Meta-Analysis Pre-Analysis Plan[†]
Community Policing Metaketa Project

Graeme Blair[‡]   Fotini Christia[§]   Cyrus Samii[¶]   Jeremy Weinstein[§]

Eric Arias[||]   Emile Badran[**]   Robert A. Blair[††]   Ali Cheema[‡‡]   Thiemo Fetzer[**]   Guy Grossman[††]
Dotan Haim[§§]   Rebecca Hanson[||]   Ali Hasanain[‡‡]   Ben Kachero[††]   Dorothy Kronick[||]   Benjamin
Morse[¶¶]   Robert Muggah[**]   Matthew Nanes[§§]   Nico Ravanilla[§§]   Jacob N. Shapiro[‡‡]   Barbara
Silva[**]   Tara Slough[||]   Pedro C. L. Souza[**]   Lily Tsai[¶¶]   Anna Wilke[††]   Susan Hyde[***]

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Contents

[‡]Chair, Metaketa Steering Committee. Correspondence: graeme.blair@ucla.edu
[§]Metaketa Steering Committee
[¶]Executive Director, Evidence in Governance and Politics.
[||]Colombia
[**]Brazil
[††]Uganda
[‡‡]Pakistan
[§§]Philippines
[¶¶]Liberia
[***]Past Executive Director, Evidence in Governance and Politics.

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 (2019a) in Liberia and Cooper (2019) in Papua New Guinea and concluded that the presence of community police officers improved security outcomes. However, Blair, Karim, and Morse (2019a) 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.

Metaketas 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: Metaketas 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
The Construction of Trust in the State: Evidence from a Field Experiment in Colombia	Colombia	Eric Arias (College of William and Mary); Rebecca Hanson (University of Florida); Dorothy Kronick (University of Pennsylvania); Tara Slough (Columbia/Berkeley/NYU)	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 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); Anna Wilke (Columbia University)	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 (but at a higher administrative level); 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 followed by foot patrols during the week in which officers distributed informational pamphlets.	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 policemen in a patrol car, little patrolling in rural areas	No support or training will be provided	No formal meetings with community groups

	Condition	Community presence	Training and support to community watch teams	Formal meetings with community members
	Treatment	Institute saturated patrolling	(i) Encouragement to form neighborhood watch teams during community meetings; (ii) Training provided to community members and police on need to form community watch teams.	Monthly 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
	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 they are not widely 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	Formation of community watch teams encouraged during village meetings	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	Support to RdV groups; very few currently exist
	Treatment	Telephone and on-line reporting	Telephone and on-line	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
	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	Encouragement to use existing systems i.e. Inspector General of police's office hotline number and Prime Minister's citizens complaint portal	Identify local problems with community input; no additional resources
Philip-pines	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

	Condition	Hotline for reporting	Citizen feedback mechanism	Problem oriented policing (budgets, authority)
	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	During community meetings, provide phone numbers for the local police post or station and the 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 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, abuse and taking corruption seriously

3b. Negative effect on 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 A3).

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 A4).

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 A5).

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

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

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 13 in the appendix.

Table 4: Tests of Hypotheses: Primary

Hyp	Primary outcome index	Outcome measures	Data source
1a.	`crime_victim_idx`	`violentcrime_num, nonviolentcrime_num, cviolentcrime_num, cnonviolentcrime_num,`	Citizen survey
1b.	`future_insecurity_idx`	`future_insecurity_idx`	Citizen survey
2.	`satis_idx`	`satis_idx`	Citizen survey
3a.	`officer_attitude_idx`	`empathy_idx, accountability_idx, abuse_idx, corrupt_idx`	Officer survey
3b.	`police_abuse_idx`	`policeabuse_any, policeabuse_num, bribe_freq, bribe_amt`	Citizen survey
4a.	`crime_reporting_idx`	`violentcrime_report_num, nonviolentcrime_report_num, cviolentcrime_report_num, cnonviolentcrime_report_num, crimeres_idx`	Citizen survey
4b.	`tips_idx`	`crime_tips_idx`	Citizen survey
		`atips_hline, atips_box`	Administrative
4c.	`police_abuse_report_idx`	`policeabuse_report, dutydrink_report, policebeating_report`	Citizen survey
		`apolvtm_hline, apolvtm_cmtbox, apolvtm_station`	Administrative
M1a.	`intentions_idx`	`polcaseserious, polcasefair, polint_idx`	Citizen survey
M1b.	`know_idx`	`know_law_idx, know_report_idx`	Citizen survey
M1c.	`norm_idx`	`norm_idx`	Citizen survey

M2a.	`police_capacity_idx`	`polcap_timely, polcap_investigate`	Citizen survey
M2b.	`responsive_act`	`responsive_act`	Citizen survey
S1.	`legit_trust`	`legit_trust`	Citizen survey
S2.	`trust_community`	`trust_community`	Citizen survey
C.	`compliance_idx`	`compliance_idx`	Citizen survey

We present secondary tests of several hypotheses in Table 5 using alternative data or alternative ways of constructing indices.

Table 5: Tests of Hypotheses: Secondary

Hyp	Primary outcome index	Outcome measures	Data source
1a. (alt. i)	`crime_victim_idx_admin`[2]	`aviolentcrime_num, anonviolentcrime_num`	Administrative
1a. (alt. ii)	`crime_victim_idx_exp`[3]	`violentcrime_num_exp, nonviolentcrime_num_exp, cviolentcrime_num_exp, cnonviolentcrime_num_exp`	Citizen survey
1a. (alt. iii)	`crime_victim_idx_bin`[4]	`violentcrime_bin, nonviolentcrime_bin, cviolentcrime_bin, cnonviolentcrime_bin`	Citizen survey
4a. (alt.)	`crime_reporting_idx_admin`[5]	`aviolent_hline, anonviolent_hline, aviolent_station, anonviolent_station`	Administrative

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 we will use to test the alternative hypotheses.

Table 6: Tests of Alternative Hypotheses

Hypothesis	Outcome measures	Data source
A1.	`satis_idx` (perceptions) and `nonviolentcrime_num, violentcrime_num` (victimization)	Citizen survey
A2.	`satis_idx` (perceptions), `nonviolentcrime_num, violentcrime_num` (crime victimization)	Citizen survey
	`acrime_num, aviolentcrime_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 `nonviolentcrime_num, violentcrime_num` (victimization)	Citizen survey
A5.	`nonviolentcrime_num, violentcrime_num`	Citizen survey

---

[2]Alternative crime victimization index based on administrative crime data rather than the crime victimization surveys.

[3]Alternative crime victimization index using the survey data using an expanded set of crimes only measured in some contexts. This secondary index includes a varying set of crimes for each country case.

[4]Alternative crime victimization index using the survey measures of the common (more limited) set of crimes in the main test of Hypothesis 1a, but with the variables dichotomized (1 = crime victimization, 0 not victimized by that crime). This index is constructed for all countries including Colombia, which is excluded from the main test of hypothesis 1a due to data collection limitations.

[5]Alternative crime reporting index based on administrative crime data rather than surveys.

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 7 summarizes the key elements of each design.

	Brazil	Colombia	Liberia	Pakistan	Philippines	Uganda
Crime data units	Neighbor-hoods	Point data	Communities	Beats	Barangays	Police stations
Survey primary units	Neighbor-hoods	Micro-neighborhoods	Communities	Beats	Barangays	Villages
Level of assignment	Neighbor-hoods	Police cuadrantes (beats)	Communities	Beats	Barangays	Police stations (CP); villages (alt.)
Assignment strategy	Two-arm (control, CP encourage-ment)	Factorial (control, CP, alt., CP + alt.)	Two-arm (control, CP)	Three-arm (control, CP, alt.)	Two-arm (control, CP) with addl. cross-randomizations	Three arm (Control, CP, CP+alt.)
Blocking	Batalhões	✓	Police zone	Station	✓	✓
Baseline survey	✓	✓	✓	✓	✓	✓
Midline survey	X	X	X	X	✓ Post-CEP treatment	X
Endline survey	✓	✓	✓	✓	✓	✓

Table 7: 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. 2019).

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. We describe the police officer population, on which we collect data in every context. However, we do not analyze the effects of the common arm on these outcomes in Brazil, Philippines and Liberia because officers were not randomized into treatment and control in these cases. 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 (centroids) in the state of Santa Catarina. We proceed as follows to build these neighborhoods. We ask local commanders[6] across Santa Catarina to select at least ten specific points within their areas of responsibilities that could host a new Rede de Vizinhos group which we call "centroids". However, we expect the total number of centroids in each batalhoe to be less than 10 because of varying organizational support across all centroids. The centroids are constructed to fall within the following conditions: (i) be within the catchment area of the potential new groups and (ii) contain the full address of a venue able to host the induction meeting. These centroids add up across all the batalhoes to form 206 neighborhoods that correspond to areas including and around the centroids selected.

```
fabricate(
  # 34 batalhoes in the province of Santa-Catarina each consisting of at least 10 specific
  # points called "centroids"
  batalhoes = add_level(
    N = 34,
    state_name = c("Santa-Catarina"),
    # We simulate from a set of numbers between 2-10 to denote
    # the size of centroids in each batalhoe
    N_centroids = c(rep.int(c(4, 6, 10), 10), rep.int(2, 2), rep.int(1, 2))
  ),
  # We simulate the dataset have a total of 206 centorids (using the numbers generated above)
  # across 34 batalhoes to stay consistent with the sampling strategy
  centroids = add_level(N = N_centroids),
  months = add_level(
    N = 14,
    # the study started in May 2018 and ended in June 2019
    month = c(month.abb[5:12], month.abb[1:6]),
    pretreatment = c(rep(0, 1), # baseline survey period from May 18
                     rep(1, 7), # intervention June-Dec 2018
                     rep(1, 6)),
    # endline survey in Apr-Jun-2019 (we simulate here the period after the
    # intervention to be a part of the endline period),
    nest = FALSE
  ),

  # construct centroid-month panel
  centroid_months = cross_levels(by = join(centroids, months))
)
```

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

---

[6]These are typically, but not always, commanders of Batalhões or Companhias.

```
fabricate(
  # 34 batalhoes in the province of Santa-Catarina each consisting of at least 10 specific
  # points called "centroids"
  batalhoes = add_level(
    N = 34,
    state_name = c("Santa-Catarina"),
    # We simulate from a set of numbers between 2-10 to denote the size of centroids in each batalhoe
    N_centroids = c(rep.int(c(4, 6, 10), 10), rep.int(2, 2), rep.int(1, 2))
  ),
  # We simulate the dataset have a total of 206 centorids (using the numbers generated above)
  #across 34 batalhoes to stay consistent with the sampling strategy
  centroids = add_level(
    N = N_centroids,
    # define citizen's population to be between 1000 and 2000 in each centroid or neighborhood
    neighborhood_population = sample(1000:2000, N, replace = TRUE)
  ),
  # add citizens' population
  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)[7]
- 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. the set of inhabited, contiguous city blocks closest to the centroid of the police beat. Each micro-neighborhood comprises about four blocks, depending on the residential density, so as to ensure similar populations across micro-neighborhoods. We describe the population of 347 micro-neighborhoods. The study will be conducted over 22 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 10.

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

---

[7]Note that this administrative unit nearly corresponds with the 16 comunas of Medellin.

