barangays based on crime rates, municipality, and whether they were included in the baseline survey sample. (We include R code that replicates this process in the replication materials.) Within blocks, barangays are assigned to treatment via a factorial design. First, they are assigned to control (1/3 probability) or to one of two versions of the community policing common arm. The first version included stickers for advertising a tip line and the second did not. Both groups otherwise received the same combination of community engaged policing (CEP) and problem-oriented policing (POP). This three arm assignment was crossed to construct the factorial design. Blocking on the treatment status from the first assignment, half of units in each block were assigned to receive an officer recognition program and half to control. Together, there are six conditions in the factorial which we be assessed in the midline survey.

```
declare_assignment(clusters = barangay, blocks = block_ID,
  prob_each = c(1/3, 1/3, 1/3), conditions = c(0,
  1, 2), assignment_variable = Z_cep)
```

```
declare_assignment(clusters = barangay, blocks = Z_cep,
  prob_each = c(1/2, 1/2), assignment_variable = Z_officer)
```

The common arm treatment variable for analysis of the midline data, $Z_{\text{common_midline}}$, is calculated by recoding $Z_{\text{cep}}! = 0$, representing assignment to either of the two versions of the CEP treatments.

Blocking on the treatment status from the first assignment, Phase II of the study assigns barangays to control (1/3 probability) or to two different versions of a problem-oriented policing intervention – tanods (1/3 probability) or tanods and police (1/3 probability). Blocking on the treatment status from the the problem oriented policing random assignment, 1/3 units are assigned to have no accountability, 1/3 are assigned to top-down accountability by the mayor, and 1/3 are assigned to top-down accountability by the Department of the Interior and Local Government (DILG).

```
declare_assignment(clusters = barangay, blocks = Z_cep,
  prob_each = c(1/3, 1/3, 1/3), conditions = c(0,
  1, 2), assignment_variable = Z_pop)
```

```
declare_assignment(clusters = barangay, blocks = Z_pop,
  prob_each = c(1/3, 1/3, 1/3), conditions = c(0,
  1, 2), assignment_variable = Z_accountability)
```

The common arm treatment variable for the endline assessment, Z_{common} , is calculated by recoding the CEP assignment variable: $Z_{\text{cep}}! = 0 * Z_{\text{pop}}! = 0$, representing assignment to either version of the community engaged policing intervention and either one of two problem oriented policing interventions.

6.4.6 Uganda

We first constructed blocks of 4 stations each, blocking on pre-treatment covariates from the census and administrative characteristics of the stations themselves. (We include code approximating the blocking process in the replication materials for the purposes of simulation.)

Each of the 72 stations is randomly assigned to 1 of the 4 treatment groups, within blocks (a probability of 1/4 for each treatment condition). The 4 study villages under the jurisdiction of each station will all receive the same treatment, corresponding to the group to which the station is assigned.

```
declare_assignment(blocks = block_ID, clusters = station_id,  
  conditions = c(0, 1, 2, 3))
```

6.5 Estimation

To estimate the effects of treatment on the outcomes described in the hypotheses section, we use a set of linear regressions with cluster-robust standard errors clustered at the level of treatment assignment that account for the cluster randomization design. For studies that used assigned treatment to clusters within blocks, we account for the blocked design using block fixed effects. We used weighted least squares with weights accounting for the sampling and assignment designs by weighting by the inverse of the product of the probability of inclusion in the sample and assignment to treatment, if either varied within blocks (Pustejovsky and Tipton 2016). In several studies, a factorial design was used. In these cases, we include treatment indicators for the crossed treatments. In each analysis, we include the outcome at baseline as a covariate. Robust standard errors adjusting for clustering when applicable are calculated using the `lm_robust` function for least squares models and the `iv_robust` function for two stage least squares in the `estimatr` package.

Given the large number of hypotheses and of outcomes measured in this study, the risk of false discovery (rejecting a true null hypothesis) is high. We address this risk by following the Benjamini and Hochberg (1995) adjustment to p-values, which controls the false discovery rate, in our case to 5%. We first adjust the tests for our primary hypotheses, eight indices testing H1 through H4c. Together, these represent the test of a grand hypothesis that community policing is effective. We use the base R function `p.adjust` to adjust the p-values with `method = 'BH'`. Second, for several hypotheses we have multiple outcomes that are combined into the single index. We adjust with the same procedure each set of p-values *within the hypothesis*, for example all of the outcomes representing H1 and, separately, all of the outcomes representing H4c. In the appendix, we present tables of estimated effects, standard errors, confidence intervals, raw p-values, and adjusted p-values. Tables are presented first for the primary hypothesis, and then for the constituent outcomes and indices.

The estimation strategy for analyzing officer survey outcomes differs in most studies from estimators for the administrative crime and citizen survey outcomes. In general, this stems from the fact that officers are not randomly assigned in the same way as locations to receive the community policing intervention. In some cases, officers in study areas operate in both treatment and control areas. In each case, we use the most credible estimation strategy for isolating the effect of the common arm intervention on police officer attitudes.

In what follows, we specify the estimation strategy for effects and standard errors that will be used for each study, separately for administrative crime, citizen survey, and officer survey outcomes.

6.5.1 Brazil

Our estimation strategy in Brazil differs substantially from the other studies, because of the use of an encouragement design. We estimate the complier average treatment effect using instrumental variable regression, instrumenting for the formation of community policing groups (`groupformed`) with the encouragement treatment (Z). We use `iv_robust` from the `estimatr` package to conduct instrumental variables estimation with cluster-robust standard errors.

```

# administrative data outcomes
iv_robust(acrime_num ~ groupformed + acrime_num_baseline + selected_for_survey |
          Z + responsive_act_baseline + selected_for_survey,
          clusters = neighborhoods,
          data = bra_data_crime)
# coefficient of interest: groupformed

# citizen survey outcomes
iv_robust(responsive_act ~ groupformed + responsive_act_baseline + selected_for_survey |
          Z + responsive_act_baseline + selected_for_survey,
          clusters = neighborhoods,
          weights = 1 / S_citizens_inclusion_prob,
          data = bra_data_citizen)
# coefficient of interest: groupformed

# officer survey outcomes
lm(empathy_complaints ~ empathy_complaints_baseline, data = bra_data_officer)
# coefficient of interest: empathy_complaints_baseline

