

Insecurity, Health, and Well-Being

An Initial Exploration Based
on Happiness Surveys

Carol Graham *and*
Juan Camilo Chaparro



Citizen Security in Latin America and the Caribbean: An Ongoing Report

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on Happiness Surveys

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This paper explores the effects of crime and insecurity on well-being—both happiness and health—in Latin America and the Caribbean. We posited that crime victimization and insecurity would have negative effects on both happiness and health, and having found that they did, we tested the extent to which those effects were mitigated by people's ability to adapt to those phenomena. The effects of victimization, we found, also varied across cohorts, with being mugged—which is typically a more threatening experience than having something stolen—having stronger effects for more vulnerable groups, such as the elderly, and/or for groups for whom it is rare, such as the wealthy, and likely produces more stigma. Greater effects were typically found for happiness than for health, although the general direction of the findings was similar for both. At the same time, we also found significant evidence of adaptation. Our victimization residuals—which were based on the unexplained probability of being victimized as a proxy for adaptation—seemed to mitigate the negative effects of victimization on life satisfaction, but not on health satisfaction. We also found that victimization had negative effects on both friendships and confidence in public institutions, suggesting that it has aggregate, society-wide costs in addition to those relating to individual welfare. Our results are an initial exploration into a new area of research and should be treated as such.

Preface

Crime and the fear of crime do not travel along parallel paths. Ever since social science began to pay special attention to the problem of citizen security, this logical division between the real probability of becoming the victim of a crime and the sensation of insecurity has inspired one of its most attractive theoretical discussions.

The problem is not just a sophisticated exercise in academic controversy. The paradox keeps governments awake at night. Why is it frequently the case that those who live in relatively safer societies are the very ones who call for more security? Who can explain the absence of criminality at the top of the agenda of citizens' demands in countries that have long been subjected to very high crime rates? Why can an abrupt increase in the number of small robberies affect citizens' feelings of security more than a sudden peak in the number of homicides? Why, ultimately, does reducing the crime rate not automatically make citizens feel safer?

Without having reached the end of the discussion process, and further still from finding satisfactory answers, economists and social scientists have begun to ask themselves how both phenomena, the objective (delinquency) and the subjective (insecurity), affect peoples' health and happiness.



This is not a new question in regard to its direction (since the very beginning, political philosophy and economics have based the purpose of their existence on the welfare of persons and societies), but it is new in terms of the logical connection of its most revised hypotheses. According to these, crime and the fear of being victimized will erode our personal satisfaction with life first, then our links with those around us and, finally, the very foundations of confidence upon which the coexistence of all society is constructed.

Thus, once again, academia focuses on a question that, for essentially practical reasons, is a central concern of those responsible for decision making. Governors are more aware than ever that the success of their citizen security policies greatly depends not only on the population's support for those policies, but also on other crucial dimensions of development, from attracting investments to ensuring the very legitimacy of their democratic institutions.

In this publication, Carol Graham and Juan Camilo Chaparro address both questions. Their analysis is based on the empirical evidence from Latin America and the Caribbean and is in line with the economic approach based on the quality of life perspective, which the Inter-American Development Bank (IDB) has emphatically promoted over the last several years with the aim of offering a more integral view to the development problem.

Within a rigorous methodological framework, the authors examine the information on crime and insecurity offered by recognized international reports about victimization, insecurity, health, and satisfaction with life to verify certain explicative hypotheses regarding the uneven evolution of crime and the fear of crime. They also analyze the impact these variables have on peoples' health, human relationships, social coexistence, and confidence in institutions.

Graham and Chaparro present the econometric analysis and its results (which have been carefully revised by experts Rafael Di Tella, Ernesto Schargrodsky, and Hugo Ñopo) with intellectual modesty and with sufficient reserve regarding its findings. They do so in accordance with the primitive state of research on the subject and the very limitations of the information sources available.

The greatest value of their conclusions, however, derives from this same prudence and methodological rigor. On one hand, they serve as a solid base for more in depth research in the future, and on the other, as a reference for those who are currently responsible for the design, support, and implementation of public policy on citizen security in Latin America and the Caribbean (governments, civil society, international cooperation).

How is it possible to achieve the citizen commitment necessary to develop decent public security policies in societies that are adapted to and, somehow, resigned to high levels of crime that have persisted over time?

How can policymakers understand and lessen the adverse effects that crime has on society's sense of optimism about the future or the credibility of institutions, and at the same time tackle the structural causes and the dynamics of delinquency?

How can policies be developed that take into account the specific effects of crime on the quality of life or the health of particular groups (for example, based on age or geographical location)?

As I invite you to read this work in the name of the IDB, I would like to acknowledge the hard work of the team that prepared and supervised the project (made up of myself and my colleagues Eduardo Lora and Gustavo Beliz) and the dedication of those who helped us with this initiative. In particular, I would



like to thank the heads of the Bank's Institutional Capacity and Finance Sector (ICF), Research Department (RES), and Country Studies Committee, who supported the proposal, provided us with valuable recommendations for improving it, and approved its execution within the framework of the IDB's Citizen Security and Justice Program organized by the International Capacity of State Division (ICS).

We trust that the following pages will prompt fruitful debate amongst all those who direct their efforts on a daily basis towards ending violence and fear. We hope that the collective reflection will bring us closer to the common objective of making Latin America and the Caribbean a prosperous, equal, and peaceful region.

Jorge Srur

Modernization of the State Senior Specialist

Institutional Capacity of State Division

Institutional Capacity and Finance Sector

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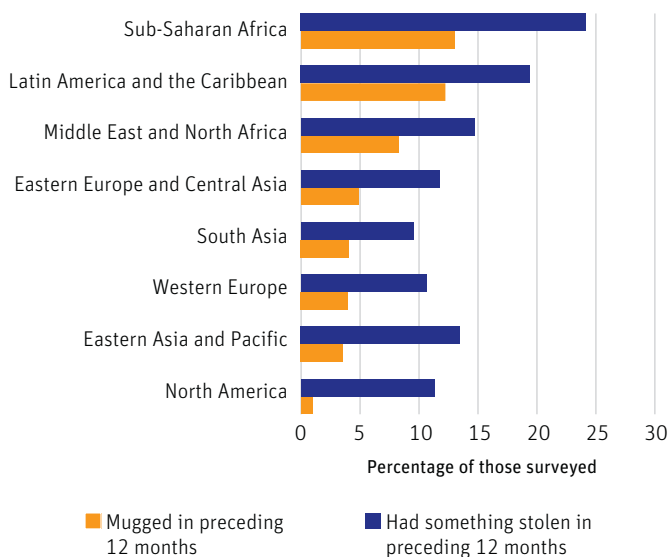
1. Introduction

Crime and insecurity are increasingly common features of life in Latin America and the Caribbean, particularly in urban areas. Victimization rates in the region are the highest in the world, with the exception of Sub-Saharan Africa (Figure 1). The proportion of the population in the region that feels safe walking at night in their neighborhood is the lowest in the world, as is the proportion that trusts the police (Figure 2). These phenomena affect the quality of life of all of the region's citizens, although some cohorts (and particularly the wealthy) have more means to protect themselves from them than do others. Notably, no country in the region has managed to achieve a security climate in its urban areas that approximates that of the developed economies (IDB 2008, Chapter 8).