```
  # we simulate crime data all 22 months of the study in each cuadrante
  months = add_level(
    N = 22,
    # the study starts in April 2018 and ends in Jan 2020
    month = c(month.abb[4:12], month.abb[1:12],  month.abb[1:1]),
    pretreatment = c(rep(0, 3), # baseline survey period April-June 2018
                     rep(1, 12), # intervention in July 2018-June 2019
                     rep(1, 7)), # endline in Jan 2020
    # (we simulate here the period after the intervention to be a part of the endline period)
    nest = FALSE
  ),
  # construct cuadrante-month panel
  cuadrante_months = cross_levels(
    by = join(cuadrantes, months),
    crime_level = rnorm(N, mean = crime_level_cuadrante, sd = 0.5)
  )
)
```

Citizens. Cuadrantes have an average of 5,348 residents (in the 2005 census) and range in between 4000 and 5000 residents, whereas our micro-neighborhoods contain approximately 1,200 residents, or about 400 households:

```
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.)

6.1.3 Liberia

Police organization. We work with the Liberian National Police. Monrovia is divided into ten LNP police zones. Each zone covers anywhere from 15 to 40 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 15 and 40 communities, within which there are approximately 3 to 6 blocks. 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 10.

```
fabricate(
  police_zones = add_level(
    # we situate this study in 10 police zones in Monrovia
    N = 10,
    crime_level_zone = rnorm(N),
    # we sample the number of communities in each block to be between 15-40
    N_communities = sample(15:40, size = N, replace = TRUE)
  ),
  communities = add_level(
    N = N_communities,
    crime_level_community = rnorm(N, mean = crime_level_zone),
    # we simulate the number of blocks in each community to be 3-6
    N_blocks = sample(3:6, N, replace = TRUE)
  ),
  blocks = add_level(
    N = N_blocks,
    crime_level_block = rnorm(N, mean = crime_level_community)
  ),
  months = add_level(
    N = 19,
    # the study started on July 15, 2017 and ended in  January 2019
    month = c(month.abb[7:12], month.abb, month.abb[1]),
    pretreatment = c(rep(0, 7), # baseline survey fielded July '17
           # (we simulate here the period before the intervention to be a part of the baseline)
                  rep(1, 11), # intervention from Feb 2018-Dec 2018
                  rep(1, 1)), # endline in Jan 2019
    nest = FALSE
  ),
  # construct block-month panel
  block_months = cross_levels(
    by = join(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(
  police_zones = add_level(
    # we situate this study in 10 police zones in Monrovia
    N = 10,
    crime_level_zone = rnorm(N),
    # we sample the number of communities in each block to be between 15-40
    N_communities = sample(15:40, size = N, replace = TRUE)
  ),
  communities = add_level(
    N = N_communities,
    crime_level_community = rnorm(N, mean = crime_level_zone),
    # we simulate the number of blocks in each community to be 3-6
    N_blocks = sample(3:6, N, replace = TRUE)
  ),
  blocks = add_level(
```

```
    N = N_blocks,
    crime_level_block = rnorm(N, mean = crime_level_community)
  ),
  # we simulate 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),
    officers_per_station = sample(4:5, N, replace = TRUE)),
  # 4-5 officers per station
  officer = add_level(N = officers_per_station)
)
```

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 20 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 10.

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

```
    N_stations = c(16, 11)
  ),
  # we use beats_per_station as an input (151 beats for the entire sample)
  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 = 20,
    # the study started in Feb 2018 and ended in September 2019
    month = c(month.abb[2:12], month.abb[1:9]),
    pretreatment = c(rep(0, 12),
                    # baseline survey fielded February-March 2018
                    # (we simulate here the period before the intervention to be a part of the baseline),
                    rep(1, 6), # intervention begins Feb to July 2019
                    rep(1, 2)),
    # endline in August to September 2019
    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 (16 in Sheikhupura and 11 Nankana)
  districts = add_level(
    N = 2,
    district_name = c("Sheikhupura", "Nankana"),
    N_stations = c(16, 11)
  ),
 # we use beats_per_station as an input (151 beats for the entire sample)
  stations = add_level(N = N_stations,
                        N_beats = beats_per_station),
  beats = add_level(
    N = N_beats,
 # we define 1000 - 2000 citizens per beat
    beat_population = sample(1000:2000, N, replace = TRUE)
  ),

 # we add citizen's population in each beat
  citizen_ID = add_level(N = beat_population),

  # we simulate data for two independent survey waves i.e. baseline and endline
  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 to be 1 officer per police station. However, within every beat we collect data on 1 police officer at baseline and 2 police officers at endline. The simulation for that can be seen as follows:

```
fabricate(
  # 27 police stations in Sheikhupura Region (16 in Sheikhupura and 11 Nankana)
  districts = add_level(
    N = 2,
    district_name = c("Sheikhupura", "Nankana"),
    N_stations = c(16, 11)
  ),
  # we use beats_per_station as an input (151 beats for the entire sample)
  stations = add_level(N = N_stations,
                        N_beats = beats_per_station),
  beats = add_level(N = N_beats),
  # two independent survey waves for police officers
  waves = add_level(
    N = 2,
    wave = c("baseline", "endline"),
    # 1 officer at wave 1 (baseline) and 2 officers at wave 2 (endline)
    N_officers = c(1, 2)
  ),
  officer = add_level(N = N_officers)
)
```

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 22 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 10.

```
# note we construct the population in two steps, first constructing the municipality-barangay hierarchy
#  and then the barangay-month panel
barangays <- fabricate(
```

```r
  data = barangays,
  # we simulate data for 298 barangays through already available data
  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
    # Sorgoson Province to be safe from insurgency activity for research ( we use the following
    # code to separate the safe (298) barangays from the total population of 541)
    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
      )
  )
)

fabricate(
  data = barangays,

  # we simulate crime data for each month of the study for each barangay
  months = add_level(
    N = 22,
    # the study started in Jan 2017 and ended in October 2018
    month       = c(month.abb[1:12], month.abb[1:10]),
    pretreatment = c(rep(0, 2), # baseline Jan to Feb 2017
                     rep(1, 4), # CEP intervention March to June 2017
                     rep(1, 4), # midline survey July to October 2017
                     rep(0.5, 9), # POP intervention Nov 2017 to July 2018,
                     rep(0, 3)),
    # endline August to October 2017
    # intervention in July 2018 (we simulate here the period after the intervention to be a part of the endline),
    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,
```

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```
          rnorm(N, mean = crime_rate_barangay, sd = crime_rate_sd)
        )
    )
)
```

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

```
# note we construct the population in two steps, first constructing the municipality-barangay hierarchy
#  and then the barangay-month panel
barangays <- fabricate(
  data = barangays,
  # we simulate data for 298 barangays through already available data
  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
    # Sorgoson Province to be safe from insurgency activity for research ( we use the following
    # code to separate the safe (298) barangays from the total population of 541)
    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
      )
  )
)



fabricate(data = barangays,
          # 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. Approximately 800 officers in the province will be surveyed, including all officers that will take part in the community policing teams (198 officers).

```
fabricate(
  # we simulate a dataset of 800 officers
  # out of 800 officers 198 will be from the community policing teams
  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 (UPF) 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 purposively 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 21 months. We simulate crime data for each month below. Further details on the timeline are provided in Table 10.

```
fabricate(
  data = stations,
  # we simulate crime data for each month of the study for each station using previously available
  # admin data
  months = add_level(
    N = 21,
    # the study started in June 2018 and is due to end in  Feb 2020
    month = c(month.abb[6:12], month.abb[1:12], month.abb[1:2]),
    pretreatment = c(rep(0, 2), # baseline survey fielded June to July 2018,
                     rep(1, 13), # intervention from Aug 2018-Aug 2019
                     rep(1, 6)),
    # Endline in Feb 2020 (we simulate here the period
      # after the intervention to be a part of the endline),
    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,
  # we simulate crime data for each station using previously available admin data
  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 estimates for male-females 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 is 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,
          # we use previously available admin data to simulate officer data
          officer = add_level(
            # we sample between 3 and 5 officers to include at least 3 officers at minumum
            # (officer-in-charge, a liaison officer, and a child and family protection officer)
            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 13, 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, due to research constraints in each context, mostly related to the safety of field workers and survey respondents. We will report the reasons each item was dropped. We will construct indices for each country based on the available set of items.

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;[8] 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 13.

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 13. 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. For this reason, we do not study officer-level hypotheses in Brazil, Philippines and Liberia.

6.2.4 Standardization and index creation

Effects are estimated on standardized outcomes. We standardize each outcome variable before estimation by subtracting the mean and dividing by the standard deviation of the variable at baseline (dropping missing values in calculating the mean and standard deviation).

In some cases, an outcome was not collected at baseline. Instead of standardizing relative to the baseline values, in these cases outcomes are standardized by subtracting the mean and dividing by the standard deviation in the control group at endline (again dropping missing values in calculating the mean and standard deviation). For studies in which a baseline was not conducted, we use this alternative standardization procedure for all outcomes.

Many of our outcomes are indices of several variables. We construct the indices in two steps. First, in the presence of attrition (missing values in the outcome) for a given index, we follow the procedures described in the attrition section to fill in missing values by making predictions based on nonmissing variables within the same index. (Note this procedure is only conducted in the absence of differential attrition.) Second, for each respondent, the index value is calculated as the mean across the variables in the index.

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[8]Not collected in Colombia.

For outcomes that draw data from more than one source, i.e. from administrative data and citizen surveys, we construct the index in a different way given that the data sources are constructed at different levels of analysis (districts, neighborhoods, or beats vs. citizens). First, we merge the standardized outcomes from the administrative data into the citizen-level data (i.e., each administrative data observation will be repeated and identical for citizens within a given administrative unit). Second, we construct an index that uses the standardized variables from both sources. We analyze these outcome indices using the estimation strategy for the citizen survey data.

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 206 neighborhoods (centroids) 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, citizens in centroids are selected.

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

```
declare_sampling(strata = centroids, 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. We conduct surveys of 15 respondents per cuadrante yielding a total of 5,205 respondents (one per household). Households are surveyed randomly within micro-neighborhood through a random walk method, with a random starting point. The expected attrition rate is about 0.3, implying an endline sample of approximately 3,643 (approximately 10 to 11 endline respondents per micro-neighborhood).

```
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. Officers from each of Monrovia's 10 police zones were asked to identify all of the communities within their jurisdiction. This resulted in a sampling frame of 244 communities, with between 12 to 35 communities per zone. 35 of these communities were identified as "high priority" for the intervention based on officers' perceptions of crime and automatically included in the sample.

An additional 63 communities were selected at random from the non-priority communities, with the number of communities selected per zone proportional to the total number of communities in the each zone (though not necessarily proportional to the population per zone). The resulting sample consists of 93 communities, with between 5 and 14 communities per zone.

Citizens. Within each community, 20 citizens are randomly sampled at baseline and form a panel for the baseline and endline survey.

```
declare_sampling(strata = communities, n = 20, 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 Sheikhupura and Nankana districts, based on AsiaPop grid-cell data on population. See Section 6.4.4 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")
```

Police officers. Within every beat we collect data on 1 police officer at baseline and 2 police officers at endline.

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 our 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. In each village, we randomly sampled 6 men and 6 women during the baseline survey. The endline survey will be a panel in which we re-interview these same 12 respondents in each village.