```

6.5.2 Colombia

```

# administrative data outcomes
lm_robust(acrime_num ~ Z_common + Z_alt + acrime_num_baseline + as.factor(block_ID),
          clusters = cuadrantes,
          data = col_data_crime)
# coefficient of interest: Z_common

# citizen survey outcomes
lm_robust(responsive_act ~ Z_common + Z_alt + responsive_act_baseline + as.factor(block_ID),
          clusters = cuadrantes,
          weights = 1 / S_citizens_inclusion_prob,
          data = col_data_citizen)
# coefficient of interest: Z_common

# officer survey outcomes
lm(empathy_idx ~ empathy_idx_baseline,
    weights = 1/S_inclusion_prob,
    data = col_data_officer)
# coefficient of interest: empathy_idx_baseline

```

6.5.3 Liberia

```

# administrative data outcomes
lm_robust(acrime_num ~ Z + acrime_num_baseline + as.factor(block_ID),
          clusters = communities,
          data = lbr_data_crime)
# coefficient of interest: Z

# citizen survey outcomes
lm_robust(responsive_act ~ Z + responsive_act_baseline + as.factor(block_ID),
          clusters = communities,

```

```

        data = uga_data_citizen)
# coefficient of interest: Z

# officer survey outcomes
lm(empathy_idx ~ headquarters_station + empathy_idx_station + headquarters_station*empathy_idx_baseline,
    data = lbr_data_officer)
# coefficient of interest: headquarters_station

```

6.5.4 Pakistan

```

# administrative data outcomes
lm_robust(acrime_num ~ Z_common + Z_alt + acrime_num_baseline + as.factor(stations),
          clusters = beats,
          weights = 1 / (Z_multistage_assignment_prob * S_multistage_inclusion_prob),
          data = pak_data_crime)
# coefficient of interest: Z_common

# citizen survey outcomes
lm_robust(responsive_act ~ Z_common + Z_alt + responsive_act_baseline + as.factor(stations),
          clusters = communities_ID,
          weights = 1 / (Z_multistage_assignment_prob *
                        S_multistage_inclusion_prob_survey),
          data = pak_data_citizen)
# coefficient of interest: Z_common

# officer survey outcomes
lm_robust(empathy_idx ~ Z_common + Z_alt + empathy_idx_baseline + as.factor(stations),
          clusters = beats,
          weights = 1 / (Z_multistage_assignment_prob * S_multistage_inclusion_prob),
          data = pak_data_officer)
# coefficient of interest: Z_common

```

6.5.5 Philippines

6.5.5.1 Midline Estimation

```

# administrative data outcomes at midline
lm_robust(acrime_num ~ Z_common_midline + Z_tipline + Z_officer + acrime_num_baseline +
          as.factor(block_ID),
          clusters = barangay,
          data = phl_data_crime)
# coefficient of interest: Z_common_midline

# citizen survey outcomes at midline
lm_robust(responsive_act ~ Z_common_midline + Z_tipline + Z_officer + responsive_act_baseline +
          as.factor(block_ID),
          clusters = barangay,
          weights = 1 / S_citizens_inclusion_prob,
          data = phl_data_citizen)
# coefficient of interest: Z_common_midline

```

6.5.5.2 Endline Estimation

```

# administrative data outcomes at endline
lm_robust(acrime_num ~ Z_common + Z_tipline + Z_officer + Z_lgu_only + Z_mayor +
          Z_dilg + acrime_num_baseline + as.factor(block_ID),
          clusters = barangay,
          data = phl_data_crime)
# coefficient of interest: Z_common

# citizen survey outcomes at endline
lm_robust(responsive_act ~ Z_common + Z_tipline + Z_officer + Z_lgu_only + Z_mayor +
          Z_dilg + responsive_act_baseline + as.factor(block_ID),
          clusters = barangay,
          weights = 1 / S_citizens_inclusion_prob,
          data = phl_data_citizen)
# coefficient of interest: Z_common

# officer survey outcomes at endline
lm_robust(empathy_idx ~ on_community_policing_team,
          data = phl_data_officer)
# coefficient of interest: on_community_policing_team

```

6.5.6 Uganda

```

# administrative data outcomes
lm_robust(acrime_num ~ Z_common + Z_alt + acrime_num_baseline + as.factor(block_ID),
          clusters = station_id,
          data = uga_data_crime)
# coefficient of interest: Z_common

# citizen survey outcomes
lm_robust(responsive_act ~ Z_common + Z_alt + responsive_act_baseline + as.factor(block_ID),
          clusters = station_id,
          weights = 1 / S_citizens_inclusion_prob,
          data = uga_data_citizen)
# coefficient of interest: Z_common

# officer survey outcomes
lm_robust(empathy_idx ~ Z_common + Z_alt + empathy_idx_baseline + as.factor(block_ID),
          clusters = station_id,
          data = uga_data_officer)
# coefficient of interest: Z_common

```

6.5.7 Addressing threats to inference

Interference. An important threat in experimental studies of policing practices is displacement of crime from treated areas to other areas (for a discussion, see Sherman and Weisburd 1995b). By design, our interventions only change the costs of committing crime in treated areas; criminals and criminal organizations may simply move to control areas (or areas outside our study) where the costs are unchanged. Unlike hotspot policing interventions, in which the unit of intervention is often as small as a street segment, the nature of the community policing treatment is that it takes place – at the smallest – at a neighborhood level where community meetings, patrols, and other interactions with citizens take place. Without unpacking the intervention, we cannot investigate its effects at a level lower than the police station or

neighborhood. Our aim is to evaluate the standard package of community policing interventions as it is implemented in developing countries. As a result, there is a risk of interference (spillovers) either from crime displacement or more standard forms of spillover of treatment such as citizens from adjacent neighborhood attending treated community meetings. As a result, we will interpret effects with caution, cognizant of the possibility that the net effect in a city or county of implementing community policing may be different than our estimated effects due to displacement or other spillover channel. The best we can do is to assess over-time trends in control and over-time trends in crime in treatment and see whether crime rates changed in control areas during the period of the treatment (Hypothesis 4c). If crime rates do not change over this time period, we will take this as (weak) evidence against the possibility of spillovers.