Despite the generally high perceptions of insecurity in the region, cross-country differences in perceptions do not correlate with homicide rates, the principal objective indicator of insecurity. There is also a disconnect between perceptions of insecurity and the priority that leaders in each country in the region assign to security problems (Figure 3; IDB 2008, Chapter 9).

It is possible that the disconnect that is observed between objective and subjective indicators, and between public opinion and the perceptions of leaders, is explained, at least in part,

FIGURE 1 Measures of Victimization, by Region

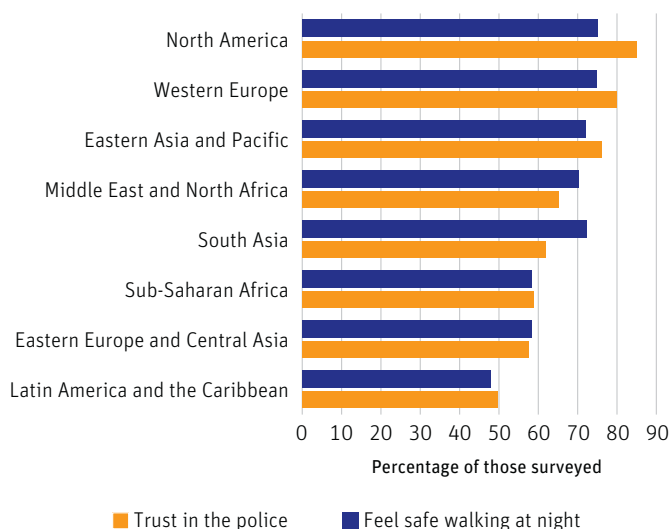


Source: Gallup World Poll (2006, 2007)

by adaptation. This is surely suggested by the fact that most of the countries where public concerns regarding insecurity are highest have only recently had increases in criminality, and those concerns are lower in those countries where the problem has persisted for longer periods of time. Although the kind of adaptation suggested by this contrast may be a positive phenomenon from an individual psychological perspective, it may be an obstacle to mobilizing the public support necessary to implement the appropriate policies to combat crime.

One of the most common arguments used to generate public support for security measures is the high economic cost of crime, understood as the loss of production and income, as well as the increase of public costs that are associated with high crime

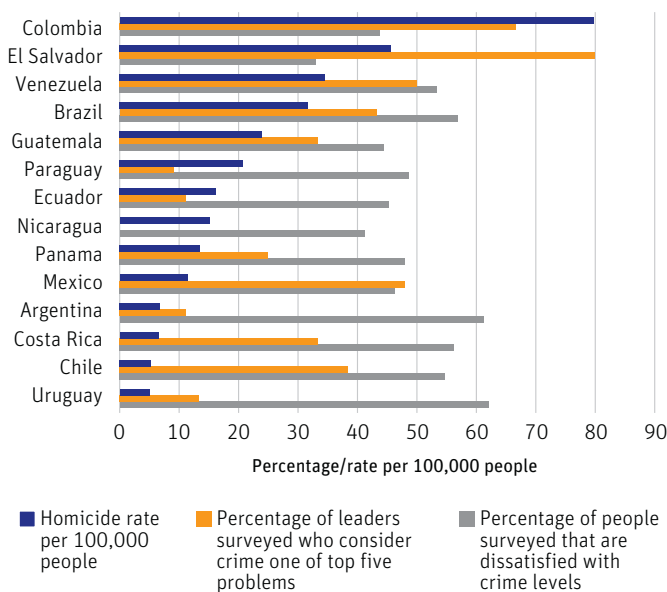
FIGURE 2 Measures of Perception of Security, by Region



Source: Gallup World Poll (2006, 2007)

levels. The Inter-American Development Bank (IDB) has been a leader in generating studies that attempt to measure these costs for Latin America and the Caribbean (Londoño, Gaviria, and Guerrero, 2000). Yet the effects of insecurity and crime on the well-being of societies are not limited to the economic costs. There can be much greater losses to individual well-being that stem from the physical and mental health costs, as well as to collective well-being as the result of changes in the way societies interact and function as a result of high levels of insecurity.

Our paper explores how victimization and perceptions of insecurity affect well-being and health in Latin America and the Caribbean, as well as how adaptation mediates those effects. More specifically, it seeks to answer the following questions in regard to the region and its population:

FIGURE 3**Homicide Rates and Perceptions of People and Leaders on Security**

Source: IDB (2008), Chapter 9, based on data from Gallup (2007) and Consulta de San José.

- What are the effects of victimization and insecurity on individual well-being? How do the well-being effects of crime and insecurity compare with those of other relevant variables, such as income and friendships?
- Victimization and insecurity can also affect well-being through health channels, such as mental health. Are the effects of these phenomena on health similar to their effects on well-being?
- Do the answers to the above questions vary for individuals who have adapted to insecurity and/or have a high probabil-

ity of being crime victims? Does adaptation occur similarly across well-being and health arenas?

- Do the answers to the above questions depend on the age or socioeconomic cohort to which individuals belong?
- How does insecurity affect social behavior, such as public confidence, attitudes about cooperation, and social capital? How do victimization and perceptions of insecurity correlate with friendships and social ties? How do these phenomena affect confidence in key public institutions?

2. The Literature

Some of the studies most relevant to our queries come from the recent literature on the economics of happiness. A summary and a number of case studies for Latin America and the Caribbean come from a recent (2008) IDB study as well as from Graham and Lora (2009). The method and empirics underlying the study of subjective well-being and its determinants, based on surveys of public opinion, are discussed in detail in Van Praag and Ferrer-i-Carbonell (2008).

Di Tella, MacCulloch, and Ñopo (2008) conducted an initial exploration into the effects of victimization on anxiety and other positive and negative sentiments. Their results ran in the expected direction, with victimization having a positive correlation with anxiety and other negative sentiments and a negative correlation with measures of positive affect, such as smiling. Earlier work by Di Tella, Galiani, and Schargrodsky (2006), meanwhile, explored adaptive behaviors as crime rates increased in Argentina. These authors found that, when possible, the rich mimicked the behavior of the poor to avoid victimization—for example, by not wearing jewelry or carrying other valuables on the street—behaviors that had no negative spillover effects for less-wealthy cohorts. Yet a second set of behaviors on the part of the rich—the purchase of private security



and other protective mechanisms for their homes and other assets—did result in negative spillover effects for these cohorts: given the increased risk involved in robbing from the rich as a result of private security and other measures, criminals then shifted their efforts and attention to the middle class and near poor, and victimization rates increased for these cohorts.