```
declare_sampling(strata = village_gender_strata, n = 6,
    sampling_variable = "S_citizens")
```

Police officers. We conduct two waves of surveys: a baseline and an endline. The baseline survey took place between June and July 2018. In each of the 72 police stations and posts, we interviewed the Officer in Charge (OC) and, whenever possible, the Community Liaison Officer (CLO) and the Child and Family Protection Unit (CFPU) officer. Then among all the more junior officers, we randomly selected as many as needed to reach 5 officers. (53 of the 72 stations and posts have five or fewer officers. We survey all officers in these cases.) We will interview the same officers during the endline survey. Officers that have rotated to a different post will be replaced with other officer who are randomly selected.

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. In the first stage we randomize half of the neighborhoods/centroids into treatment, and half to control blocking on Batalhões. 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. The campaigns are geographically targeted at circles of 1km radii around the centroids.

```
declare_assignment(
  # 50-50 complete random assignment across neighborhoods (centroids)
  clusters = centroids, blocks = batalhoes, prob_each = c(0.5, 0.5), assignment_variable = Z)
```

We represent the second stage of treatment received in potential outcomes as a function of treatment assignment. Note that both treatment assigned (encouragement) and treatment received (forming a Rede de Vizinhos group) are at the neighborhood level.

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

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(
  # within each block, we will assign each cuadrante to one of four groups:
  # (3) treated with both police-community meetings and information provision;
  # (1) treated only with police- community meetings;
  # (2) treated only with information provision; and
  # (0) pure control (no intervention).
  # blocked by block_ID, clustered by cuadrantes
  clusters = cuadrantes,
```

```
    blocks = block_ID,
    prob_each = rep(1 / 4, 4),
    conditions = c(0, # control
                   1, # common arm
                   2, # alternative arm
                   3), # both
    assignment_variable = Z
)


# recode treatment indicators for estimation
declare_step(
  Z_common = 1 * (Z == 1 | Z == 3),
  Z_alt = 1 * (Z == 2 | Z == 3),
  handler = mutate
)
```

6.4.3 Liberia

In Liberia, communities are assigned to the common arm treatment or control via block randomization, blocking on police zones. Within each police zone, half of the communities were randomly assigned to treatment and control conditions with equal probability, i.e. $1/2$. For zones with an odd number of communities, treatment and control are assigned through $\frac{((N_b-1)/2)}{N_b}$, where N_b is equal to the number of communities in each block (zone).

Due to implementation constraints, communities in Police Zone 6 were dropped altogether. The final sample thus consists of 48 control communities and 45 treatment communities across nine police zones.

```
declare_assignment(
  # assign 1/2 communities to treatment (Z = 1)
  #        1/2 to control (Z = 0)
  # using clustered assignment
  clusters = communities, prob_each = c(0.5, 0.5), blocks = police_zones, assignment_variable = Z
)
```

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 stations: 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.

```
# two stage assignment: assign three units within each beat to:
#    control, alternative, common arm, and the rest to "available"
# then, randomly sample 27 beats from remaining "available" units,
#    randomly assign the 27 to control, ADR, common arm

declare_assignment(
  # assign ~1/3 beats to common arm treatment (Z = 1),
  #        ~1/3 beats to alternative arm treatment (Z == 2),
  #        ~1/3 beats to control (Z = 0)
  clusters = beats, blocks = stations,
  block_m_each = cbind(matrix(rep(1, 3), ncol = 3, nrow = 27), beats_per_station - 3),
  conditions = c(0, # control
```

```
                1, # common arm
                2, # alternative arm
                99), # available to assign in second stage
    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, # control
                1, # common arm
                2, # alternative arm
                99, # assigned in first stage
                88), # not sampled
  assignment_variable = S2
)
```

The treatment variable then is calculated by combining the two indicators: `Z = ifelse(S1 == 99, S2, S1)`. Those with `Z == 88` are dropped (i.e., not sampled).

We then construct two treatment indicators for analysis:

```
declare_step(
  Z_common = 1*(Z == 1),
  Z_alt = 1*(Z == 2),
  handler = mutate
)
```

The joint probabilities of assignment to treatment must be calculated adjusting for the details of both of the above processes, i.e. `Z_multistage_assignment_prob = ifelse(S1 == 99, S1_cond_prob * S2_cond_prob, S1_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, we use a factorial experimental design implemented in two phases: a CEP phase and a POP phase. In the first phase (CEP), barangays are randomly assigned to 1) a control condition, 2) a treatment condition in which CEP is implemented along with an encouragement to use the SMS tip line, and 3) a treatment condition in which CEP is implemented without an encouragement to use the SMS tip line. In addition, CEP-treated barangays are assigned to either A) a control condition, or B) a treatment condition in which police officers have a chance to be given a certificate of recognition conditional on performance. The specifics of the CEP and alternative treatment arms are described below.

In the second phase (POP), CEP-treated barangays are randomly assigned to 1) a treatment condition in which POP is implemented by Barangay Council and Tanods alone, and 2) a treatment condition in which POP is implemented by PNP and Barangay Council and Tanods in coordination with each other. This means the control group is common across CEP and POP phases.

In addition, villages treated with POP are assigned to either A) a control condition or B) a treatment condition in which POP teams receive top-down accountability from the Mayor's office, or C) a treatment condition in which POP teams receive top-down accountability from the Department of Interior and Local Government (DILG) Provincial Office. The specifics of the POP and alternative treatment arms are described below.

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The procedure for this initial randomization unintentionally led to two deviations from the planned design. In particular, most units were put into a single large block due to the way the Stata *randtreat* command treats missing values and several units were put into blocks of size 1. As a result, we do not include blocked fixed effects. We estimated the probabilities of assignment through simulation and found they varied across blocks only within a very narrow range (very close to 0.33), so we do not reweight our estimates based on the assignment probabilities.

```
declare_assignment(
  # assign 1/3 of barnagays to control, 1/3 to CEP intervention plus tipline,
  #   1/3 to CEP intervention with no tipline (both are common arm)
  # within blocks defined above
  # using blocked-and-clustered assignment
  clusters = barangay, blocks = block_ID, prob_each = c(1/3, 1/3, 1/3),
  conditions = c(0,  # control
                 1,  # CEP without tipline (common arm)
                 2), # CEP with tipline (common arm)
  assignment_variable = Z_cep
)


declare_assignment(
  # within CEP treatment status, assign
  #   half to officer recognition program
  #   half to no officer recognition (control)
  clusters = barangay, blocks = Z_cep, block_prob = c(0, 0.5, 0.5),
  assignment_variable = Z_officer
)


declare_assignment(
  # within CEP treatment status, assign 1/3 of barnagays to tanod, 1/3 to tanod+ police,
  #   1/3 to control
  clusters = barangay, blocks = Z_cep,
  block_prob_each = matrix(c(1, 0, 0, rep(1/3, 3), rep(1/3, 3)),
                           nrow = 3, ncol = 3, byrow = TRUE),
  conditions = c(0,  # control
                 1,  # PNP_LGU - police & tanod
                 2), # LGU - tanod
  assignment_variable = Z_pop
)


declare_assignment(
  # within POP treatment status, assign 1/3 of barnagays to have no accountability,
  #  1/3 with top-down accountability (Mayor), and 1/3 with top-down accountability (DILG)
  clusters = barangay, blocks = Z_pop,
  block_prob_each = matrix(c(1, 0, 0, rep(1/3, 3), rep(1/3, 3)),
                           nrow = 3, ncol = 3, byrow = TRUE),
  conditions = c(0,  # no accountability
                 1,  # top-down accountability (Mayor)
                 2), # top-down accountability (DILG)
  assignment_variable = Z_accountability
)


declare_step(
  Z_common_midline = 1*(Z_cep != 0),
  Z_common = 1*(Z_cep != 0) * 1*(Z_pop != 0),
```

```
    Z_tipline = 1*(Z_cep == 2),
    Z_lgu_only = 1*(Z_pop == 2),
    Z_lgu_pnp = 1*(Z_pop == 1),
    Z_dilg = 1*(Z_accountability == 2),
    Z_mayor = 1*(Z_accountability == 1),
    handler = mutate
)
```

6.4.6 Uganda

For the primary treatment group, we use police stations as the unit of treatment assignment and first construct blocks of 4 police stations each. Prior to blocking, stations were sorted into four regions and blocking took place within region. Blocks were formed using pre-treatment covariates from the census and administrative characteristics of the stations themselves. Each of the 72 stations is randomly assigned to the primary treatment group within blocks (a probability of 1/2 to be assigned to the primary treatment). The secondary treatment group is assigned at the village level. Within each of the 36 police stations that were assigned to treatment, two of the four study villages are assigned to receive the secondary treatment.

All four study villages under the jurisdiction of each station in the treatment group will receive the main treatment. Additionally, for each station in the treatment group, two out of four villages are assigned to receive our secondary treatment in addition.

```
# station-level assignment (common arm vs. control)
declare_assignment(
  blocks = block_ID, clusters = station_id,
  conditions = c(0, 1),
  assignment_variable = Z_common
)

# village-level assignment (common arm only vs. community policing + alternative arm)
declare_assignment(
  Z_alt = block_and_cluster_ra(blocks = station_id, clusters = villages, m = 2),
  Z_alt_cond_prob =
    obtain_condition_probabilities(assignment = Z_alt, blocks = station_id, clusters = villages, m = 2),
  Z_alt = if_else(Z_common == 1, Z_alt, 0L),
  Z_multistage_cond_prob =
    if_else(Z_common == 1, Z_common_cond_prob * Z_alt_cond_prob, Z_common_cond_prob),
  handler = mutate
)
```

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 in which treatment was assigned 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 through weighting by the inverse of the product of the probability of inclusion in the sample and assignment to treatment, if either varied across 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 if the variable was collected at baseline. Estimates and standard errors 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 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 for 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. In all of these tables, we present effects for standardized outcomes.

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 + as.factor(batalhoes) |
                       Z + acrime_num_baseline + as.factor(batalhoes),
          data = bra_data_crime)
# coefficient of interest: groupformed


# citizen survey outcomes
iv_robust(responsive_act ~ groupformed + responsive_act_baseline + as.factor(batalhoes) |
                          Z + responsive_act_baseline + as.factor(batalhoes),
          clusters = centroids,
          weights = 1 / S_citizens_inclusion_prob,
          data = bra_data_citizen)
# coefficient of interest: groupformed
```

6.5.2 Colombia

Due to research constraints, we do not control for outcomes at baseline in the officer survey. In addition, we are only able to control for some outcomes at baseline. Outcomes for which we are unable to control for at baseline include: `polcasefair`, `burglaryres`, `bribe_whatfor`, `bribe_amt`, `armedrob_satisfied`, `burglary_satisfied`, `simpleassault_satisfied`, `other_any`, `other_report`, `other_satisfied`, `caggassault_any`, `caggassault_num`, `caggassault_report`, `cmurder_num`, `cmurder_report`, `cother_any`, `cother_report`, `fear_violent`, `know_law_suspect`, `know_law_lawyer`, `know_law_fees`, `know_law_vaw`, `know_report_station`, and `obeynorm`. All other outcomes are controlled for at baseline.