Noncompliance. We will identify noncompliance through two sets of data: administrative information on treatment implementation (meetings held, patrols conducted, etc.), and citizen survey data on interactions with police (Hypothesis C). We will use the administrative information to assess whether any units assigned to treatment failed to receive treatment and whether treatment was mistakenly implemented in any control areas. In addition, if we see increases in control areas in the compliance index, that will be evidence of two-sided noncompliance. Our analysis strategy will not change in response to these data; the primary analysis will remain as described above. However, the interpretation of the effect for any study in which we assess that one-sided noncompliance has occurred, will change to be the intent-to-treat effect rather than the average treatment effect for those studies' individual effects and for the overall effects. We will report in text on these assessments and in appendices on their basis in the data.

Attrition. We will conduct a t-test (or in the case of the multi-arm or factorial designs a joint F-test) for each study to compare attrition rates between treatment groups. For any study for which the test is rejected, we will conduct a Lee bounds sensitivity analysis for differential attrition.

Missing data in baseline outcomes. If there is missing data in the baseline outcome used as a control in each analysis, we will add an indicator variable for missingness and replace missing values with zeros (Gerber and Green 2012).

7. Meta-analysis design

We pool the results from each study. We rely on the “random effects” meta-analysis model which weights estimates according to both the within-study variance and the between-study variance. This model is derived from an interpretation of effect sizes across studies that are drawn from a common distribution and the aim is to estimate the moments of that distribution (Borenstein et al. 2009). Variance in effects in this meta-analysis are implied by variation in study context, including different police organizations or different baseline levels of citizen cooperation. In the case where there is no between-study variance in effects, the random effects reduces to the fixed effects model. We use the restricted maximum likelihood random-effects estimator (Viechtbauer 2005).

```
library(metafor)
meta_re_estimator <- function(data){
  results <- rma(
    yi = estimate, # estimates from each study
    sei = std.error, # standard error from each study
    method = "REML", # maximum likelihood random-effects meta analysis estimator
    data = data)

  data.frame(list(estimate = results$b, std.error = results$se,
                 z.value = results$zval, p.value = results$pval,
                 conf.low = results$ci.lb, conf.high = results$ci.ub))
}
```

8. Registered analyses

In this section, we present a registered report of the analyses we will run and report in (1) an article based on the top-line findings from the Metaketa; and (2) in the meta-analysis chapter of the book based on the findings from the Metaketa.⁸

8.1 Average effects of community policing

In this first section, we present the average effects of the common community policing treatment arm for each outcome enumerated in the hypotheses table above.. Figure XX presents effect estimates pooling across all six study sites along with 95% confidence intervals.

8.2 Variation across countries

In this section, we explore variation in the effects across the study sites. We present effect estimates for each outcome for each study site along with 95% confidence intervals.

8.3 Variation across outcomes

In the preceding sections, we have examined the effects of community policing on several composite indices combining outcomes. In this section, we explore variation in the effects across components of those indices. We present effect estimates for each component outcome along with 95% confidence intervals, in the figures that follow.

8.4 Isolating Effects of Components of the Treatment

In the Philippines study, we have the unique ability to decouple the two components of community policing that are bundled as the common arm treatment: community engagement and problem-oriented policing. In the Philippines design, community engagement was rolled out first, and we took measurements at midline, before the second phase in which the problem-oriented policing intervention was rolled out. In Figure XX, we present the effects of community engagement alone, based on those midline measurements.

8.5 Compliance

In this section, we examine measures of compliance with the treatment from citizen and police officer measurements. In Figure XX, we present average effects pooling across studies for each outcome, and in Figure XX we present the effects disaggregated by study site.

8.6 Inclusion of studies

We expect to include all six study sites in our analyses. In this section, we will report whether any studies were excluded and why. Studies will only be excluded if they cannot be completed for logistical reasons external to the researchers, such as the police agency halting the intervention or a natural disaster.

9. Timing of publication

Metaketa teams all agree to work according to a common timeframe, to make good faith efforts to complete all interventions and data collection by the agreed upon end date, and to restrict any individual project publication

⁸The actual code we will use is included in the .Rmd version of this file available in the replication materials.

or presentation of results, which draws from the common treatment arm, until submission for publication of the meta-analysis. However, Metaketa members have agreed to consider individual teams’ proposals to publish individual papers drawing only on alternative treatment arms. For such proposals to move forward, Metaketa members need to reach a positive consensus before the team moves forward with diffusion of results, and submission to academic journals.

10. Ethics

All projects in Metaketa IV: Community Policing will abide by a common set of principles above and beyond minimal requirements (i.e. securing formal IRB approvals, avoiding conflicts of interest, and ensuring all interventions do not violate local laws):

- Eight principles of the Metaketa Initiative: <http://egap.org/content/eight-principles-metaketa-initiative>
- EGAP principles on research transparency: <http://egap.org/resources/egap-statement-of-principles/>
- Protect staff: Do not put research staff in harms way
- Informed consent: Subjects will know that information they receive is provided as part of a research project. Core project data will be publicly available in primary languages at <http://egap.org/research/metaketa/>
- Approval from the police agency under study and, if relevant, other government entities
- EGAP is committed to monitoring ethics and human rights compliance for all research projects in the Metaketa Initiative. Should harm to any individuals occur on an EGAP funded research project, including human rights abuses, ethical breaches, or breaches of international humanitarian law, EGAP and DFID both individually reserve the right to terminate our support for the research project, and cancel remaining funding. Any report to the research team that acts which are harmful to research subjects (including human rights abuses, ethical breaches, breaches of international humanitarian law) have been committed by any person(s) involved with implementation, research or other aspects of the study must be relayed to the Principle Investigator immediately. The Principle Investigator must pass any such report to EGAP Executive Director within 72 hours. EGAP Executive Director must pass any such report to the DFID SRO immediately. EGAP and DFID will consider appropriate remedial actions within 48 hours. These rules apply regardless of whether or not the abuse or breach occurred on activities directly connected to the study, and whether or not the report has been substantiated. EGAP requires confirmation from the Principal Investigator that all required ethical, governmental and other clearances for research have been gained prior to beginning of baseline data collection. EGAP will forward this confirmation to DFID, who will store it.

11. Study timing

Study Location	Baseline Survey	Intervention	Endline Survey
Brazil	May 1, 2018	June - December 2018	April - June 2019
Colombia	April 6 - June 25, 2018	July 18 - December 2018/January 2019	January - February 2019
Liberia	July 15, 2017	January 1, 2018	November 2018
Pakistan	February 15 - March 31, 2018	April 1, 2018 - September 10, 2018	May - June 2019
Philippines	Midline civilian survey: July 10, 2017; Officer survey: August 1, 2017	POP intervention: December 1, 2017	Endline civilian survey: July 20, 2018
Uganda	June 2018	May 2018	May 2019

12. Change log

If this preanalysis plan is amended, each change will be summarized here. Each version of the .Rmd and separate code files will be retained so that they can be directly compared.