Related work by Di Tella and Schargrodsky (2009), meanwhile, also based on panel data for Argentina, found that victimization does not have a significant relationship with reported happiness, but it does result in changes in ideological position. Victims of crime were found to be more likely later to declare that levels of inequality were higher in Argentina than elsewhere, as well as to demand lesser penalties for those who commit the crime of which they themselves were a victim. The latter finding is explained by a sort of empathy effect in which criminals are seen as much as victims of an unjust economic system as they are seen as perpetrators of crime.

In research targeting more specifically the role of adaptation, Graham (2008, 2009) showed how the well-being costs of phenomena such as crime, corruption, and ill health are mediated by norms and expectations. In other words, in places where high levels of crime and corruption are the norm, people adapt to these phenomena and suffer lower reported well-being costs when they occur, both because people already anticipate their occurrence and because they feel less stigmatized by them. The same occurs in regard to various health-related conditions, such as obesity and smoking. The obese and those who smoke, for example, are typically less happy than others. But if they are in a reference group in which obesity and/or smoking are the norm, then they suffer lower well-being costs, as they feel less stigma from their conditions or behaviors. Powdthavee (2005), meanwhile, based on data for South Africa, found that

the effects of crime victimization vary a great deal depending on both the crime rate for the neighborhood in which victims live (with lower well-being costs reported in those where crime is more common) and the racial balance underlying victimization as well.

The first author posits that the ability to adapt to negative phenomena may be a good thing from an individual happiness/survival perspective but may result in lower levels of aggregate welfare, as it allows societies to persist in bad equilibria. Understanding how these norms can be “tipped” is an objective of this research. Most recently, in a new study of happiness in Afghanistan, Graham, Chattopadhyay, and Picon (2010) showed that adaptation can reach extreme levels. Crime and corruption are so rampant in Afghanistan that victims there do not report lower happiness levels than nonvictims, unlike virtually everywhere else that victimization has been studied. More generally, happiness levels (and self-reported rates of having smiled the day before) in Afghanistan are as high as the average for Latin America and the Caribbean, suggesting a remarkable human capacity to adapt and retain natural levels of cheerfulness while in conditions of adversity and poverty that would be intolerable by most countries’ standards.

3. Data and Methods

In the research reported in this paper, we took advantage of a unique data set for Latin America and the Caribbean that combines data on happiness and crime victimization with detailed data on health status. The data are a subset of the Gallup World Poll for 2006, 2007, and 2008 for 24 countries in the region (most of which had more than one year of coverage). These data have been used widely in studies of the economics of happiness. The first author has previously made extensive use of Latinobarometer data to explore happiness in the region. More recent studies based on Gallup data confirm her earlier findings, despite some modest differences between the two data sources in sampling and in the phrasing of the life satisfaction questions.¹ And as noted, Di Tella, MacCulloch, and

¹ See Graham and Pettinato (2002). The Latinobarometer uses an open-ended happiness question, phrased simply as “Generally speaking, how happy are you with your life?” with possible answers on a four-point scale from *not at all* to *very happy*, similar to the World Values and Eurobarometer surveys. The Gallup World Poll uses the Cantril best-possible-life question, on which respondents are asked to imagine the best possible life and then to rank their life compared with that life on a 10-step ladder. Although both questions are clearly good measures of life satisfaction, there are differences, in particular with how closely they correlate with income. The best-possible-life question is a more framed question and typically correlates

Ñopo (2008) have also used the Gallup data in an initial exploration of the well-being effects of crime in the region.

The Latin America and Caribbean subset of the Gallup World Poll includes the Euro-Quality Five Dimensions (EQ-5D) health index. This is an index of assessed health based on respondents' answers about whether they have extreme, moderate, or no problems with the following conditions: mobility, self-care, customary acts (such as going to work and other daily activities), pain, and anxiety. The EQ-5D has been used widely in Europe and the United States as a health self-assessment that tracks closely with objective indicators of health and as a way to value the relative well-being costs of different health conditions. Dolan pioneered the EQ-5D's use in the United Kingdom, Shaw and Combs implemented it in the United States, and, most recently, Graham, Higuera, and Lora used it to value health conditions in Latin America and the Caribbean, based on the Gallup data (see Dolan 1997; Shaw, Johnson, and Coons 2005; and Graham, Higuera, and Lora, forthcoming).

Our primary methodology in the study reported in this paper is (standard-usage) regression analysis to examine the determinants of reported well-being. The most orthodox approach is to rely on ordered logit regressions, as most of the variables that measure happiness are categorical rather than continuous. More recently, it has become common practice to also conduct ordinary least squares, probit ordinary least squares, cardinal ordinary least squares, and probit regressions on the same data. The results are very similar, and the latter methods allow more room for making inferences about cardinality as well as about

more closely with income than do more open-ended happiness questions. For detail on these methodological differences and the debate they have generated, see Graham, Chattopadhyay, and Picon (2010).

the relative weights of the resulting coefficients. Van Praag and Ferrer-i-Carbonell (2008) discuss the merits and demerits of the various approaches in detail.

It is important to note that the coefficients that result from these sorts of estimations reflect statistical associations or correlations and cannot be interpreted in a causal manner, because of endogeneity. The information that is reported by individuals can be biased by their inherent personality traits. For example, more optimistic individuals tend to report higher levels of life satisfaction and less insecurity than more pessimistic individuals. This can be corrected for, to some extent, by the construction of an individual bias or “optimism” variable, which is calculated based on each respondent’s responses to questions across several quality-of-life domains and the latent correlation between them—that is, that which is not explained by socioeconomic and demographic traits. For detail on the method, see Graham and Lora (2009).

We are particularly interested in the links between victimization and insecurity on the one hand and mental health (as captured by an anxiety variable) on the other. Graham, Higuera, and Lora (forthcoming) found that of all the conditions in the EQ-5D, anxiety has the strongest (negative) association with life satisfaction. Although any assessment of this finding must be tempered by taking into account the above-stated endogeneity problem (more anxious people being inherently more likely to report unhappiness or poor health), it highlights the very strong effects of mental health on well-being, relative to those of physical conditions like mobility problems.

There are, presumably, many ways to explore our adaptation hypothesis. Our first strategy involved a two-stage regression approach. In the first stage, we examined individuals’ probability of being victims of crime, based on a logit regression

with three separate crime questions from the 2006–2008 Gallup surveys on the left-hand side. The three questions that we used were “Do you feel safe walking in your neighborhood at night?” (referred to hereafter as *safe walk*); “In the past 12 months, have you had anything stolen?” (hereafter, *stolen*); and “In the past year, were you mugged?” (hereafter, *mugged*). Right-hand-side variables included the usual vector of sociodemographic variables; income; a control for individual optimism, based on each respondent’s assessments of his/her prospects of upward mobility (POUM) in the following five years;² country-level rule of law; GDP growth; country fixed effects; and an error term or residual. We then used the coefficient on the residual (i.e., the unexplained probability of being a crime victim) as a proxy for living in a higher or lower crime norm area.