```
# administrative data outcomes
#   controlling for baseline outcome if available (see above)
lm_robust(acrime_num ~ Z_common + Z_alt + acrime_num_baseline + as.factor(block_ID),
          data = col_data_crime)
# coefficient of interest: Z_common
```

```
# citizen survey outcomes
#   controlling for baseline outcome if available (see above)
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
# (note an officer baseline was not conducted, so not controlling for baseline outcome)
lm_robust(empathy_idx ~ Z_common + Z_alt + as.factor(block_ID),
          weights = 1 / S_inclusion_prob,
          data = col_data_officer)
# coefficient of interest: Z_common
```

6.5.3 Liberia

```
# administrative data outcomes
lm_robust(acrime_num ~ Z + acrime_num_baseline + as.factor(police_zones),
          weights = 1 / S_communities_inclusion_prob,
          data = lbr_data_crime)
# coefficient of interest: Z


# citizen survey outcomes
lm_robust(responsive_act ~ Z + responsive_act_baseline + as.factor(police_zones),
          clusters = communities,
          weights = 1 / (S_communities_inclusion_prob *
                           S_citizens_inclusion_prob),
          data = lbr_data_citizen)
# coefficient of interest: Z
```

6.5.4 Pakistan

```
# administrative data outcomes
lm_robust(acrime_num ~ Z_common + Z_alt + acrime_num_baseline + as.factor(stations),
          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 = beats,
          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

```
# administrative data outcomes
lm_robust(acrime_num ~ Z_common + Z_tipline + Z_officer + Z_lgu_pnp + Z_mayor +
            Z_dilg + acrime_num_baseline,
         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_pnp + Z_mayor +
            Z_dilg + responsive_act_baseline,
         clusters = barangay,
         data = phl_data_citizen)
# coefficient of interest: Z_common
```

6.5.6 Uganda

```
# administrative data outcomes
lm_robust(acrime_num ~ Z_common + acrime_num_baseline + as.factor(block_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,
         data = uga_data_citizen)
# coefficient of interest: Z_common

# officer survey outcomes
lm_robust(empathy_idx ~ Z_common + 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 hypothesis test for each study to assess whether treatment status affects missingness. To do so, we will run a regression that follows the specification in the estimation section of this document exactly, except that the outcome is whether the outcome is non-missing. We will do this for every outcome-country pair, but not for outcome indices (we will present the results for each constituent item in the index instead). For Colombia, for example, to test for differential attrition in the outcome `acrime_num` we will run the regression:

```
lm_robust(!is.na(acrime_num) ~ Z_common + Z_alt + acrime_num_baseline + as.factor(block_ID),
          data = col_data_crime)
```

In this example, we will present the *t* statistic and p-value for the coefficient estimate on `Z_common`, the common arm treatment. For designs in which the common arm is cross-randomized with another treatment in a factorial design, we conduct a heteroskedasticity-robust F-test on the joint null hypothesis that all treatment indicators do not affect attrition status. For multi-arm designs, the F-test will not include indicators for alternative arms that are not crossed with the common arm.[9] See Lin, Green, and Coppock (2016) for a related procedure. In a table of estimates and their uncertainty in the appendix, we will include the test statistic and associated p-value, as well as the Lee (2009) bounds of the effect estimate. For meta-analysis estimates, we will run the lower and upper bound through our meta-analysis estimator to present bounds on the meta-analysis estimate.

Several of our outcomes are indices of other items. We will impute values from constituent items using other items from the same respondent country-by-country, if all items exhibit no evidence of differential attrition for that country (if $p > .05$) based on the results from the tests described above. For example, we will fill in missing values for the `satis_idx` index for Colombia if the tests result in $p > .05$ as follows:

```
# satis_idx is made up of two survey items: satis_trust and satis_general

satis_trust_fit <- lm_robust(satis_trust ~ satis_general, data = col_data_survey)

col_data_survey <-
  prediction::prediction(model = satis_trust_fit,
                         data = col_data_survey) %>%
  mutate(satis_trust = replace(satis_trust, is.na(satis_trust), fitted))

satis_general_fit <- lm_robust(satis_general ~ satis_trust, data = col_data_survey)
```

---

[9]The threat to inference of concern here is from differential attrition between the common arm treatment and control.

```
col_data_survey <-
  prediction::prediction(model = satis_general_fit, data = col_data_survey) %>%
  mutate(satis_general = replace(satis_general, is.na(satis_general), fitted))
```

These imputed outcome variables will only be used in these indices, not for analyses of treatment effects on individual items. We have several outcomes that are indices of indices. We will conduct this imputation process from the lowest level possible, first imputing items into the lowest level indices and then, if needed, imputing again within the higher-level indices.

Outliers. To deal with outliers, we will collect further data by contacting enumerators with many errors or especially large errors and/or their research managers to document whether transcription, training, or enumeration errors could have led to the outliers. If there are documented administrative reasons of this nature for the error, the outlier will be deleted or recoded. The same procedure will be conducted with the same intensity in treatment and control. If no administrative errors are found, we will retain these outliers without modification, given that these issues should be parallel across treatment and control.

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). Responses coded as `Don't know` or `Refused` will be coded as `NA`.

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).

```
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.[10]

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. We present effect estimates pooling across all six study sites along with 95% confidence intervals. We present all of these estimates as standardized outcomes.

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. We present all of these estimates as standardized outcomes.

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. We present all of these estimates as standardized outcomes.

8.4 Compliance

In this section, we examine measures of compliance with the treatment from citizen and police officer measurements. We present average effects pooling across studies for each outcome as well as the effects disaggregated by study site. We present all of these estimates as standardized outcomes.

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

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	Mid-line Survey	Intervention	Endline Survey
Brazil	May 1, 2018	-	June - December 2018	April - June 2019
Colombia	April 6 - June 25, 2018	-	July 2018-June 2019	Jan 2020
Liberia	July 15, 2017	-	Feb 2018 - Dec 2018	January 2019
Pakistan	February 15 - March 31, 2018	-	February 2019-July 2019	August 2019-September 2019
Philippines	January to February 2017	July to October 2017	CEP intervention: March to June 2017; POP intervention: November 2017 to July 2018	Endline survey: August to October 2018
Uganda	June - July 2018	-	August 2018 to August 2019	Dec 2019 - Feb 2020

Table 10: Study timing

12.   Change log

When this preanalysis plan is amended, each change is 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.

Version 2: 4 October 2019. The steering committee who authored this revision have not had access to data or results prior to this revision. In addition, at this date not all of the studies have concluded endline data collection.

Category of change	Description	Justification	Sections Amended
Hypothesis Testing	We modify hypotheses 1(a) in table 4 and alternative hypothesis A1, A2, A4 & A5 in table 6 to include violentcrime_num, nonviolentcrime_num & cviolentcrime_num, cnonviolentcrime_num instead of crime_num, violentcrime_num & ccrime_num, cviolentcrime_num.	We change the crime indices to avoid double counting of crimes in both crime_num and violentcrime_num.	Section 4, 5 & Table 13
Expand the set of crimes	We expand the set of crimes for crime_victim_idx to construct a secondary index crime_victim_idx_exp that includes the full set of crimes that most teams measured. This is reported as a part of our secondary analysis.	Previously the crimes were excluded from the larger measures because they were not measured everywhere. They will now be included in the paper, but with notes for the cases where a slightly different set of crimes is included.	Section 5 & Table 13
Modify/Add Hypothesis	We limit the estimation of hypothesis 1(a) in table 4 to exclude one study site i.e. Colombia. We divide the crime victimization index into two sub indices: 1(a) and 1(a) (alt iii), where in the former we measure crime_victim_idx for 5 studies and in the latter we estimate crime_victim_idx_bin for all 6 studies.	This is because data on the number of crime victimization incidents was not collected in Colombia, instead we collected data only on whether a particular crime took place.	Section 5
Hypothesis Testing	We limit the estimation of hypothesis 3(a) in table 4 to include only 3 study sites i.e. Pakistan, Colombia and Uganda. In the remaining study sites i.e. Liberia, Brazil and Philippines officers were not randomized into/out of community policing teams which restricts our ability to estimate hypothesis 3(a) experimentally. Hence, hypothesis 3(a) would not be estimated for the countries which have non-experimental designs for the police officer survey.	We decided to only include experimental comparisons.	Sections 4, 5 & 6
Estimation Strategy	We revise our strategy for dealing with attrition and protocols to deal with outliers. We do this by expanding procedures for the treatment of both realized attrition and outliers in our data in section 6.5.7	In writing our code, we realized that the attrition section needed more detail and developed a more concrete protocol that aligns with our design.	Section 6

Remove Planned Analysis	For the Philippines study, the research design allows us the 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 previous version of the PAP we intended to report it as an analysis in the meta-paper. We remove this from the planned set of analyses in this version. This analysis will go in the paper(s) published by the Philippines.	We removed this analysis because it does not involve meta-analysis of multiple cases and to allow the Philippines team to publish on this unique aspect of their design. It is registered in their PAP.	Section 8
Presentation of Primary/Secondary Hypotheses	We clarify visually the distinction between primary and secondary hypotheses in Table 4 and Table 5, which was previously noted in footnotes.		Section 5.
Questionnaire Presentation Changes	In table 13 we fill in columns for survey source, response type and treatment of non-responses. We also complete some missing cells to include full question texts and complete or revised variable constructions in favor of consistency across the analysis. In section 5 we change the name construction of the index associated hypothesis 4c to avoid duplication and to be consistent with the empirical implementation of the hypotheses in section 4.1.	All of these changes were made to make variable description, variable construction and reporting of results consistent across studies and hypothesis.	Section 5 and table 13
Updating Research Designs	In sections 3, 5 & 6 we update the intervention details and research designs of our studies in Uganda, Pakistan, Colombia, Philippines, Liberia and Brazil to include updated design changes made to study population, outcome measurement, sampling, intervention, treatment assignment and estimation.	Update changes.	Section 3, 5 & 6
Updating Timings	In section 11 we update the time frame for each of our studies to include the updated frame, however, since all studies have not been completed, these timings are still tentative.	Update implementation timings.	Section 11
Updating Research Team Members	In sections 2 and our title page we add two new members to the research teams in Colombia and Uganda.	Update co-authors.	Section 2

Version 3: 02 January, 2020. The steering committee who authored this revision did not have access to data or results prior to this revision. In addition, at this date not all of the studies have concluded endline data collection.

Category of Change	Description	Justification	Sections Amended
Code clarity	We added code comments for the random assignment code and now include the code that recodes treatment assignment indicators into the variables used in estimation (originally only included in the replication materials)	Clarity	Section 6.4
Estimation	We modify our estimation specifications to correct inconsistencies in the definition of assignment and sampling weights and the inclusion of fixed effects for some studies. The estimation procedures for each study now reflect their designs. We also remove text regarding the estimation of police officer-level outcomes to be consistent with earlier changes to the PAP. Finally, we clarify the text from the last PAP revision justifying our choice to not adjust analysis of the Philippines data for block randomization and update the code to reflect that previously-registered change.	The changes are to make the analysis for each study consistent with the assignment and sampling designs as originally intended.	Section 6
Estimation	In Section 6.5 we wrote that we will reweight estimates based on the probabilities of assignment and inclusion if the probabilities vary "within blocks," but intended to write "across blocks." Replaced to "if they vary across blocks".	See Gerber and Green (2012) and Pustejovsky and Tipton (2016).	Section 6.5
Estimation	We remove clustering from standard errors in several estimation strategies for administrative data and for officer survey data with a single officer where clustering was not required. Clustering was unintentionally included for these designs according to variables that represent the unit of analysis.	Clarity	Section 6.5
Random assignment	Code for the secondary random assignment schemes for the Philippines (for the officer recognition program and the top-down accountability program) and for Uganda (for the alternative arm) was corrected. The text described random assignment among the common arm treatment group but it was unintentionally conducted across all units in both cases. The code has been corrected.	Correcting a code error	Section 6.4.5
Hypothesis testing	We modify the indices in hypotheses 4(a) (crime_reporting_idx), 1. (alt. i) (crime_victim_idx_admin) and 4a (alt.) (crime_reporting_idx_admin) to include violent and non-violent crimes separately (see Table 4 and Table 5).	We make these changes to avoid double counting crimes and to be consistent with the parallel change to hypothesis 1(a) in an earlier modification of the PAP.	Section 5 and 13
Standardizing	We clarify that we will present results for standardized outcomes.	To facilitate comparison across the six sites and to make index component effects consistent with index effects.	Sections 5, 6, and 8