Version 1 26 August, 2018

13. Appendix

13.1 Survey questionnaire and data coding summary

Table 10: Variable Coding and Survey Questionnaire

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
PRIMARY OUTCOME FAMILY 1: SECURITY OF LIFE AND PROPERTY			
1a. Negative effect on incidence of crime			
armedrob_num ⁹	[IF YES:] How many times did this happen in the past 6 months?	Numeric	
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ¹⁰		
burglary_num ¹¹	[IF YES:] How many times did this happen in the past 6 months?	Numeric	
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ¹²		
simpleassault_num ¹³	[IF YES:] How many times did this happen in the past 6 months?	Numeric	
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ¹⁴		
other_any	In the past 6 months, were you or any member of your household a victim of any OTHER CRIME that we haven't mentioned already?	0-No; 1-Yes; 97-Do not know; 98-Refuse to answer	
	[IF YES:] What was the crime?	Freeform	
other_any_violent	Coded as other_any if other_any is a violent crime		
crime_num	Sum of armedrob_num, burglary_num, simpleassault_num, other_any		
violentcrime_num	Sum of armedrob_num, burglary_num, simpleassault_num, other_any_violent		
	Now I want to ask you some questions about different types of crimes that may have happened to SOMEONE ELSE IN THIS COMMUNITY. This can include your neighbors, friends, relatives, or any other person you know that's living IN THIS COMMUNITY. ¹⁵		
carmedrob_num ¹⁶	[IF YES:] As far as you know, how many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	

⁹Adapted from Blair et al. (2017).

¹⁰Blair et al. (2017).

¹¹Adapted from Blair et al. (2017).

¹²Blair et al. (2017).

¹³Adapted from Blair et al. (2017).

¹⁴Blair et al. (2017).

¹⁵Adapted from Blair et al. (2017).

¹⁶Adapted from Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
<i>cburglary_num</i> ¹⁷	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. [IF YES:] How many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	
<i>caggassault_num</i> ¹⁹	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ¹⁸ [IF YES:] How many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	
<i>csimpleassault_num</i> ²¹	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ²⁰ [IF YES:] How many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	
<i>csexual_num</i>	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ²² [IF YES:] How many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	
<i>cdomestic_phys_num</i>	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. [IF YES:] How many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	
<i>cmurder_num</i>	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. [IF YES:] How many times did this happen in the past 6 months?	1-Once; 2-Two to three times; 3-Four to five times; 4-Six to ten times; 5-More than ten times; 97-Do not know	
<i>cother_any</i>	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. In the past 6 months, was anyone in this community a victim of any OTHER CRIME that we haven't mentioned already?	0-No; 1-Yes; 97-Do not know; 98-Refuse to answer	

¹⁷Adapted from Blair et al. (2017).

¹⁸Adapted from Blair et al. (2017).

¹⁹Adapted from Blair et al. (2017).

²⁰Adapted from Blair et al. (2017).

²¹Adapted from Blair et al. (2017).

²²Adapted from Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
	[IF YES:] What was the crime?	Freeform	To be added to the relevant dummies and indices, depending on whether the crime is violent or non-violent
cother_any_violent	Coded as cother_any if cother_any is a violent crime (see general coding rule for violent crimes)		
ccrime_num	Sum of carmedrob_num, cburglary_num, caggassault_num, csimpleassault_num, csexual_num, cdomestic_phys_num, cmurder_num, cother_any		
cviolentcrime_num	Sum of carmedrob_num, caggassault_num, csimpleassault_num, csexual_num, cdomestic_phys_num, cmurder_num, cother_any_violent		
crime_victim_idx			Index of crime_num, violentcrime_num, ccrime_num, cviolentcrime_num
aarmedrob_num	Number of reports of armed robbery in community in past 6 months		
aburglary_num	Number of reports of burglary or theft in community in past 6 months		
aaggassault_num	Number of reports of aggravated assault in community in past 6 months		
asimpleassault_num	Number of reports of simple assault in community in past 6 months		
asexual_num	Number of reports of sexual abuse in community in past 6 months		
adomestic_phys_num	Number of reports of domestic violence (physical) in community in past 6 months		
adomestic_verbal_num	Number of reports of domestic violence (verbal) in community in past 6 months		
aland_num	Number of reports of land disputes in community in past 6 months		

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
aland_violent_num	Number of reports of violent land disputes in community in past 6 months		
amob_num	Number of reports of mob justice in community in past 6 months		
ariot_num	Number of reports of riots in community in past 6 months		
amurder_num	Number of reports of murder in community in past 6 months		
aother_num	Number of reports of other crimes in community in past 6 months		
acrime_num	Sum of aarmedrob_num, aburglary_num, aaggassault_num, asimpleassault_num, asexual_num, adomestic_phys_num, adomestic_verbal_num, aland_num, aland_violent_num, amob_num, ariot_num, amurder_num, aother_any		
aviolentcrime_num	Sum of aarmedrob_num, aaggassault_num, asimpleassault_num, asexual_num, adomestic_phys_num, aland_violent_num, amob_num, ariot_num, amurder_num		
4b. Positive effect on perceptions of safety (personal, land, and possessions)			
fear_violent ²³	How worried are you that you or a member of your household will be the victim of a VIOLENT CRIME in the coming year? [INCLUDING ARMED ROBBERY, ASSAULT WITH A WEAPON, ASSAULT WITHOUT A WEAPON, ETC.]	0-Not at all worried; 1-Somewhat worried; 2-Worried; 3-Very worried	
fear_nonviolent ²⁴	How worried are you that you or a member of your household will be the victim of a NON-VIOLENT CRIME in the coming year? [INCLUDING BURGLARY, THEFT, ETC.]	0-Not at all worried; 1-Somewhat worried; 2-Worried; 3-Very worried	
feared_walk ²⁵	In the past 6 months, how often, if ever, have you or anyone in your family felt unsafe walking in your neighborhood?	0-Never; 1-Just once or twice; 2-Several times; 3-Many times; 4-Always	

²³Adapted from Cheema et al. (2017).