Our second-stage regressions had, respectively, life satisfaction and the EQ-5D index as the left-hand-side variables (to test the effects on both happiness and health), with the same sociodemographic variables and income on the right-hand side, as well as each of our insecurity variables (*safe walk*, *stolen*, and *mugged*, respectively). We also included the corresponding insecurity residual on the right-hand side. We conducted the same second-stage regressions by separate gender, age, and income cohorts. The last of these were defined as being above or below the median income for the respondent’s country.

² POUM scores typically correlate closely with happiness and reflect innate optimism as well as realistic assessments of prospects for the future. We chose POUM rather than individual happiness as a control because the latter is the dependent variable in the second-stage regressions. In an additional specification, we used the principal component of several residuals as a control and obtained similar results (available from the authors).

Thus the basic first-stage equation was

$$\text{Victimization}_{ij} = a + b \cdot \text{age}_{ij} + c \cdot \text{friends}_{ij} + d \cdot \text{employment}_{ij} + e \cdot \text{urban area}_{ij} + f \cdot \text{shortage of income to buy food}_{ij} + g \cdot \text{shortage of income to pay rent}_{ij} + h \cdot \text{POUM score}_{ij} + \epsilon$$

Victimization is a variable with values between 0 and 1 capturing the probability of being mugged, having something stolen, or perceiving insecurity (based on the safe walk variable), respectively. The left-hand-side variables are income, age, and age-squared, a vector of other sociodemographic traits, a measure of health status, a measure of respondents' optimism as proxied by their POUM score (as discussed above), and an error term that captures the unexplained probability of being victimized. We also included country fixed effects in the first specification, and measures for GDP growth and for rule of law in a second. The results were essentially the same with both specifications. The residuals reported in all of the tables in this paper were based on the specification with country fixed effects.

The second-stage base equation was

$$LS_{ij} = a + b y_{ij} + c \text{age}_{ij} + d \text{age}_{ij}^2 + e fs_{ij} + g H_{ij} + h L_{ij} + v_{ij} + \epsilon_{ij}$$

The left-hand-side variables are, respectively, life satisfaction and assessed health status (based on the EQ-5D index), and the right-hand-side variables are the usual controls, plus a dummy variable for victimization (one of each of our three victimization variables), and then the unexplained probability of being victimized for the same respondent. We repeated the same equations for samples split according to crime levels and according to respondents' self-reported feelings of safety in



their own neighborhoods (see “Split-Sample Results” on page 22), as well as with each of the five separate health conditions covered in the EQ-5D as left-hand-side variables.

4. Results

Our initial results provided support for both of our basic hypotheses. The probability of being a crime victim was found to be higher for the young, those without friends, the employed, those without concerns for food security (i.e., the nonpoor), those with lower levels of natural optimism, and, not surprisingly, those who lived in a country with less rule of law. Perceptions of security (i.e., reporting that one feels safe walking at night) were higher for the young, the employed, those in rural areas, the optimistic, and those in countries with greater rule of law. We included POUM as a control for optimism under the assumption that more-optimistic people might be inherently less likely to report crime and certainly would be inherently less likely to perceive insecurity. Our results supported that proposition, with those respondents with brighter prospects for the future less likely to report feeling insecure and/or to report being victimized (see Appendix Table 1).

Our second-stage regressions showed that insecurity and crime victimization have negative and significant effects on both reported well-being and health, although these effects are more consistent for the former. The links we found between crime victimization and well-being are confirmed by other studies

(Di Tella and Schargrodsky 2009; Powdthavee 2005) and are not a particular surprise. The links between some kinds of victimization, perceptions of insecurity, and self-assessed health—as measured by the EQ-5D index—are intuitive, but as far as we know, a fairly novel finding. Both crime victimization (being mugged) and perceptions of insecurity (being unable to walk safely in one’s neighborhood) were found to have significant negative effects on both happiness and health (see Appendix Tables 2A–2B).

Our second baseline result was that as crime victimization and insecurity become more common, individuals seem to adapt to them, a process that mitigates their negative effects. This result held only for life satisfaction, however, and not for health. That is not surprising, as it is likely that adapting to health shocks is more difficult than adapting to decreases in happiness. The mitigation effects that were found in the life satisfaction arena—to the extent that that is what was being captured, as opposed to unobserved variables that are also in the error term—were significant. As our residuals were likely capturing other unobservables, it would be imprudent to attempt to attach relative weights to the coefficients; however, the sign on the residuals consistently ran in the opposite direction from that on the crime variables, and the magnitude of the coefficients was large (Appendix Tables 2A–2B).

We first conducted the regressions without including the residuals (Appendix Table 2A); the coefficients on our victimization variables were roughly the same—although slightly lower—when the residuals were not included. Including the residuals had no significant effects on our other covariates, suggesting that the residuals were not introducing random error into our specifications. Those respondents who had friends, for example, were less likely to be victimized, and having friends

was also found to be positively correlated with life satisfaction. When we included the residuals in the regressions, the coefficient on the variable for having friends was essentially the same as when we did not, which at least rules out the possibility that our proxy for a higher crime norm variable was picking up or diluting the effects of friendships and/or networks on life satisfaction.

Because the residuals were based on each individual's unexplained probability of being victimized, we posited that they are a better approximation of local-level crime rates than are national crime rates, as crime rates typically show a great deal of variance across cities and regions. Yet given that our residuals were likely also capturing any number of unobservables, we conducted our second-stage life satisfaction regressions with the national-level crime rate corresponding to each respondent (and clustering the standard errors), based on reported victimization in the sample, instead of our residuals. In this instance, the national-level victimization rates were found to be correlated with lower levels of life satisfaction, suggesting that national-level rates and more local crime norms may operate differently. Another note of caution is that it was not possible to control for country fixed effects when the national-level rates were included, so there may have been many other country-level unobservables that were picked up by the national-rates variables. The results are reported in Appendix C.

Another plausible phenomenon that it is not possible to capture with the Gallup data set, which is a cross-section across two years, is adaptation over time rather than to the level of crime at the moment. In another study, based on 10 years of Latinobarometer data, Soumya Chattopadhyay and the first author conducted a similar exercise that looked at the effects of victimization—and the unexplained probability of being

victimized—on happiness across countries in Latin America and the Caribbean. In this study, lagged victimization, for one and two years, was also included. The study found that being a victim a year prior was still negatively correlated with well-being, but being a victim two years prior was positively correlated. This suggests that there is adaptation across time as well as to the overall level of crime.³

The effects of victimization were found to vary significantly across age and income cohorts (see Appendix Tables 3A–3C). The negative effects of victimization were, not surprisingly, stronger for the life satisfaction of the elderly and the poor (more accurately, those respondents whose income was below the median), suggesting that crime has a regressive component. These groups are surely more vulnerable to crime, as they have fewer means to protect themselves from it. It is notable, for example, that the difference found between the elderly and the young was much greater for the negative effects associated with being mugged than for those associated with having something stolen. Being mugged is a more direct and potentially more violent experience than having something stolen, and one can imagine that its impact is greater for someone who is elderly and physically more vulnerable than for someone who is younger. In the same vein, being mugged was found to have negative and significant effects on women but not on men. In contrast, poorer and more vulnerable groups were less likely to be carrying valuables worth stealing (Appendix Tables 3A–3C).