Standardizing	We add a procedure for standardizing variables which were not collected at baseline (we use the control group).	This is consistent with the spirit with our original procedure, which cannot be implemented in these cases. In both, comparison is made to units not affected by treatment (baseline or control group).	Section 6.2.4
Index construction	We compile details about how indices are standardized and constructed into a new section.	Clarity	Section 6.2.4

13. Appendix

13.1 Survey questionnaire and data coding summary

Table 13: Variable Coding and Survey Questionnaire

Variable name	Question text	Response options	Variable construction	Data Source
Primary Outcome Family 1: Security of Life and Property				
1a. Negative effect on incidence of crime				
armedrob_num[11]	In the past 6 months, were you or any member of your household the victim of any ARMED ROBBERY? [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[12]			
armedrob_bin		Numeric	Recoded 1 if armedrob_num > 0; 0 if armedrob_num = 0	Citizen survey
burglary_num[13]	Besides any armed robbery, in the past 6 months, were you or any member of your household the victim of BURGLARY or THEFT? [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[14]	Freeform		
burglary_bin		Numeric	Recoded 1 if burglary_num > 0; 0 if burglary_num = 0	Citizen survey
simpleassault_num[15]	In the past 6 months, has anyone attacked you or any member of your household WITHOUT a weapon? [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[16]	Freeform		Citizen survey
simpleassault_bin		Numeric	Recoded 1 if simpleassault_num > 0; 0 if simpleassault_num = 0	Citizen survey

---

[11] Adapted from Blair et al. (2017).
[12] Blair et al. (2017).
[13] Adapted from Blair et al. (2017).
[14] Blair et al. (2017).
[15] Adapted from Blair et al. (2017).
[16] Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
aggassault_num	Besides any armed robbery, in the past 6 months, has anyone attacked you or any member of your household WITH A WEAPON? (INCLUDING GUNS, CUTLASSES, STICKS, ETC.) [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey
sexual_num	In the past 6 months, have you or any member of your household been a victim of SEXUAL ABUSE OR RAPE? (INCLUDING RAPE) [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.	Freeform		Citizen survey
domestic_phys_num	Besides any sexual abuse, in the past 6 months, has anyone in your household ever PHYSICALLY ABUSED you? (INCLUDING PUSHING, SLAPPING, PUNCHING, KICKING, CHOKING, ETC.) (IF YES:) How many times did this happen in the past 6 months?	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.	Freeform		Citizen survey
domestic_verbal_num	Besides any physical abuse, in the past 6 months, has anyone in your household ever VERBALLY ABUSED you? [INCLUDING SHOUTING, CUSSING, THREATS OF ABUSE, ETC.]	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.	Freeform		Citizen survey
land_any	In the past 6 months, did you or a member of your household have a LAND DISPUTE over your house land or farm land? This include disputes that ended in the past 6 months or disputes that are still ongoing up to now. [IF YES:] Was there any violence or property destruction due to this dispute?	Numeric		Citizen survey

Variable name	Question text	Response options	Variable construction	Data Source
`other_any`[17]	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		Citizen survey
	[IF YES:] What was the crime?	Freeform		Citizen survey
`other_any_violent`	Coded as `other_any` if `other_any` is a violent crime	Freeform		Citizen survey
`other_any_nonviolent`	Coded as `other_any` if `other_any` is a non-violent crime	Freeform		Citizen survey
`violentcrime_num`			Sum of `armedrob_num`, `simpleassault_num`, `other_any_violent`	Citizen survey
`nonviolentcrime_num`			Sum of `burglary_num`, `other_any_nonviolent`	Citizen survey
`violentcrime_num_exp`			Sum of `armedrob_num`, `aggassault_num`, `sexual_num`, `domestic_phys_num`, `simpleassault_num`, `other_any_violent`	Citizen survey
`nonviolentcrime_num_exp`			Sum of `burglary_num`, `domestic_verbal_num`, `land_any`, `other_any_nonviolent`	Citizen survey
`violentcrime_bin`			Sum of `armedrob_bin`, `simpleassault_bin`, `other_any_violent`	Citizen survey
`nonviolentcrime_bin`			Sum of `burglary_bin`, `other_any_nonviolent`	Citizen survey
	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.[18]			

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[17]Only collected at endline in the Colombia study.
[18]Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
carmedrob_num[19]	In the past 6 months, was anyone you know in this community a victim of ARMED ROBBERY? (ROBBERY WITH ANY KIND OF WEAPON, INCLUDING GUNS, CUTLASSES, STICKS, ETC.) [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		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.			Citizen survey
carmedrob_bin		Numeric	Recoded 1 if carmedrob_num > 0; 0 if carmedrob_num = 0	Citizen survey
cburglary_num[20]	Besides any armed robbery, in the past 6 months, was anyone you know in this community a victim of BURGLARY or THEFT? (ROBBERY WITHOUT WEAPON]) [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		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[21]			
cburglary_bin		Numeric	Recoded 1 if cburglary_num > 0; 0 if cburglary_num = 0	Citizen survey
caggassault_num[22]	Besides any armed robbery, in the past 6 months, was anyone you know in this community attacked WITH A WEAPON? (INCLUDING GUNS, CUTLASSES, STICKS, ETC.) [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		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[23]			
caggassault_bin		Numeric	Recoded 1 if caggassault_num > 0; 0 if caggassault_num = 0	Citizen survey

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[19] Adapted from Blair et al. (2017).
[20] Adapted from Blair et al. (2017).
[21] Adapted from Blair et al. (2017).
[22] Adapted from Blair et al. (2017); Only collected at endline in the Colombia study.
[23] Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
csimpleassault_num[24]	In the past 6 months, was anyone you know in this community attacked WITHOUT a weapon? [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		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[25]			
csimpleassault_bin		Numeric	Recoded 1 if csimpleassault_num > 0; 0 if csimpleassault_num = 0	Citizen survey
csexual_num	In the past 6 months, was anyone you know in this community SEXUALLY ABUSED? (INCLUDING RAPE) [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		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.			
csexual_bin		Numeric	Recoded 1 if csexual_num > 0; 0 if csexual_num = 0	Citizen survey
cdomestic_phys_num	Besides any sexual abuse, in the past 6 months, was anyone you know in this community PHYSICALLY ABUSED by someone in their own household? (INCLUDING PUSHING, SLAPPING, PUNCHING, KICKING, CHOKING, ETC.) [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		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.			
cdomestic_phys_bin		Numeric	Recoded 1 if cdomestic_phys_num > 0; 0 if cdomestic_phys_num = 0	Citizen survey

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[24]Adapted from Blair et al. (2017).
[25]Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
cmurder_num[26]	In the past 6 months, was anyone you know in this community MURDERED? [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.	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		Citizen survey
cmurder_bin		Numeric	Recoded 1 if cmurder_num > 0; 0 if cmurder_num = 0	Citizen survey
cland_any	In the past 6 months, did anyone you know in this community have a LAND DISPUTE over their house land or farm land? This includes disputes that ended in the past 6 months or disputes that are still ongoing up to now.	0-No; 1-Yes		Citizen survey
cdomestic_verbal_any	Besides any physical abuse, in the past 6 months, was anyone you know in this community been VERBALLY ABUSED by someone in their own household? [INCLUDING SHOUTING, CUSSING, THREATS OF ABUSE, ETC.]	0-No; 1-Yes		Citizen survey
cmob_num	In the past 6 months, were there any incidents of MOB JUSTICE in this community (i.e. beating of flogging of someone suspected of committing a crime)? [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		Citizen survey
cother_any[27]	In the past 6 months, was anyone you know 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		Citizen survey
	[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	Citizen survey
cother_any_violent	Coded as cother_any if cother_any is a violent crime (see general coding rule for violent crimes)			

[26]Only collected at endline in the Colombia study.
[27]Only collected at endline in the Colombia study.

Variable name	Question text	Response options	Variable construction	Data Source
cother_any_nonviolent	Coded as `cother_any` if `cother_any` is a non-violent crime (see general coding rule for non-violent crimes)			
cviolentcrime_num			Sum of `carmedrob_num`, `caggassault_num`, `csimpleassault_num`, `csexual_num`, `cdomestic_phys_num`, `cmurder_num`, `cother_any_violent`	
cnonviolentcrime_num			Sum of `cburglary_num`, `cother_any_nonviolent`	
cviolentcrime_num_exp			Sum of `carmedrob_num`, `caggassault_num`, `csimpleassault_num`, `csexual_num`, `cdomestic_phys_num`, `cmurder_num`, `cmob_num`, `cother_any_violent`	
cnonviolentcrime_num_exp			Sum of `cburglary_num`, `cland_any`, `cdomestic_verbal_num`, `cother_any_nonviolent`	
cviolentcrime_bin			Sum of `carmedrob_bin`, `caggassault_bin`, `csimpleassault_bin`, `csexual_bin`, `cdomestic_phys_bin`, `cmurder_bin`, `cother_any_violent`	
cnonviolentcrime_bin			Sum of `cburglary_bin`, `cother_any_nonviolent`	
crime_victim_idx			Index of `violentcrime_num`, `nonviolentcrime_num`, `cviolentcrime_num`, `cnonviolentcrime_num`	

Variable name	Question text	Response options	Variable construction	Data Source
`crime_victim_idx_exp`			Index of `violentcrime_num_exp`, `nonviolentcrime_num_exp`, `cviolentcrime_num_exp`, `cnonviolentcrime_num_exp`	
`crime_victim_idx_bin`			Index of `violentcrime_bin`, `nonviolentcrime_bin`, `cviolentcrime_bin`, `cnonviolentcrime_bin`	
`aarmedrob_num`	Number of reports of armed robbery in community in past 6 months			Administrative
`aburglary_num`	Number of reports of burglary or theft in community in past 6 months			Administrative
`aaggassault_num`	Number of reports of aggravated assault in community in past 6 months			Administrative
`asimpleassault_num`	Number of reports of simple assault in community in past 6 months			Administrative
`asexual_num`	Number of reports of sexual abuse in community in past 6 months			Administrative
`adomestic_phys_num`	Number of reports of domestic violence (physical) in community in past 6 months			Administrative
`adomestic_verbal_num`	Number of reports of domestic violence (verbal) in community in past 6 months			Administrative
`aland_num`	Number of reports of land disputes in community in past 6 months			Administrative
`aland_violent_num`	Number of reports of violent land disputes in community in past 6 months			Administrative
`amob_num`	Number of reports of mob justice in community in past 6 months			Administrative
`ariot_num`	Number of reports of riots in community in past 6 months			Administrative
`amurder_num`	Number of reports of murder in community in past 6 months			Administrative
`aother_num`	Number of reports of other crimes in community in past 6 months			Administrative
`aother_num_violent`	Coded as aother_num if aother_num is a violent crime (see general coding rule for violent crimes)			Administrative

Variable name	Question text	Response options	Variable construction	Data Source
`aother_num_nonviolent`	Coded as aother_num if aother_num is a non-violent crime (see general coding rule for violent crimes)			Administrative
`aviolentcrime_num`	Sum of `aarmedrob_num`, `aaggassault_num`, `asimpleassault_num`, `asexual_num`, `adomestic_phys_num`, `amurder_num`, `aother_num_violent`			
`anonviolentcrime_num`	Sum of `aburglary_num`, `aother_num_nonviolent`			
1b. Positive effect on perceptions of safety (personal, land, and possessions)				
`fear_violent`[28]	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		Citizen survey
`fear_nonviolent`[29]	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		Citizen survey
`feared_walk`[30]	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		Citizen survey
`future_insecurity_idx`			Index of `fear_violent`, `fear_nonviolent`, `feared_walk`	Citizen survey
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		Citizen survey

[28]Adapted from Cheema et al. (2017); Only collected at endline in the Colombia study.
[29]Adapted from Cheema et al. (2017).
[30]Adapted from Afrobarometer (2016).