²⁴Adapted from Cheema et al. (2017).

²⁵Adapted from Afrobarometer (2016).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
future_insecurity_idx			Index of fear_violent, fear_nonviolent, feared_walk
PRIMARY OUTCOME FAMILY 2: CITIZEN PERCEPTIONS OF THE POLICE			
2. Positive effect on citizen perceptions of police			
satis_trust	I generally trust the police. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
satis_general	I am satisfied with the service that the police provide. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
satis_idx			Index of satis_trust and satis_general
PRIMARY OUTCOME FAMILY 3: POLICE PERCEPTIONS OF AND BEHAVIORS TOWARD CITIZENS			
3a. Positive effect on perceptions of police empathy, accountability, and abuse and corruption concerns			
empathy_complaints	When people complain about the police, they usually have a good reason. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Agree; 3-Strongly agree; 97-Do not know; 98-Refuse to answer	
empathy_reports	Most things that people report to the police are worth taking seriously. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Agree; 3-Strongly agree; 97-Do not know; 98-Refuse to answer	
empathy_idx			Index of empathy_complaints, empathy_reports
account_pol_matter ²⁶	The police leadership takes citizen complaints about officers seriously. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Agree; 3-Strongly agree; 97-Do not know; 98-Refuse to answer	
hypothetical2_punishment ²⁷	If an officer in your agency engaged in this behavior and was discovered doing so, what if any discipline do YOU think WILL follow?	0-None; 1-Verbal reprimand; 2-Written reprimand; 3-Period of suspension without pay; 4-Demotion in rank; 5-Dismissal; 97-Do not know; 98-Refuse to answer	
hypothetical2_reportself	Do you think YOU would report a fellow police officer who engaged in this behavior?	0-Definitely not; 1-Probably not; 2-Probably yes; 3-Definitely yes; 97-Do not know; 98-Refuse to answer; 99-other	
hypothetical2_reportothers ²⁸	Do you think MOST POLICE OFFICERS would report a fellow police officer who engaged in this behavior?	0-Definitely not; 1-Probably not; 2-Probably yes; 3-Definitely yes; 97-Do not know; 98-Refuse to answer	

²⁶Not collected in Uganda.

²⁷Not collected in Uganda.

²⁸Not collected in Uganda.

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
hypothetical3_punishment ²⁹	If an officer in your agency engaged in this behavior and was discovered doing so, what if any discipline do YOU think WILL follow?	0-None; 1-Verbal reprimand; 2-Written reprimand; 3-Period of suspension without pay; 4-Demotion in rank; 5-Dismissal; 97-Do not know; 98-Refuse to answer	
hypothetical3_reportself	Do you think YOU would report a fellow police officer who engaged in this behavior?	0-Definitely not; 1-Probably not; 2-Probably yes; 3-Definitely yes; 97-Do not know; 98-Refuse to answer	
hypothetical3_reportothers ³⁰	Do you think MOST POLICE OFFICERS would report a fellow police officer who engaged in this behavior?	0-Definitely not; 1-Probably not; 2-Probably yes; 3-Definitely yes; 97-Do not know; 98-Refuse to answer	
hypothetical5_punishment ³¹	If an officer in your agency engaged in this behavior and was discovered doing so, what if any discipline do YOU think WILL follow?	0-None; 1-Verbal reprimand; 2-Written reprimand; 3-Period of suspension without pay; 4-Demotion in rank; 5-Dismissal; 97-Do not know; 98-Refuse to answer	
hypothetical5_reportself	Do you think YOU would report a fellow police officer who engaged in this behavior?	0-Definitely not; 1-Probably not; 2-Probably yes; 3-Definitely yes; 97-Do not know; 98-Refuse to answer	
hypothetical5_reportothers ³²	Do you think MOST POLICE OFFICERS would report a fellow police officer who engaged in this behavior?	0-Definitely not; 1-Probably not; 2-Probably yes; 3-Definitely yes; 97-Do not know; 98-Refuse to answer	
accountability_idx			Index of account_pol_matter, hypothetical2_punishment, hypothetical2_reportself, hypothetical2_reportothers, hypothetical3_punishment, hypothetical3_reportself, hypothetical3_reportothers, hypothetical5_punishment, hypothetical5_reportself, hypothetical5_reportothers
hypothetical5_abuseself	Do you consider this behavior to be serious misconduct?	0-Not at all serious; 1-Somewhat serious; 2-Serious; 3-Very serious; 97-Do not know; 98-Refuse to answer	
hypothetical5_abuseother ³³	Do MOST POLICE OFFICERS consider this behavior to be serious misconduct?	0-Not at all serious; 1-Somewhat serious; 2-Serious; 3-Very serious; 97-Do not know; 98-Refuse to answer	
abuse_idx			Index of hypothetical5_abuseself, hypothetical5_abuseother

²⁹Not collected in Uganda.

³⁰Not collected in Uganda.

³¹Not collected in Uganda.

³²Not collected in Uganda.

³³Not collected in Uganda.

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
hypothetical2_corruptself	Do you consider this behavior to be serious misconduct?	0-Not at all serious; 1-Somewhat serious; 2-Serious; 3-Very serious; 97-Do not know; 98-Refuse to answer	
hypothetical2_corruptother ³⁴	Do MOST POLICE OFFICERS consider this behavior to be serious misconduct?	0-Not at all serious; 1-Somewhat serious; 2-Serious; 3-Very serious; 97-Do not know; 98-Refuse to answer	
hypothetical3_corruptself	Do you consider this behavior to be serious misconduct?	0-Not at all serious; 1-Somewhat serious; 2-Serious; 3-Very serious; 97-Do not know; 98-Refuse to answer	
hypothetical3_corruptother ³⁵	Do MOST POLICE OFFICERS consider this behavior to be serious misconduct?	0-Not at all serious; 1-Somewhat serious; 2-Serious; 3-Very serious; 97-Do not know; 98-Refuse to answer	
corrupt_idx			Index of hypothetical2_corruptself, hypothetical2_corruptother, hypothetical3_corruptself, hypothetical3_corruptother
officer_attitude_idx			Index of corrupt_idx, abuse_idx, accountability_idx, empathy_idx
3b. Negative effect reporting of police abuse and bribery			
policeabuse_verbal_any ³⁶	Besides any incidents of physical abuse, in the past 6 months, have you ever witnessed or heard about police officers VERBALLY ABUSING people from your community? [INCLUDING SHOUTING, CUSSING, ETC.] This includes verbal abuse against you or someone in your family.	0-No; 1-Yes; 97-Do not know; 98-Refuse to answer	
policeabuse_phys_any ³⁷	In the past 6 months, have you ever witnessed or heard about police officers PHYSICALLY ABUSING people from your community? [INCLUDING PUSHING, SLAPPING, PUNCHING, KICKING, CHOKING, ETC.]	0-No; 1-Yes; 97- Do not know; 98-Refuse to answer	

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³⁴Not collected in Uganda.