The health effects of perceptions of insecurity, as measured by our insecurity variables, were similar but varied slightly

³ We thank Rafael Di Tella for raising a question about why national rates of crime were not used, as well as about levels versus over-time effects. For the results, see Chapter 7 in Graham (2009).

across cohorts (Appendix Tables 4A–4C). The (positive) health effects of feeling safe walking in one’s neighborhood and the (negative) effects of being mugged or having something stolen, for example, were strongest for women, and the negative effects of having something stolen were strongest for the elderly. One can imagine that the negative health effects of such experiences are worse for those cohorts that are more physically vulnerable than others (Appendix Tables 4A–4C).

Adaptation, on the other hand, does not seem to occur in the health arena in the same way that it does in the happiness one. It is, of course, possible that our residuals were merely picking up unobservable variables that had nothing to do with respondents’ adaptation. If this was the case, the consistency in the findings suggests there is something in what we were observing (or not observing) that mitigated the usual effects of these phenomena on reported happiness. The mitigation effects seemed to be greater when the unexplained probabilities were higher—that is, more common to the environment rather than explained by individual characteristics—which is suggestive of adaptation. This last finding, though, could be an artifact of construction: it may be that the residuals were greater when the unexplained probability of being a victim was greater precisely because in such cases we were able to explain less.

As a robustness check, we attempted an alternative specification, creating victimization propensities for each respondent and then testing how their actual victimization experience compared with those propensity scores. The gaps we find between propensity and experience should, in theory, be equivalent to our unexplained probability residuals. Our results under this alternate specification supported our basic findings and are reported in Appendix A. Those respondents who reported feeling safe in their neighborhood, for example, were significantly

happier than those with similar characteristics but who did not report feeling safe. The coefficient on the stolen variable was negative but not significant, whereas that on the mugged variable was both negative and significant. This supports our findings above, which suggested much stronger well-being effects for being mugged than for having something stolen, as the former is likely a more direct and unsettling experience. (For detailed results, see Appendix A; for detail on the method, see Greene 2008.) Although the matching scores confirm the robustness of our victimization variables, however, they cannot fully resolve the question of the unobservables that our residuals were picking up.

Split-Sample Results

As an additional test of our hypothesis that individuals adapt—at least in part—to higher crime norms, we split our sample twice into sets of country clusters, using a different criterion for the split each time. First we divided it into countries with homicide rates above (Brazil, Bolivia, Colombia, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Paraguay, and Venezuela) and below (Argentina, Chile, Costa Rica, the Dominican Republic, Jamaica, Mexico, Nicaragua, Panama, Peru, Trinidad and Tobago, and Uruguay) the median for the region, with the split serving as a proxy for major differences in crime levels across the two groups.

Our results only partly supported our hypothesis: the well-being effects (as measured by our life satisfaction variable) of being a crime victim (as gauged by our mugged variable) were not significant in countries with *lower* homicide rates. In contrast, the residual (and the potential mitigating effects that it was picking up) was significant; in other words, in a country

with a higher crime probability, being mugged was a less negative experience. Being mugged had significant and negative effects on well-being in countries with higher-than-median homicide rates, and the coefficient on the residuals was positive and significant (see Appendix Table 5). There were no significant differences in the health effects of being a crime victim across the two subsamples, however.

We obtained similar results with our second sample split, which was based on the percentage of respondents in each country who answered positively the question “Do you feel safe walking alone at night in your neighborhood?” Again we divided the sample into those countries that were above the median response (i.e., those where respondents feel more secure: Colombia, Costa Rica, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, and Peru) and those that were below (i.e., those where respondents feel less secure: Argentina, Bolivia, Brazil, Chile, the Dominican Republic, Ecuador, El Salvador, Haiti, Paraguay, Trinidad and Tobago, Uruguay, and Venezuela); the median response in this case was 48 percent.

Again, we obtained mixed support for our hypothesis. The findings ran in the same general direction as those reported for the full sample, but we did not find any difference between the subsamples. Note that security *perceptions* across countries did not correlate closely with objective indicators (specifically, with homicide rates). The effect of being mugged on life satisfaction was roughly similar in the subsample of countries where respondents generally felt more safe or secure to the effect in countries where they did not (Appendix Table 6). Again, our residuals ran in the opposite direction from our coefficients on victimization. And as above, the difference in the effects was much more important for life satisfaction than it was for health status, as measured by the EQ-5D.

Societal-Level Effects: Friends and Institutions

We also explored the potential society-wide effects of crime victimization and perceptions of insecurity. We looked at the impact of crime victimization on friendships, based on a question in the Gallup World Poll that asks respondents whether they have friends or family on whom they can rely in times of need. In earlier work using a variable based on this same Gallup question, researchers at the IDB (2008) found that having friends was the second most important variable, after food security, in regard to reported happiness for respondents in the region. Additionally, having friends was more important to the life satisfaction of the rich than of the poor (IDB, 2008). In the absence of institutionalized safety nets in most of the region, it makes sense that friends and family are an important source of economic support, particularly for the poor, in addition to the obvious social support that ties to these people provide.

In our research using the Gallup question, we replaced life satisfaction with our friends variable as the left-hand-side variable in our second-stage regression. We found that crime victimization—in this case, represented by our mugged variable—was negatively correlated with having friends, and the correlation was slightly stronger for the middle-aged and for those with incomes below the median. The income results suggest that more vulnerable groups who lack friendships experience stronger negative well-being effects from being victimized (Appendix Table 7).

We also explored the effects of victimization on confidence in public institutions. We focused on respondents' answers to questions about confidence in three kinds of institutions: the police, the judiciary system, and the national government. As above, we replaced life satisfaction as the left-hand-side vari-

able in our second-stage regressions with variables representing each of these three institutions, respectively. Being a crime victim—in this instance, represented by our mugged variable—was found to be negatively and significantly correlated with confidence in the police and with confidence in the national government; the correlation was found to be negative but not significant in the case of the judiciary. The link between victimization and confidence in the police is a direct and obvious one, and not surprisingly, more so than that between victimization and attitudes about the judiciary. Victimization may also affect general attitudes about the government more than it affects those toward to a more removed and less obvious institution like the judiciary, at least for the average respondent (see Appendix Table 8). As in our other regressions, our unexplained probability of victimization worked in the opposite direction, mitigating the negative effects. One can imagine that where higher crime rates are the norm, confidence in the kinds of institutions represented by the three variables we employed is already low, and an instance of victimization is less significant in regard to that confidence, in the same way that it has smaller effects on life satisfaction. Despite this mitigation, however, crime victimization was found to have significant and negative effects on confidence in certain institutions in the region, demonstrating yet another cost related to the high rates of insecurity in the region.