Variable name	Question text	Response options	Variable construction	Data Source
`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		Citizen survey
`satis_idx`			Index of `satis_trust` and `satis_general`	Citizen survey
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		Officer survey
`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		Officer survey
`empathy_idx`			Index of `empathy_complaints`, `empathy_reports`	
`account_pol_matter`[31]	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		Officer survey
`hypothetical2_punishment`[32]	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		Officer survey
`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		Officer survey
`hypothetical2_reportothers`	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		Officer survey

[31]Not collected in Uganda.
[32]Not collected in Uganda.
[33]Not collected in Uganda.

Variable name	Question text	Response options	Variable construction	Data Source
`hypothetical3_punishment`[34]	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		Officer survey
`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		Officer survey
`hypothetical3_reportothers`	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		Officer survey
`hypothetical5_punishment`[36]	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		Officer survey
`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		Officer survey
`hypothetical5_reportothers`	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		Officer survey

[34]Not collected in Uganda.
[35]Not collected in Uganda.
[36]Not collected in Uganda.
[37]Not collected in Uganda.

Variable name	Question text	Response options	Variable construction	Data Source
`accountability_idx`			Index of `account_pol_matter`, `hypothetical2_punishment` `hypothetical2_reportself` `hypothetical2_reportothe` `hypothetical3_punishment` `hypothetical3_reportself` `hypothetical3_reportothe` `hypothetical5_punishment` `hypothetical5_reportself` `hypothetical5_reportothe`	
`hypothetical5_abuseself`	Two police officers on foot patrol surprise a man who is attempting to break into an automobile. The man flees. They chase him for about two blocks before apprehending him by tackling him and wrestling him to the ground. After he is under control, both officers punch him a couple of times in the stomach as punishment for fleeing and resisting. 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		Officer survey
`hypothetical5_abuseother`[38]	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		Officer survey
`abuse_idx`			Index of `hypothetical5_abuseself`, `hypothetical5_abuseother`	
`hypothetical2_corruptself`	A police officer routinely accepts free meals, cigarettes, and other items of small value from merchants on his beat. He does not solicit these gifts and is careful not to abuse the generosity of those who give gifts to him. 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		Officer survey

[38]Not collected in Uganda.

Variable name	Question text	Response options	Variable construction	Data Source
hypothetical2_corruptother	A police officer routinely accepts free meals, cigarettes, and other items of small value from merchants on his beat. He does not solicit these gifts and is careful not to abuse the generosity of those who give gifts to him. 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		Officer survey
hypothetical3_corruptself	A police officer stops a motorist for speeding. The officer agrees to accept a personal gift of half of the amount of the fine in exchange for not issuing a citation. 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		Officer survey
hypothetical3_corruptother	A police officer stops a motorist for speeding. The officer agrees to accept a personal gift of half of the amount of the fine in exchange for not issuing a citation. 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		Officer survey
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	
3a. Negative effect reporting of police abuse and bribery				
policeabuse_phys_any[41]	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		Citizen survey

[39]Not collected in Uganda.
[40]Not collected in Uganda.
[41]Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
policeabuse_verbal_any[42]	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		Citizen survey
policeabuse_any			Recoded 0 if `policeabuse_verbal_any` = 0 and `policeabuse_phys_any` = 0; 1 if `policeabuse_verbal_any` = 1 or `policeabuse_phys_any` = 1	
policeabuse_phys_num[43]	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.) [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[44]			
policeabuse_verbal_num[45]	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. [IF YES:] How many times did this happen in the past 6 months?	Numeric		Citizen survey

[42] Adapted from Blair et al. (2017).
[43] Adapted from Blair et al. (2017).
[44] Blair et al. (2017).
[45] Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
	[IF MORE THAN 1:] I want to ask about the MOST RECENT incident.[46]			
`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	Recoded 0 if `policeabuse_verbal_num` = 0 or `policeabuse_verbal_report` = 0; 1 if `policeabuse_verbal_num` > 0 and `policeabuse_verbal_num` = 2	Citizen survey
`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	Recoded 0 if `policeabuse_phys_num` = 0 or `policeabuse_phys_report` = 0; 1 if `policeabuse_phys_num` > 0 and `policeabuse_phys_report` = 2	Citizen survey
`policeabuse_report`			Recoded 0 if `policeabuse_verbal_report` = 0 and `policeabuse_phys_report` = 0; 1 if `policeabuse_verbal_report` > 0 or `policeabuse_phys_report` > 0	

[46]Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
bribe_freq[47]	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	Citizen survey
bribe_amt[48]	[IF ANY:] The last time you made an unofficial payment to the police, how much was it?	Numeric		Citizen survey
police_abuse_idx			Index of policeabuse_any, policeabuse_num, bribe_freq, bribe_amt	
PRIMARY OUTCOME FAMILY 4: BEHAVIORAL COOPERATION OF CITIZENS WITH THE POLICE				
4a. Positive effect on reporting of crime victimization				
acrime_hline	Total number of reports of crimes to hotline			Administrative
aviolent_hline	Number of reports of violent crimes to hotline			Administrative
anonviolent_hline	Number of reports of non-violent crimes to hotline			Administrative
acrime_station	Total number of reports of crimes to nearest police station			Administrative
aviolent_station	Number of reports of violent crimes to nearest police station			Administrative
anonviolent_station	Number of reports of non-violent crimes to nearest police station			Administrative
aburglary_hline	Number of reports of burglary to hotline			Administrative
aarmedrob_hline	Number of reports of armed robbery to hotline			Administrative
arape_hline	Number of reports of rape to hotline			Administrative
amurder_hline	Number of reports of murder to hotline			Administrative
asimpleassault_hline	Number of reports of simple assault to hotline			Administrative
aaggassault_hline	Number of reports of aggravated assault to hotline			Administrative
atheft_hline	Number of reports of theft to hotline			Administrative
aburglary_station	Number of reports of burglary to nearest police station			Administrative

[47]Adapted from Cheema et al. (2017); Not collected for Philippines since bribery is virtually non-existent in Sorsogon.
[48]Only collected at endline in the Colombia study; Not collected for Philippines.

Variable name	Question text	Response options	Variable construction	Data Source
`aarmedrob_station`	Number of reports of armed robbery to nearest police station			Administrative
`arape_station`	Number of reports of rape to nearest police station			Administrative
`amurder_station`	Number of reports of murder to nearest police station			Administrative
`asimpleassault_station`	Number of reports of simple assault to nearest police station			Administrative
`aaggassault_station`	Number of reports of aggravated assault to nearest police station			Administrative
`atheft_station`	Number of reports of theft to nearest police station			Administrative
Actual crime (survey)				
armedrob_report[49]	In the past 6 months, were you or any member of your household the victim of any ARMED ROBBERY? (ROBBERY WITH ANY KIND OF WEAPON, INCLUDING GUNS, CUTLASSES, STICKS, ETC.) 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	Citizen survey
burglary_report[50]	Besides any armed robbery, in the past 6 months, were you or any member of your household the victim of BURGLARY or THEFT? [ROBBERY WITHOUT WEAPON]. 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	Citizen survey

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[49]Adapted from Blair et al. (2017).
[50]Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
simpleassault_report[51]	Besides any armed robbery, in the past 6 months, has anyone attacked you or any member of your household WITH A WEAPON? [INCLUDING GUNS, CUTLASSES, STICKS, ETC.] 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	Citizen survey
other_report[52]	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? 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	Citizen survey
other_report_violent			Coded as `other_report` if `other_any` is a violent crime	
other_report_nonviolent			Coded as `other_report` if `other_any` is a non-violent crime	
violentcrime_report_num			Sum of `armedrob_report`, `simpleassault_report`, `other_report_violent`	
nonviolentcrime_report_num			Sum of `burglary_report`, `other_report_nonviolent`	
carmedrob_report[53]	In the past 6 months, was anyone you know in this community a victim of ARMED ROBBERY and [ROBBERY WITH ANY KIND OF WEAPON, INCLUDING GUNS, CUTLASSES, STICKS, ETC.] 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 `carmedrob_num` = 0 or `carmedrob_report` = 0; 1 if `carmedrob_num` > 0 and `carmedrob_report` = 1	Citizen survey

[51]Blair et al. (2017).
[52]Blair et al. (2017); Only collected at endline in the Colombia study.
[53]Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
cburglary_report[54]	Besides any armed robbery, in the past 6 months, was anyone you know in this community a victim of BURGLARY or THEFT and [ROBBERY WITHOUT WEAPON] 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	Citizen survey
caggassault_report[55]	Besides any armed robbery, in the past 6 months, was anyone you know in this community attacked WITH A WEAPON and [INCLUDING GUNS, CUTLASSES, STICKS, ETC.] 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	Citizen survey
csimpleassault_report[56]	In the past 6 months, was anyone you know in this community attacked WITHOUT a weapon and 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 csimpleassault_num = 0 or csimpleassault_report = 0; 1 if csimpleassault_num > 0 and csimpleassault_report = 1	Citizen survey
csexual_report	In the past 6 months, was anyone you know in this community SEXUALLY ABUSED? [INCLUDING RAPE] and 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 csexual_num = 0 or csexual_report = 0; 1 if csexual_num > 0 and csexual_report = 1	Citizen survey

[54]Adapted from Blair et al. (2017).
[55]Adapted from Blair et al. (2017); Only collected at endline in the Colombia study.
[56]Adapted from Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
`cdomestic_phys_report`	Besides any sexual abuse, in the past 6 months, was anyone you know in this community PHYSICALLY ABUSED by someone in their own household and [INCLUDING PUSHING, SLAPPING, PUNCHING, KICKING, CHOKING, ETC.] 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 `cdomestic_phys_num = 0` or `cdomestic_phys_report = 0`; 1 if `cdomestic_phys_num > 0` and `cdomestic_phys_report = 1`	Citizen survey
`cmurder_report`[57]	In the past 6 months, was anyone you know in this community MURDERED and 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 `cmurder_num = 0` or `cmurder_report = 0`; 1 if `cmurder_num > 0` and `cmurder_report = 1`	Citizen survey
`cother_report`[58]	In the past 6 months, was anyone you know in this community a victim of any OTHER CRIME that we haven't mentioned already? 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 `cother_num = 0` or `cother_report = 0`; 1 if `cother_num > 0` and `cother_report = 1`	Citizen survey

[57]Only collected at endline in the Colombia study.
[58]Only collected at endline in the Colombia study.