³⁵Not collected in Uganda.

³⁶Adapted from Blair et al. (2017).

³⁷Adapted from Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
policeabuse_any			Dummy for any verbal (policeabuse_verbal_any) or physical abuse (policeabuse_phys_any) by police officers in the past 6 months
policeabuse_verbal_num ³⁸	[IF YES:] How many times did this happen in the past 6 months?	Numeric	
policeabuse_phys_num ⁴⁰	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ³⁹ [IF YES:] How many times did this happen in the past 6 months? [IF MORE THAN 1:] I want to ask about the MOST RECENT incident. ⁴¹	Numeric	
policeabuse_num			Sum of number of incidents of verbal (policeabuse_verbal_num) or physical abuse (policeabuse_phys_num) by police officers in the past 6 months
policeabuse_verbal_report	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-No; 1-Community leaders; 2-Police station or police commander; 3-Any other government agency; 4-NGO; 5-Journalist; 6-[OTHER COUNTRY-SPECIFIC VENUES]; 97-Do not know; 98-Refuse to answer	
policeabuse_phys_report	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-No; 1-Community leaders; 2-Police station or police commander; 3-Any other government agency; 4-NGO; 5-Journalist; 6-[OTHER COUNTRY-SPECIFIC VENUES]; 97-Do not know; 98-Refuse to answer	

³⁸Adapted from Blair et al. (2017).

³⁹Blair et al. (2017).

⁴⁰Adapted from Blair et al. (2017).

⁴¹Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
policeabuse_report			Dummy for any reporting of verbal (policeabuse_verbal_report) or physical abuse (policeabuse_phys_report) by police officers in the past 6 months
bribe_freq ⁴²	How many times in the past 6 months have you made an unofficial payment to the police?	1-None; 2-Once; 3-Between 2 and 5 times; 4-More than 5 times; 97-Do not know; 98-Refuse to answer	Categorical variable for frequency of unofficial payments to the police in the past 6 months
bribe_amt	[IF ANY:] The last time you made an unofficial payment to the police, how much was it?	Numeric	
police_abuse_idx			Index of policeabuse_any, policeabuse_num, policeabuse_report, bribe_freq, bribe_amt
PRIMARY OUTCOME FAMILY 4: BEHAVIORAL COOPERATION OF CITIZENS WITH THE POLICE			
4a. Positive effect on reporting of crime victimization			
<i>Administrative data</i>			
acrime_hline	ADMIN: Total number of reports of crimes to hotline		
aviolent_hline	ADMIN: Number of reports of violent crimes to hotline		
anonviolent_hline	ADMIN: Number of reports of non-violent crimes to hotline		
acrime_station	ADMIN: Total number of reports of crimes to nearest police station		
aviolent_station	ADMIN: Number of reports of violent crimes to nearest police station		
anonviolent_station	ADMIN: Number of reports of non-violent crimes to nearest police station		

⁴²Adapted from Cheema et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
aburglary_hline	ADMIN: Number of reports of burglary to hotline		
aarmedrob_hline	ADMIN: Number of reports of armed robbery to hotline		
arape_hline	ADMIN: Number of reports of rape to hotline		
amurder_hline	ADMIN: Number of reports of murder to hotline		
asimpleassault_hline	ADMIN: Number of reports of simple assault to hotline		
aaggassault_hline	ADMIN: Number of reports of aggravated assault to hotline		
atheft_hline	ADMIN: Number of reports of theft to hotline		
aburglary_station	ADMIN: Number of reports of burglary to nearest police station		
aarmedrob_station	ADMIN: Number of reports of armed robbery to nearest police station		
arape_station	ADMIN: Number of reports of rape to nearest police station		
amurder_station	ADMIN: Number of reports of murder to nearest police station		
asimpleassault_station	ADMIN: Number of reports of simple assault to nearest police station		
aaggassault_station	ADMIN: Number of reports of aggravated assault to nearest police station		
atheft_station	ADMIN: Number of reports of theft to nearest police station		
<i>Actual crime (survey)</i>			
armedrob_report ⁴³	Where did you report this case? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other; 98-Refuse to Answer	Recoded 0 if armedrob_num = 0 or armedrob_report = 0; 1 if armedrob_num > 0 and armedrob_report = 1

⁴³Adapted from Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
burglary_report ⁴⁴	Where did you report this case? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded 0 if burglary_num = 0 or burglary_report = 0; 1 if burglary_num > 0 and burglary_report = 1
simpleassault_report ⁴⁵	Where did you report this case? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded 0 if simpleassault_num = 0 or simpleassault_report = 0; 1 if simpleassault_num > 0 and simpleassault_report = 1
other_report ⁴⁶	Where did you report this case? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded 0 if other_num = 0 or other_report = 0; 1 if other_num > 0 and other_report = 1
crime_report_num	Sum of armedrob_report, burglary_report, simpleassault_report, other_report		
other_report_violent	Coded as other_report if other_any is a violent crime		
violentcrime_report_num	Sum of armedrob_report, burglary_report, simpleassault_report, other_report_violent		

⁴⁴Blair et al. (2017).

⁴⁵Blair et al. (2017).

⁴⁶Blair et al. (2017)

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
carmedrob_report ⁴⁷	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded carmedrob_num = 0 or carmedrob_report = 0; 1 if carmedrob_num > 0 and carmedrob_report = 1
cburglary_report ⁴⁸	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded 0 if cburglary_num = 0 or cburglary_report = 0; 1 if cburglary_num > 0 and cburglary_report = 1
caggassault_report ⁴⁹	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded 0 if caggassault_num = 0 or caggassault_report = 0; 1 if caggassault_num > 0 and caggassault_report = 1

⁴⁷Adapted from Blair et al. (2017).

⁴⁸Adapted from Blair et al. (2017).