We further posited that exposure to the media could play a mediating role in regard to the well-being effects of crime victimization. This role presumably could influence well-being in two directions: one would be in heightening insecurity by highlighting the existence of crime and the dangers surrounding it; the other would be in lowering the stigma attached to crime victimization by making it seem a more “normal” event. To test this hypothesis, we included a variable representing access to

the Internet in our second-stage regressions, with both life satisfaction and health satisfaction as the left-hand-side variables, but our results under this specification were not significant.

Estimating the Costs: Income Equivalents for Crime Victimization

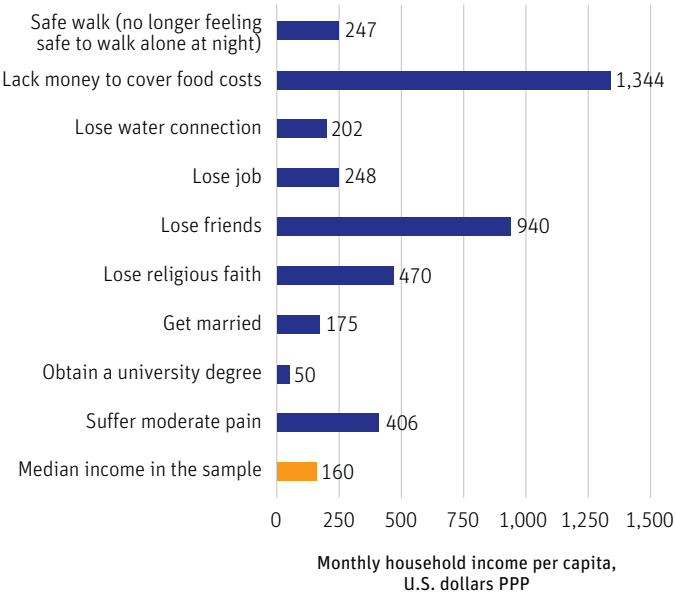
As a means of assessing the costs of victimization relative to those of other experiences, we measured their income equivalents. As is standard practice, we calculated the marginal effects on well-being of changes in our relevant variables, while holding the obvious sociodemographic variables constant. We used our safe walk variable as our insecurity variable in the following equation:

$$\begin{aligned}
 LS_{ij} = & a + b_1 \text{ gender}_{ij} + b_2 \text{ age}_{ij} + b_3 \text{ age}_{ij}^2 + b_4 \text{ health index}_{ij} \\
 & + b_5 \text{ education}_{ij} + b_6 \text{ marital status}_{ij} + b_7 \text{ family size}_{ij} \\
 & + b_8 \text{ religious beliefs}_{ij} + b_9 \text{ friends}_{ij} \\
 & + b_{10} \text{ employment status}_{ij} + b_{11} y_{ij} + b_{12} \text{ utilities}_{ij} \\
 & + b_{13} \text{ rural/urban area}_{ij} + b_{14} \text{ food security}_{ij} \\
 & + b_{15} \text{ housing security}_{ij} + b_{16} \text{ safe walk}_{ij} + v_i + \epsilon_{ij}
 \end{aligned}$$

Our results regarding most of the standard variables were very similar to those that have been found by the IDB (2008) for Latin America and the Caribbean, also based on Gallup data. Friendships and food were found to be the most important variables to well-being. Education and marriage were also found to be important, but the least so, in relative terms. We also added a variable for suffering moderate pain, based on the EQ-5D questions, and found that the effects were quite significant: almost four times the monthly median income would be needed to compensate for the pain. The effects of feeling insecure were

also notable: respondents would need one-and-a-half times the median income to compensate for feeling insecure, roughly on par with what they would need if they lost their job. The negative effects of insecurity were greater than the positive effects of marriage, but less than those of losing friends or having insufficient income to cover food (see Figure 4; details on calculations in Appendix B).

FIGURE 4 Amount of Income Needed to Maintain Individual’s Initial Level of Satisfaction when Faced with Change



5. Conclusions

In this paper we have explored the welfare effects of the high levels of crime in Latin America and the Caribbean on a large sample of respondents from the region. Our research measured the effects of high crime levels both on reported happiness and on health status, as measured by the EQ-5D index, which is based on self-assessments of health across a range of physical and emotional conditions that correlate very closely with health status as assessed by a number of objective indicators.

Our baseline hypothesis was that crime victimization would have negative effects on both happiness and health. At the same time, we also posited that some of those effects would be mitigated by people's ability to adapt to high crime levels when they are more common. Our priors were that adaptation would most likely mitigate the happiness effects of victimization more than the health effects, and that the ability to adapt would vary across cohorts.

Our results supported our basic hypothesis. Crime victimization was found to have significant and negative effects on both happiness and health. The effects of victimization varied across cohorts, with occurrences like being mugged—which is typically a more threatening and more physical experience than



having something stolen—having stronger effects for more vulnerable groups, such as women and the elderly, and at times for groups for whom these occurrences are rare, such as the wealthy, and likely produce more stigma. The coefficients in our regression results were typically quite a bit higher for happiness than for health, although the general direction of the findings was similar, and there were some modest differences across the cohorts.

At the same time, we also found evidence of adaptation. Our victimization residuals—which were based on the unexplained probability of being victimized as a proxy for adaptation—ran in the opposite direction of our victimization variables, suggesting that a higher unexplained probability of victimization—that is, a higher crime norm—mitigates the effects of victimization. This occurred to a much greater degree in the happiness than in the health arena, suggesting that it is more difficult to adapt in the health arena, where the effects of victimization can result in permanent conditions.

It is possible that our residuals were merely picking up other unobservable variables that had nothing to do with our respondents' ability to adapt. Still, the consistency in the direction of the findings suggests that something in what we were observing (or not observing) mitigated the usual effects on well-being of the phenomena under consideration. Some of what we found could, of course, be an artifact of construction: it may be that the residuals were greater when the unexplained probability of being a victim was greater precisely because in such cases we were able to explain less. In a later stage of this research, we will attempt to develop alternative specifications to get around this problem.

We also explored the society-wide costs of insecurity. In this case, we replaced life satisfaction as the left-hand-side vari-

able in our second-stage regressions with a variable measuring whether or not respondents had friends and family on whom they could rely during times of difficulty. We found that crime victimization—in this case, being mugged—was negatively correlated with having friends, a variable that was very important to the well-being of respondents in the region. The correlation was stronger for the middle-aged and for those with incomes below the median. The income results suggest that vulnerable groups who lack friendships experience heavier well-being costs as a result of being victimized. Victimization was also found to have negative effects on confidence in certain public institutions—the police and national governments—for all of our cohorts. This seems to indicate a vicious cycle of sorts, in which institutions are weak, and then crime victimization undermines already weak confidence in those institutions. Thus the region's crime rates not only affect individual well-being, but societal well-being as well.