Variable name	Question text	Response options	Variable construction	Data Source
cother_report_violent	Coded as `cother_report` if `cother_any` 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 `cother_num_violent` = 0 or `cother_report_violent` = 0; 1 if `cother_num_violent` > 0 and `cother_report_violent` = 1	
cother_report_nonviolent	Coded as `cother_report` if `cother_any` is a non-violent crime (see general coding rule for non-violent crimes)		Recoded such that a zero represents either that the person responded that the community did not experience any other non-violent crimes or they did not report the crime. E.g., 0 if `cother_num_nonviolent` = 0 or `cother_report_nonviolent` = 0; 1 if `cother_num_nonviolent` > 0 and `cother_report_nonviolent` = 1	
cviolentcrime_report_num			Sum of `carmedrob_report`, `caggassault_report`, `csimpleassault_report`, `csexual_report`, `cdomestic_phys_report`, `cmurder_report`, `cother_report_violent`	

Variable name	Question text	Response options	Variable construction	Data Source
`cnonviolentcrime_report_nu`			Sum of `cburglary_report`, `cother_report_nonviolent`	
Hypothetical crime (survey)				
	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.[59]			
`burglaryres`[60]	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	Recoded such that `burglaryres` = 1 if respondent prefers the police or courts to resolve the situation; `burglaryres` = 0 if otherwise.	Citizen survey
`dviolres`[61]	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	Recoded such that `dviolres` = 1 if respondent prefers the police or courts to resolve the situation; `dviolres` = 0 if otherwise.	Citizen survey

[59]Blair et al. (2017).
[60]Blair et al. (2017); Only collected at endline in the Colombia study.
[61]Blair et al. (2017).

Variable name	Question text	Response options	Variable construction	Data Source
armedrobres[62]	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	Recoded such that `armedrobres` = 1 if respondent prefers the police or courts to resolve the situation; `armedrobres` = 0 if otherwise.	Citizen survey
crimeres_idx			Index of `burglaryres`, `dviolres`, and `armedrobres`	Citizen survey
crime_reporting_idx			Index of `violentcrime_report_num`, `nonviolentcrime_report_n`, `cviolentcrime_report_num`, `cnonviolentcrime_report_r`, `crimeres_idx`	Citizen survey
4b. Positive effect on reporting of crime prevention tips[63]				
atips_hline[64]	Number of crime prevention tips reported via hotline (if available in both T and C locations)		Number of crime prevention tips reported	Administrative
atips_box[65]	ADMIN: Number of crime prevention tips reported via comment boxes (if available in both T and C locations)		Number of crime prevention tips reported	Administrative
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		Citizen survey
give_info_pol_investigatic	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		Citizen survey
crime_tips_idx			Index of `contact_pol_susp_activit` and `give_info_pol_investigat`	

[62]Blair et al. (2017).
[63]Not collected for Philippines.
[64]Not collected in Liberia.
[65]Not collected in Liberia or the Philippines.

Variable name	Question text	Response options	Variable construction	Data Source
`tips_idx`			Index of `atips_hline`, `atips_box`, `crime_tips_idx`	
4c. Positive effect on reporting of victimization by the police				
`apolvtm_hline`	Number of incidents of victimization by the police reported via hotline (if available in both T and C locations)			Administrative
`apolvtm_cmtbox`[66]	Number of incidents of victimization by the police reported via comment boxes (if available in both T and C locations)			Administrative
`apolvtm_station`	Number of incidents of victimization by the police reported to nearest station			Administrative
	See Section 3a.i. Incidence of victimization by police on reporting of police abuse.			Administrative
Reporting of victimization by the police (hypothetical)				
`dutydrink_report`[67]	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		Citizen survey
`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		Citizen survey
`police_abuse_report_idx`			Index of `dutydrink_report`, `policebeating_report`, `policeabuse_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				
Perceptions of police intentions (case management)				
	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.			

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[66]Not collected in Liberia or the Philippines.

[67]Not 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	Data Source
`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		Citizen survey
`polcasefair`[68]	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		Citizen survey
Perceptions of police intentions (general)				
	Ok, now I want to ask you about what you think about the police in general.			
`polint_corrupt`[69]	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	In our construction of this variable we reverse the order of this variable to ensure that a higher value indicates a positive effect on citizen belief about police intentions.	Citizen survey
`polint_quality`[70]	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		Citizen survey
`polint_idx`			Index of `polint_corrupt` and `polint_quality`	
`intentions_idx`			Index of `polcaseserious`, `polcasefair`, `polint_idx`	
M1b. Positive effect on knowledge of criminal justice system				
`know_law_suspect`[71]	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		Citizen survey

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[68]Note 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.

[69]Adapted from Sunshine and Tyler (2003).

[70]Sunshine and Tyler (2003).

[71]Not collected in Brazil. Adapted from Blair et al. (2017). Only collected at endline in the Colombia study.

Variable name	Question text	Response options	Variable construction	Data Source
`know_law_lawyer`[72]	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		Citizen survey
`know_law_fees`[73]	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		Citizen survey
`know_law_vaw`[74]	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		Citizen survey
`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		Citizen survey
`know_report_station`[75]	Do you know where the nearest police station is? [ENUMERATOR: IS RESPONDENT CORRECT?]	0-No; 1-Yes		Citizen survey
`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				

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[72]Blair et al. (2017). Only collected at endline in the Colombia study.
[73]Only collected at endline in the Colombia study.
[74]Siddiqi and Sandefur. Only collected at endline in the Colombia study.
[75]Blair et al. (2017). Only collected at endline in the Colombia study.

Variable name	Question text	Response options	Variable construction	Data Source
reportnorm_theft[76]	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	In our construction of this variable we reverse the order for the responses to ensure that a higher value indicates a positive effect on norms of citizen cooperartion with police.	Citizen survey
reportnorm_abuse[77]	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	In our construction of this variable we reverse the order for the responses to ensure that a higher value indicates a positive effect on norms of citizen cooperartion with police.	Citizen survey
obeynorm[78]	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	In our construction of this variable we reverse the order for the responses to ensure that a higher value indicates a positive effect on norms of citizen cooperartion with police.	Citizen survey
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		Citizen survey
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		Citizen survey
police_capacity_idx			Index of polcap_timely, polcap_investigate	

[76]Blair et al. (2017).
[77]Blair et al. (2017).
[78]Sunshine and Tyler (2003). Only collected at endline in the Colombia study.

Variable name	Question text	Response options	Variable construction	Data Source
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		Citizen survey
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		Citizen survey
COMPLIANCE WITH TREATMENT: CITIZEN INTERACTIONS WITH POLICE				
C. Positive effect on rate of citizen interactions with police				
ameeting_count[79]	Attendance sheets at community meetings	Percentage Attendance		Administrative
compliance_patrol	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	In our construction of this variable we reverse the order of this variable such that a higher value indicates a positive effect on citizen interactions with the police.	Citizen survey
compliance_freq	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	In our construction of this variable we reverse the order of this variable such that a higher value indicates a positive effect on citizen interactions with the police.	Citizen survey
compliance_meeting	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		Citizen survey

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[79]Not collected for Philippines since community meetings were not part of the CEP intervention

Variable name	Question text	Response options	Variable construction	Data Source
compliance_idx			Index of compliance_patrol, compliance_freq, compliance_meeting	

References

Afrobarometer. 2016. "Uganda, Round 7, Questionnaire."

Alves, Márcia C., and Enrique D. Arias. 2012. "Understanding the Fica Vivo Programme: Two-Tiered Community Policing in Belo Horizonte, Brazil." *Policing and Society* 22 (1). Taylor & Francis: 101–13.

Arias, Enrique D., and Mark Ungar. 2009. "Community Policing and Latin America's Citizen Security Crisis." *Comparative Politics* 41 (4): 409–29.

Banerjee, Abhijit V., Raghabendra Chattopadhyay, Esther Duflo, Daniel Keniston, and Nina Singh. 2012. "Can Institutions Be Reformed from Within? Evidence from a Randomized Experiment with the Rajasthan Police."

Baranyi, Stephen, Pierre Beaudet, and Uli Locher. 2011. "World Development Report 2011: Conflict, Security, and Development." Taylor & Francis.

Becker, Gary S. 1968. "Crime and Punishment: An Economic Approach." In *The Economic Dimensions of Crime*, 13–68. Springer.

Benjamini, Yoav, and Yosef Hochberg. 1995. "Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing." *Journal of the Royal Statistical Society Series B (Methodological)*, 289–300.

Bennett, Trevor, Katy Holloway, and David P. Farrington. 2006. "Does Neighborhood Watch Reduce Crime? A Systematic Review and Meta-Analysis." *Journal of Experimental Criminology* 2 (4): 437–58.

Bichler, Gisela, Karin Schmerler, and Janet Enriquez. 2013. "Curbing Nuisance Motels: An Evaluation of Police as Place Regulators." *Policing: An International Journal of Police Strategies & Management* 36 (2). Emerald Group Publishing Limited: 437–62.

Blair, Graeme, Jasper Cooper, Alexander Coppock, and Macartan Humphreys. 2019. "Declaring and Diagnosing Research Designs." *American Political Science Review* 30. Cambridge University Press: 838–59.

Blair, Robert, Sabrina Karim, and Ben Morse. 2019a. "Establishing the Rule of Law in Weak and War-Torn States: Evidence from a Field Experiment with the Liberian National Police." *American Political Science Review (Forthcoming)*.

Blair, Robert, Sabrina Karim, and Benjamin Morse. 2019b. "Building Trust in a Reformed Security Sector: Evidence from a Field Experiment with the Liberian National Police." *Comparative Political Studies (Forthcoming)*.

Blattman, Christopher, Donald P. Green, Daniel Ortega, and Santiago Tobón. 2017. "Place-Based Interventions at Scale: The Direct and Spillover Effects of Policing and City Services on Crime." National Bureau of Economic Research.

Blattman, Christopher, Alexandra Hartman, and Robert Blair. 2014. "How to Promote Order and Property Rights Under Weak Rule of Law? An Experiment in Changing Dispute Resolution Behavior Through Community Education." *American Political Science Review* 108 (1): 100–120.

Blattman, Christopher, Julian C. Jamison, and Margaret Sheridan. 2017. "Reducing Crime and Violence: Experimental Evidence from Cognitive Behavioral Therapy in Liberia." *American Economic Review* 107 (4): 1165–1206.

Borenstein, Michael, Larry V. Hedges, Julian Higgins, and Hannah R. Rothstein. 2009. *Introduction to Meta-Analysis*. Wiley.

Braga, Anthony A., and Brenda J. Bond. 2008. "Policing Crime and Disorder Hot Spots: A Randomized Controlled Trial." *Criminology* 46 (3): 577–607.

Braga, Anthony A., and David L. Weisburd. 2010. *Policing Problem Places: Crime Hot Spots and Effective Prevention*. Oxford University Press.

———. 2012. "The Effects of Focused Deterrence Strategies on Crime: A Systematic Review and Meta-Analysis of the

Empirical Evidence." *Journal of Research in Crime and Delinquency* 49 (3): 323–58.

Braga, Anthony A., David L. Weisburd, Elin J. Waring, Lorraine G. Mazerolle, William Spelman, and Francis Gajewski. 1999. "Problem-Oriented Policing in Violent Crime Places: A Randomized Controlled Experiment." *Criminology* 37 (3): 541–80.

Brogden, Michael. 2002. "Implanting Community Policing in South Africa: A Failure of History, of Context, and of Theory." *Liverpool Law Review* 24 (3): 157–79.

Cheema, Ali, Zulfiqar Hameed, and Jacob N. Shapiro. 2017. "Victimization, Citizen Engagement and Policing in Lahore." Institute of Development; Economic Alternatives.

Concha-Eastman, Alberto. 2005. "Ten Years of a Successful Violence Reduction Program in Bogota, Colombia." In *National Conference Preventing Violence from Global Perspectives to National Action*.