⁴⁹Adapted from Blair et al. (2017)

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
<code>csimpleassault_report</code> ⁵⁰	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recorded 0 if <code>csimpleassault_num = 0</code> or <code>csimpleassault_report = 0</code> ; 1 if <code>csimpleassault_num > 0</code> and <code>csimpleassault_report = 1</code>
<code>csexual_report</code>	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recorded 0 if <code>csexual_num = 0</code> or <code>csexual_report = 0</code> ; 1 if <code>csexual_num > 0</code> and <code>csexual_report = 1</code>
<code>cdomestic_phys_report</code>	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recorded 0 if <code>cdomestic_phys_num = 0</code> or <code>cdomestic_phys_report = 0</code> ; 1 if <code>cdomestic_phys_num > 0</code> and <code>cdomestic_phys_report = 1</code>
<code>cmurder_report</code>	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recorded 0 if <code>cmurder_num = 0</code> or <code>cmurder_report = 0</code> ; 1 if <code>cmurder_num > 0</code> and <code>cmurder_report = 1</code>

⁵⁰Adapted from Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
<code>cother_report</code>	To the best of your knowledge, was this incident reported to anyone? [SELECT ALL THAT APPLY]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 88-Other	Recoded 0 if <code>cother_num = 0</code> or <code>cother_report = 0</code> ; 1 if <code>cother_num > 0</code> and <code>cother_report = 1</code>
<code>cother_report_violent</code>	Coded as <code>cother_report</code> if <code>cother_any</code> is a violent crime (see general coding rule for violent crimes)	Recoded such that a zero represents either that the person responded that the community did not experience any other violent crimes or they did not report the crime. E.g., 0 if <code>cother_num_violent = 0</code> or <code>cother_report_violent = 0</code> ; 1 if <code>cother_num_violent > 0</code> and <code>cother_report_violent = 1</code>	
<code>ccrime_report_num</code>	Sum of <code>carmedrob_report</code> , <code>cburglary_report</code> , <code>caggassault_report</code> , <code>csimpleassault_report</code> , <code>csexual_report</code> , <code>cdomestic_phys_report</code> , <code>cmurder_report</code> , <code>cother_report_violent</code>		
<code>cviolentcrime_report_num</code>	Sum of <code>carmedrob_report</code> , <code>cburglary_report</code> , <code>caggassault_report</code> , <code>csimpleassault_report</code> , <code>csexual_report</code> , <code>cdomestic_phys_report</code> , <code>cmurder_report</code>		
<i>Hypothetical crime (survey)</i>	There are many places you can go to solve your crime here in [COUNTRY]. We got the POLICE, community leaders, [COUNTRY SPECIFIC FORUM 1], and [COUNTRY SPECIFIC FORUM 2]. Now I want to ask about what you think should happen for different types of crime that might happen in your community. ⁵¹		

⁵¹Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
burglaryres ⁵²	If there's a BURGLARY in your community, who you would most like to resolve the situation? [DO NOT READ OPTIONS]	0-Nowhere; 1-Police; 2-Court; 3-[Town chief or elders]; 4-[Community watch group]; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 97-Don't know; 98-Refuse to answer	Dummy denoting whether respondent prefers the police or courts to resolve the situation
dviolres ⁵³	If a MAN BEAT HIS WOMAN in your community, who you would most like to resolve the situation? [DO NOT READ OPTIONS]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 97-Don't know; 98-Refuse to answer	Dummy denoting whether respondent prefers the police or courts to resolve the situation
armedrobres ⁵⁴	If there's an ARMED ROBBERY in your community, who you would most like to resolve the situation? [DO NOT READ OPTIONS]	0-Nowhere; 1-Police; 2-Court; 3-Town chief or elders; 4-Community watch group; 5-Settled directly with the perpetrator; 6-Other country specific forum1; 7-Other country-specific forum2; 8-Other country specific forum3; 97-Don't know; 98-Refuse to answer	Dummy denoting whether respondent prefers the police or courts to resolve the situation
crimeres_idx			Index of burglaryres, dviolres, and armedrobres
crime_reporting_idx			Index of crime_report_num, violentcrime_report_num, ccrime_report_num, cviolentcrime_report_num, crimeres_idx
4b. Positive effect on reporting of crime prevention tips			
atips_hline ⁵⁵	ADMIN: Number of crime prevention tips reported via hotline (if available in both T and C locations)		Number of crime prevention tips reported

⁵²Blair et al. (2017)

⁵³Blair et al. (2017).

⁵⁴Blair et al. (2017).

⁵⁵Not collected in Liberia.

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
atips_box ⁵⁶	ADMIN: Number of crime prevention tips reported via comment boxes (if available in both T and C locations)		Number of crime prevention tips reported
contact_pol_susp_activity	In the past 6 months, have you ever contacted the police to alert them to suspicious or criminal activity in your community?	0-No; 1-Yes; 97-Do not know; 98-Refuse to answer	
give_info_pol_investigation crime_tips_idx	In the past 6 months, have you ever given information to the police to assist with an investigation?	0-No; 1-Yes; 97-Do not know; 98-Refuse to answer	Index of contact_pol_susp_activity and give_info_pol_investigati
tips_idx			Index of atips_hline, atips_box, crime_tips_idx
4c. Positive effect on reporting of victimization by the police			
apolvtm_hline	ADMIN: Number of incidents of victimization by the police reported via hotline (if available in both T and C locations)		
apolvtm_cmtbox ⁵⁷	ADMIN: Number of incidents of victimization by the police reported via comment boxes (if available in both T and C locations)		
apolvtm_station	ADMIN: Number of incidents of victimization by the police reported to nearest station		
See Section 3a.i. Incidence of victimization by police on reporting of police abuse.			
<i>Reporting of victimization by the police (hypothetical)</i>			
dutydrink_report ⁵⁸	Suppose you see a uniformed police officer drinking alcohol in your community. How likely would you be to report that situation?	1-Very unlikely; 2-Unlikely; 3-Likely; 4-Very likely; 97-Don't know; 98-Refuse to answer	
policebeating_report	Suppose you see a group of officers unjustifiably beating someone in your community. How likely would you be to report that situation?	1-Very unlikely; 2-Unlikely; 3-Likely; 4-Very likely; 97-Don't know; 98-Refuse to answer	

⁵⁶Not collected in Liberia or the Philippines.

⁵⁷Not collected in Liberia or the Philippines.