Finally, we attempted to provide an order-of-magnitude estimate of the costs incurred as a result of victimization by calculating income equivalence values for crime victimization for our cohorts of respondents. Respondents, it was found, would need one-and-a-half times the median monthly income to make up for not feeling safe walking in their neighborhoods, an amount equivalent to that which would be required to offset the effect of losing one's job and greater than that which would be needed to make up for losing access to water, but less than that necessary to offset the effects of suffering moderate pain or of losing one's friends.

Our results are derived from an initial exploration into a new area of research and should be treated as such. They provide a new means of measuring the well-being and health effects of victimization and insecurity. Not surprisingly, these phenomena have negative effects on both well-being and health in the



Latin American and Caribbean region, effects that vary somewhat across age, gender, and income cohorts. Those responding to the survey from which we obtained our data seemed to adapt to these phenomena when they were more common, at least in regard to their effects on happiness; adapting in such a way as to mitigate their health effects seemed more difficult. Despite the occurrence of some adaptation, however, the well-being costs of the high levels of crime in the region were found to be high, both for individuals and for societies in general.

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Appendixes

Appendix 1

The basic first stage equation was:

$$\text{Victimization}_{ij} = a + b \cdot \text{age}_{ij} + c \cdot \text{friends}_{ij} + d \cdot \text{employment}_{ij} \\ + e \cdot \text{urban area}_{ij} + f \cdot \text{shortage of income to} \\ \text{buy food}_{ij} + g \cdot \text{shortage of income to pay} \\ \text{rent}_{ij} + h \cdot \text{POUM score}_{ij} + \varepsilon$$

Victimization is a zero–1 variable capturing the probability of being mugged, having something stolen, or perceiving insecurity (based on safe walk), respectively. The independent variables are age, friendships, employment status, urban/rural area, two measures of income insecurity, a measure of respondents' optimism as proxied by their POUM score (as discussed above), and an error term that captures the unexplained probability of being victimized. We also included country fixed effects in the first specification and measures for GDP growth and for rule of law in a second. The results are essentially the same with both specifications. The residuals reported in all of the tables are based on the specification with country fixed effects.

The second stage base equation was:

$$LS_{ij} = a + b y_{ij} + c age_{ij} + d age_{ij}^2 + e fs_{ij} + g H_{ij} + h L_{ij} + v_{ij} + \epsilon_{ij}$$

The dependent variables are, respectively, life satisfaction and assessed health status (based on the EQ-5D index) and the independent variables are the usual controls, plus a dummy variable for victimization (one of each of our three victimization variables) and then the unexplained probability of being victimized for that same respondent (v_{ij}). The stochastic term of the second stage equation is ϵ_{ij} . We repeated the same equations for the split samples as well as with each of the five separate health conditions as dependent variables.

Appendix 2

We used our safe walk variable as our insecurity variable in the following equation:

$$\begin{aligned} LS_{ij} = & a + b_1 gender_{ij} + b_2 age_{ij} + b_3 age_{ij}^2 + b_4 health\ index_{ij} \\ & + b_5 education_{ij} + b_6 marital\ status_{ij} \\ & + b_7 family\ size_{ij} + b_8 religious\ beliefs_{ij} + b_9 friends_{ij} \\ & + b_{10} employment\ status_{ij} + b_{11} y_{ij} \\ & + b_{12} utilities_{ij} + b_{13} rural/urban\ area_{ij} \\ & + b_{14} food\ security_{ij} + b_{15} housing\ security_{ij} \\ & + b_{16} safe\ walk_{ij} + v_{ij} + \epsilon_{ij} \end{aligned}$$

Appendix Table 1 First-Step Regressions

	(1)	(2)	(3)	(4)	(5)
Dependent variables	Do you feel safe walking alone at night in the city or area where you live? (Yes = 1)	Within the past 12 months: Have you had money or property stolen from you or another household member? (Yes = 1)	Within the past 12 months: Have you been assaulted or mugged? (Yes = 1)	Are there gangs in the area where you live? (Yes = 1)	Is there illicit drug trafficking or drug sales in the area where you live? (Yes = 1)
	(Safe walk)	(Stolen)	(Mugged)	(Gangs)	(Drugs)
Age (years)	0.0008* [0.0004]	-0.0067*** [0.0006]	-0.0108*** [0.0008]	-0.0056*** [0.0011]	-0.0063*** [0.0012]
Have friends	0.1452*** [0.0197]	-0.1096*** [0.0240]	-0.1835*** [0.0311]	-0.0421 [0.0512]	-0.0936* [0.0562]
Have employment	0.2751*** [0.0144]	0.1640*** [0.0179]	0.1427*** [0.0244]	-0.0249 [0.0359]	0.0984** [0.0393]
Live in urban area	-0.6713*** [0.0153]	0.4045*** [0.0192]	0.3582*** [0.0253]	0.8049*** [0.0379]	0.8640*** [0.0414]
Do not have shortage of income to cover food costs	0.1269*** [0.0185]	-0.3334*** [0.0226]	-0.3269*** [0.0308]	-0.2152*** [0.0430]	-0.1507*** [0.0473]

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Appendix Table 1 First-Step Regressions (continued)

Dependent variables	(1)	(2)	(3)	(4)	(5)
	Do you feel safe walking alone at night in the city or area where you live? (Yes = 1)	Within the past 12 months: Have you had money or property stolen from you or another household member? (Yes = 1)	Within the past 12 months: Have you been assaulted or mugged? (Yes = 1)	Are there gangs in the area where you live? (Yes = 1)	Is there illicit drug trafficking or drug sales in the area where you live? (Yes = 1)
	(Safe walk)	(Stolen)	(Mugged)	(Gangs)	(Drugs)
Do not have shortage of income to cover household costs	0.1164*** [0.0202]	-0.2079*** [0.0241]	-0.3739*** [0.0316]	-0.0508 [0.0517]	0.1392** [0.0571]
Prospects of Upward Mobility (POM): Life situation expected in five years, 0–10 scale	0.0416*** [0.0031]	-0.0012 [0.0039]	-0.0180*** [0.0053]	-0.0224*** [0.0071]	-0.0170** [0.0077]
Constant term	-0.7322*** [0.1103]	-1.5110*** [0.1434]	-0.9774*** [0.1725]	0.0272 [0.1446]	0.1091 [0.1528]
Number of observations	104,419	106,951	106,984	14,198	12,594
Pseudo <i>R</i> -squared	0.109	0.0665	0.100	0.0580	0.0976

Note: Standard errors in brackets.