Contreras, Viridiana Rios. 2012. "How Government Structure Encourages Criminal Violence: The Causes of Mexico's Drug War." PhD thesis, Harvard University.

Cook, Philip J., Kenneth Dodge, George Farkas, Roland G. Fryer Jr., Jonathan Guryan, Jens Ludwig, Susan Mayer, Harold Pollack, and Laurence Steinberg. 2014. "The (Surprising) Efficacy of Academic and Behavioral Intervention with Disadvantaged Youth: Results from a Randomized Experiment in Chicago." National Bureau of Economic Research.

Cooper, Jasper. 2019. "State Capacity and Gender Inequality: Experimental Evidence from Papua New Guinea."

Davis, Robert, Nicole Henderson, and Cybele Merrick. 2003. "Community Policing: Variations on the Western Model in the Developing World." *Police Practice and Research* 4 (3). Routledge: 285–300.

Di Tella, Rafael, and Ernesto Schargrodsky. 2004. "Do Police Reduce Crime? Estimates Using the Allocation of Police Forces After a Terrorist Attack." *American Economic Review* 94 (1): 115–33.

Fisman, Raymond, and Roberta Gatti. 2002. "Decentralization and Corruption: Evidence Across Countries." *Journal of Public Economics* 83 (3): 325–45.

Frühling, Hugo. 2007. "The Impact of International Models of Policing in Latin America: The Case of Community Policing." *Police Practice and Research* 8 (2): 125–44.

Gerber, Alan S., and Donald P. Green. 2012. *Field Experiments: Design, Analysis, and Interpretation*. W.W. Norton.

Gill, Charlotte, David L. Weisburd, Cody W. Telep, Zoe Vitter, and Trevor Bennett. 2014. "Community-Oriented Policing to Reduce Crime, Disorder and Fear and Increase Satisfaction and Legitimacy Among Citizens: A Systematic Review." *Journal of Experimental Criminology* 10 (4): 399–428.

Greene, Jack R., and Stephen D. Mastrofski. 1988. *Community Policing: Rhetoric or Reality*. Praeger New York.

Grillo, Ioan. 2012. *El Narco: Inside Mexico's Criminal Insurgency*. Bloomsbury Publishing USA.

Groff, Elizabeth R., Jerry H. Ratcliffe, Cory P. Haberman, Evan T. Sorg, Nola M. Joyce, and Ralph B. Taylor. 2015. "Does What Police Do at Hot Spots Matter? The Philadelphia Policing Tactics Experiment." *Criminology* 53 (1). Wiley Online Library: 23–53.

Heller, Sara, Harold A. Pollack, Roseanna Ander, and Jens Ludwig. 2013. "Preventing Youth Violence and Dropout: A Randomized Field Experiment." National Bureau of Economic Research.

Higginson, Angela, Lorraine G. Mazerolle, Michelle Sydes, Jacqueline Davis, and Kerrie Mengersen. 2015. "Policing Interventions for Targeting Interpersonal Violence in Developing Countries: A Systematic Review." International Initiative for Impact Evaluation.

Karim, Sabrina. 2017. "Restoring Confidence in Post-Conflict Security Sectors: Survey Evidence from Liberia on Female Ratio Balancing Reforms." *British Journal of Political Science*. Cambridge University Press, 1–23.

Khruakham, Seksan. 2011. "Assessing the Effectiveness of the 2001 Drug Policy and Drug Enforcement in Thailand: A Time-Series Analysis of Police Data." PhD thesis, Sam Houston State University.

Lee, David S. 2009. "Training, Wages, and Sample Selection: Estimating Sharp Bounds on Treatment Effects." *The Review of Economic Studies* 76 (3): 1071–1102.

Lin, Winston, Donald P. Green, and Alexander Coppock. 2016. "Standard Operating Procedures for Don Green's Lab at Columbia."

Magaloni, Beatriz, Edgar Franco, and Vanessa Melo. 2015. "Killing in the Slums: An Impact Evaluation of Police Reform in Rio de Janeiro." CDDRL Working Paper 556, Center for Democracy, Development; the Rule of Law, Stanford University.

Marat, Erica. 2016. "Reforming Police in Post-Communist Countries: International Efforts, Domestic Heroes." *Comparative Politics* 48 (3): 333–52.

Marcano, Luis, and Inder J. Ruprah. 2008. "An Impact Evaluation of Chile's Progressive Housing Program." Inter-American Development Bank.

Mazerolle, Lorraine G., James F. Price, and Jan Roehl. 2000. "Civil Remedies and Drug Control: A Randomized Field Trial in Oakland, California." *Evaluation Review* 24 (2). Sage Publications Sage CA: Thousand Oaks, CA: 212–41.

Muggah, Robert, Ilona Szabó de Carvalho, Nathalie Alvarado, Lina Marmolejo, and Ruddy Wang. 2016. "Making Cities Safer: Citizen Security Innovations from Latin America," July. Igarapé Institute.

Pate, Antony M., and Sampson O. Annan. 1989. *Baltimore Community Policing Experiment: Summary Report*. Washington D.C.: Police Foundation.

Pettersson, Therése, and Kristine Eck. 2017. "Organized Violence, 1989-2017." In *Journal of Peace Research*. Vol. 55. Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand (2002) Armed Conflict 1946-2001: A New Dataset. Journal of Peace Research 39(5) 4.

Piza, Eric L., and Brian A. O'Hara. 2014. "Saturation Foot-Patrol in a High-Violence Area: A Quasi-Experimental Evaluation." *Justice Quarterly* 31 (4). Taylor & Francis: 693–718.

Problem-Oriented Policing, Center for. 2018. "The Key Elements of Problem Oriented Policing." http://www.popcenter.org/about/?p=elements.

Pustejovsky, James E., and Elizabeth Tipton. 2016. "Small Sample Methods for Cluster-Robust Variance Estimation and Hypothesis Testing in Fixed Effects Models." *Journal of Business & Economic Statistics*.

Ratcliffe, Jerry H., Travis Taniguchi, Elizabeth R. Groff, and Jennifer D. Wood. 2011. "The Philadelphia Foot Patrol Experiment: A Randomized Controlled Trial of Police Patrol Effectiveness in Violent Crime Hotspots." *Criminology* 49 (3): 795–831.

Reaves, Brian A. 2015. "Local Police Departments, 2013: Personnel, Policies, and Practices." National Criminal Justice Reference Service.

Riccio, Vicente, Marco Aurélio Ruediger, Steven D. Ross, and Wesley G. Skogan. 2013. "Community Policing in the Favelas of Rio de Janeiro." *Police Practice and Research* 14 (4): 308–18.

Rosenfeld, Richard, Michael J. Deckard, and Emily Blackburn. 2014. "The Effects of Directed Patrol and Self-Initiated Enforcement on Firearm Violence: A Randomized Controlled Study of Hot Spot Policing." *Criminology* 52 (3). Wiley Online Library: 428–49.

Ruteere, Mutuma, and Marie E. Pommerolle. 2003. "Democratizing Security or Decentralizing Repression? The Ambiguities of Community Policing in Kenya." *African Affairs* 102 (409): 587–604.

Seagrave, Jayne. 1996. "Defining Community Policing." *American Journal of Police* 15 (2). MCB UP Ltd: 1–22.

Sherman, Lawrence W. 1990. "Police Crackdowns: Initial and Residual Deterrence." *Crime and Justice* 12: 1–48.

Sherman, Lawrence W., Michael Buerger, and Patrick Gartin. 1989. "Repeat Call Address Policing: The Minneapolis Recap Experiment." *Washington, DC: Crime Control Institute*.

Sherman, Lawrence W., and Dennis P. Rogan. 1995. "Effects of Gun Seizures on Gun Violence: "Hot Spots" Patrol in Kansas City." *Justice Quarterly* 12 (4): 673–93.

Sherman, Lawrence W., Dennis P. Rogan, Timothy Edwards, Rachel Whipple, Dennis Shreve, Daniel Witcher, William Trimble, et al. 1995. "Deterrent Effects of Police Raids on Crack Houses: A Randomized, Controlled Experiment." *Justice Quarterly* 12 (4): 755–81.

Sherman, Lawrence W., and David L. Weisburd. 1995a. "Does Patrol Prevent Crime? The Minneapolis Hot Spots Experiment." National Criminal Justice Reference Service.

———. 1995b. "General Deterrent Effects of Police Patrol in Crime 'Hot Spots': A Randomized, Controlled Trial." *Justice Quarterly* 12 (4): 625–48.

Skogan, Wesley G. 2004. *Community Policing: Can It Work?* Wadsworth/Thomson Learning Belmont.

Slough, Tara L., and Christopher Fariss. 2017. "Judicial System Organization and Human Rights: Evidence from a Field Experiment to Combat Prolonged Pre-Trial Detention in Haiti." United States Agency for International Development (USAID).

Sunshine, Jason, and Tom R. Tyler. 2003. "The Role of Procedural Justice and Legitimacy in Shaping Public Support for Policing." *Law & Society Review* 37 (3): 513–48.

Taylor, Bruce, Christopher S. Koper, and Daniel J. Woods. 2011. "A Randomized Controlled Trial of Different Policing Strategies at Hot Spots of Violent Crime." *Journal of Experimental Criminology* 7 (2): 149–81.

Trejo, Guillermo, and Sandra Ley. 2016. "Federalism, Drugs, and Violence: Why Intergovernmental Partisan Conflict Stimulated Inter-Cartel Violence in Mexico." *Politica Y Gobierno* 23 (1): 9–52.

Viechtbauer, Wolfgang. 2005. "Bias and Efficiency of Meta-Analytic Variance Estimators in the Random-Effects Model." *Journal of Educational and Behavioral Statistics* 30 (3): 261–93.

Villaveces, Andrés, Peter Cummings, Victoria E. Espitia, Thomas D. Koepsell, Barbara McKnight, and Arthur L. Kellermann. 2000. "Effect of a Ban on Carrying Firearms on Homicide Rates in 2 Colombian Cities." *Jama* 283 (9). American Medical Association: 1205–9.

Visher, Christy A., Laura Winterfield, and Mark B. Coggeshall. 2005. "Ex-Offender Employment Programs and Recidivism: A Meta-Analysis." *Journal of Experimental Criminology* 1 (3): 295–316.

Wassel, Todd. 2014. *Institutionalising Community Policing in Timor Leste: Police Development in Asia's Youngest Country: Report*. Overseas Development Institute.

Weisburd, David L., and Lorraine G. Mazerolle. 1995. "Policing Drug Hot Spots: The Jersey City Drug Market Analysis Experiment." *Justice Quarterly* 12 (4): 711–35.

Weisburd, David L., Nancy A. Morris, and Justin Ready. 2008. "Risk-Focused Policing at Places: An Experimental Evaluation." *Justice Quarterly* 25 (1): 163–200.

Weisburd, David L., and Cody W. Telep. 2014. "Hot Spots Policing: What We Know and What We Need to Know." *Journal of Contemporary Criminal Justice* 30 (2): 200–220.

White, Michael D., and Charles M. Katz. 2013. "Policing Convenience Store Crime: Lessons from the Glendale, Arizona Smart Policing Initiative." *Police Quarterly* 16 (3). Sage Publications Sage CA: Los Angeles, CA: 305–22.

Wood, Jennifer, Evan T. Sorg, Elizabeth R. Groff, Jerry H. Ratcliffe, and Caitlin J. Taylor. 2014. "Cops as Treatment

Providers: Realities and Ironies of Police Work in a Foot Patrol Experiment." *Policing and Society* 24 (3): 362–79.