⁵⁸Not collected in Colombia, because officers often wear uniforms off-duty so distinguishing on-duty drinking is difficult.

Variable name	Question text	Response options	Variable construction
police_abuse_idx			Index of dutydrink_report, policebeating_report, apolvtm_hline, apolvtm_cmtbox, apolvtm_station
MECHANISM FAMILY 1: PERCEIVED COST TO CITIZENS COOPERATING WITH THE POLICE			
M1a. Positive effect on beliefs about police intentions			
<i>Perceptions of police intentions (case management)</i>			
	Imagine someone is a VICTIM of an armed robbery in your community and they take the case to the POLICE. I want to ask you what you think will happen.		
polcaseserious	The police will take the case seriously and investigate. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
polcasefair ⁵⁹	The police will be fair to both complainant and defendant in the investigation. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
<i>Perceptions of police intentions (general)</i>			
	Ok, now I want to ask you about what you think about the police in general.		
polint_corrupt ⁶⁰	The police are corrupt. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
polint_quality ⁶¹	The police provide the same quality of service to all citizens. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
polint_idx			Index of polint_corrupt and polint_quality
intentions_idx			Index of polcaseserious, polcasefair, polint_idx

⁵⁹Note in Colombia this outcome is modified to refer to handling the case fairly, rather than the investigation, which are not conducted by the police but rather the public prosecution service.

⁶⁰Adapted from Sunshine and Tyler (2003).

⁶¹Sunshine and Tyler (2003).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
M1b. Positive effect on knowledge of criminal justice system			
know_law_suspect ⁶²	If you see a dead body lying in the street and you report it to the police, [COUNTRY] law says the police must hold you as a suspect. True or false?	0-False; 1-True; 97-Do not know; 98-Refuse to answer	
know_law_lawyer ⁶³	If you take your case to court and you don't have money to pay a lawyer, [COUNTRY] law says the government must provide a lawyer for you. True or false?	0-False; 1-True; 97-Do not know; 98-Refuse to answer	
know_law_fees	If you take a case to the police, [COUNTRY] law says the police can charge a fee to register the case. True or false?	0-False; 1-True; 97-Do not know; 98-Refuse to answer	
know_law_vaw ⁶⁴	According to [COUNTRY] law, it is a crime to beat on one's wife. True or false?	0-False; 1-True; 97-Do not know; 98-Refuse to answer	
know_law_idx			Index of know_law_suspect, know_law_lawyer, know_law_fees, and know_law_vaw
know_report_followup	If a crime is reported to the police using the hotline, an officer must follow up with the complainant in person in order for the crime to be recorded by the police. True or False? [ENUMERATOR: IS RESPONDENT CORRECT?]	0-No; 1-Yes	
know_report_station ⁶⁵	Do you know where the nearest police station is? [ENUMERATOR: IS RESPONDENT CORRECT?]	0-No; 1-Yes	
know_report_idx			Index of know_report_followup, know_report_station
know_idx			Index of know_law_idx, know_report_idx
M1c. Positive effect on norms of citizens cooperation with police			

⁶²Not collected in Brazil. Adapted from Blair et al. (2017).

⁶³Blair et al. (2017).

⁶⁴Siddiqi and Sandefur.

⁶⁵Blair et al. (2017).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
reportnorm_theft ⁶⁶	If there is a BURGLARY in your community, people can get angry if you take it to the police. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
reportnorm_abuse ⁶⁷	If a MAN BEATS HIS WIFE in your community, people can get angry if you take it to the police. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
obeynorm ⁶⁸	You should do what the police tell you to do even when you do not understand the reasons for their decisions. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
norm_idx			Index of reportnorm_theft, reportnorm_abuse, obeynorm
MECHANISM FAMILY 2: PERCEIVED RETURNS TO CITIZENS COOPERATING WITH THE POLICE			
M2a. Positive effect on beliefs about police capacity			
polcap_timely	The police have the capacity to respond to incidents of crime in a timely manner. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
polcap_investigate	The police have the capacity to investigate crimes and gather evidence effectively. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
police_capacity_idx			Index of polcap_timely, polcap_investigate
M2b. Positive effect on perceptions of responsiveness to citizen feedback			
responsive_act	The police act upon citizen comments and complaints about security in my community. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Neither agree nor disagree; 3-Agree; 4-Strongly agree; 97-Do not know; 98-Refuse to answer	
SECONDARY OUTCOME FAMILY 1: INCREASE IN TRUST IN THE STATE			
S1. Positive effect on trust in the state			
legit_trust	How much do you trust the government of [COUNTRY]?	1-Not at all; 2-Just a little; 3-Somewhat; 4-A lot; 97-Don't know; 98-Refuse to answer	
SECONDARY OUTCOME FAMILY 2: INCREASE IN COMMUNAL TRUST			
S2. Positive effect on communal trust			
trust_community	Most people in my community can be trusted. Agree or disagree?	0-Strongly disagree; 1-Disagree; 2-Agree; 3-Strongly agree; 97-Do not know; 98-Refuse to answer	

⁶⁶Blair et al. (2017).

⁶⁷Blair et al. (2017).

⁶⁸Sunshine and Tyler (2003).

<i>Variable name</i>	<i>Question text</i>	<i>Response options</i>	<i>Variable construction</i>
COMPLIANCE WITH TREATMENT: CITIZEN INTERACTIONS WITH POLICE			
C. Positive effect on rate of citizen interactions with police			
<code>ameeting_count</code>	ADMIN: Attendance sheets at community meetings		
<code>compliance_patrol</code>	About how often do you see police officers patrolling your area on FOOT?	1-Daily; 2-Weekly; 3-Monthly; 4-Seasonally; 5-Less than seasonally; 97-Do not know; 98-Refuse to answer	
<code>compliance_freq</code>	About how often do you see police officers patrolling your area while in a vehicle or on a motorbike?	1-Daily; 2-Weekly; 3-Monthly; 4-Seasonally; 5-Less than seasonally; 97-Do not know; 98-Refuse to answer	
<code>compliance_meeting</code>	In the past 6 months, have you HEARD ABOUT, SEEN, OR ATTENDED community meetings with police officers taking place in your area?	0-No; 1-Yes; 97-Do not know; 98-Refuse to answer	
<code>compliance_idx</code>			Index of <code>compliance_patrol</code> , <code>compliance_freq</code> , <code>compliance_meeting</code>

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