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

Appendix Table 2A

Second Step: Entire Sample, Dependent Variable: Life Satisfaction

Dependent
variable: Life
Satisfaction,
0–10 scale

Entire sample (without residuals)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Male	-0.1734*** [0.0353]	-0.1700*** [0.0374]	-0.1679*** [0.0349]	-0.1617*** [0.0370]	-0.1673*** [0.0349]	-0.1601*** [0.0370]	-0.1718*** [0.0359]	-0.1653*** [0.0380]	-0.1638*** [0.0380]	-0.1635*** [0.0400]
Age (years)	-0.0505*** [0.0055]	-0.0518*** [0.0059]	-0.0494*** [0.0054]	-0.0511*** [0.0058]	-0.0489*** [0.0054]	-0.0510*** [0.0058]	-0.0495*** [0.0056]	-0.0513*** [0.0060]	-0.0498*** [0.0059]	-0.0506*** [0.0063]
Age-squared	0.0004*** [0.0001]	0.0005*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0004*** [0.0001]
Health score (EQ-5D)	1.217*** [0.1314]	1.3094*** [0.1426]	1.2532*** [0.1307]	1.3417*** [0.1417]	1.2596*** [0.1307]	1.3524*** [0.1416]	1.2063*** [0.1342]	1.2820*** [0.1459]	1.1531*** [0.1426]	1.2715*** [0.1535]
Complete primary education	-0.0038 [0.0630]	0.0025 [0.0688]	0.0088 [0.0625]	0.0109 [0.0682]	0.0115 [0.0625]	0.0144 [0.0683]	0.0452 [0.0647]	0.0386 [0.0707]	0.0568 [0.0690]	0.0536 [0.0744]
Complete secondary education	0.0794 [0.0679]	0.0601 [0.0733]	0.0837 [0.0673]	0.0623 [0.0728]	0.0812 [0.0673]	0.0605 [0.0728]	0.1204* [0.0694]	0.0881 [0.0751]	0.1119 [0.0740]	0.0874 [0.0790]
Complete superior education	0.2512*** [0.0795]	0.2341*** [0.0858]	0.2653*** [0.0789]	0.2419*** [0.0852]	0.2581*** [0.0788]	0.2351*** [0.0851]	0.2748*** [0.0817]	0.2494*** [0.0879]	0.2674*** [0.0855]	0.2460*** [0.0913]

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Appendix Table 2A **Second Step: Entire Sample, Dependent Variable: Life Satisfaction** *(continued)*

Dependent
variable: Life
Satisfaction,
0–10 scale

Entire sample (without residuals)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Married	-0.0208 [0.0441]	0.0101 [0.0464]	-0.0218 [0.0437]	0.0048 [0.0460]	-0.0243 [0.0437]	0.0036 [0.0461]	-0.0183 [0.0450]	0.0147 [0.0474]	-0.0182 [0.0472]	0.0184 [0.0495]
Divorced	-0.0495 [0.0783]	-0.0294 [0.0834]	-0.0635 [0.0777]	-0.0385 [0.0833]	-0.0634 [0.0780]	-0.0349 [0.0836]	-0.0662 [0.0799]	-0.0375 [0.0855]	-0.0667 [0.0842]	-0.0581 [0.0897]
Widowed	0.0632 [0.0879]	0.1128 [0.0950]	0.0584 [0.0871]	0.0993 [0.0943]	0.0623 [0.0876]	0.1050 [0.0949]	0.0431 [0.0902]	0.0909 [0.0973]	0.0872 [0.0977]	0.1154 [0.1045]
Have one child	0.0108 [0.0451]	-0.0098 [0.0475]	0.0037 [0.0447]	-0.0167 [0.0472]	0.0046 [0.0449]	-0.0149 [0.0473]	0.0023 [0.0461]	-0.0133 [0.0485]	0.0125 [0.0487]	-0.0133 [0.0511]
Have two or more children	-0.0015 [0.0456]	-0.0101 [0.0483]	-0.0105 [0.0453]	-0.0149 [0.0480]	-0.0112 [0.0454]	-0.0152 [0.0482]	0.0036 [0.0465]	0.0074 [0.0492]	0.0188 [0.0493]	0.0157 [0.0521]
Consider religion to be important	0.2520*** [0.0419]	0.2287*** [0.0439]	0.2518*** [0.0415]	0.2322*** [0.0435]	0.2540*** [0.0416]	0.2321*** [0.0435]	0.2601*** [0.0425]	0.2348*** [0.0444]	0.2638*** [0.0453]	0.2349*** [0.0473]
Have friends	0.4274*** [0.0492]	0.4186*** [0.0534]	0.4324*** [0.0490]	0.4394*** [0.0533]	0.4318*** [0.0490]	0.4343*** [0.0533]	0.4373*** [0.0505]	0.4396*** [0.0546]	0.4332*** [0.0533]	0.4439*** [0.0574]
Have employment	0.0989*** [0.0369]	0.0508 [0.0397]	0.1052*** [0.0367]	0.0889** [0.0391]	0.1045*** [0.0367]	0.0893** [0.0391]	0.1066*** [0.0376]	0.0790** [0.0400]	0.1168*** [0.0399]	0.0896** [0.0423]

Appendix Table 2A

Second Step: Entire Sample, Dependent Variable: Life Satisfaction (continued)

Dependent variable: Life Satisfaction, O-10 scale

Entire sample (without residuals)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Household income (monthly per capita in PPP U.S. dollars)	0.2256*** [0.0236]	0.2203*** [0.0253]	0.2238*** [0.0235]	0.2189*** [0.0252]	0.2243*** [0.0235]	0.2189*** [0.0253]	0.2278*** [0.0242]	0.2222*** [0.0258]	0.2378*** [0.0254]	0.2300*** [0.0270]
Live in urban area	-0.0110 [0.0375]	0.0491 [0.0411]	-0.0221 [0.0369]	-0.0117 [0.0397]	-0.0217 [0.0369]	-0.0088 [0.0395]	-0.0191 [0.0383]	0.0307 [0.0428]	-0.0277 [0.0402]	0.0040 [0.0449]
Access to running water service	0.0535 [0.0614]	-0.0029 [0.0665]	0.0476 [0.0612]	-0.0014 [0.0663]	0.0512 [0.0614]	0.0036 [0.0665]	0.0647 [0.0620]	0.0251 [0.0672]	0.0806 [0.0664]	0.0150 [0.0713]
Access to electricity service	0.3795*** [0.1085]	0.4495*** [0.1184]	0.3428*** [0.1089]	0.4070*** [0.1186]	0.3441*** [0.1087]	0.4117*** [0.1184]	0.3582*** [0.1116]	0.4077*** [0.1219]	0.3551*** [0.1161]	0.4218*** [0.1250]
Access to telephone service	0.1554*** [0.0407]	0.1719*** [0.0429]	0.1605*** [0.0404]	0.1730*** [0.0427]	0.1594*** [0.0404]	0.1682*** [0.0428]	0.1750*** [0.0415]	0.1758*** [0.0437]	0.1720*** [0.0441]	0.1834*** [0.0464]
Asset index	0.1390*** [0.0157]	0.1406*** [0.0167]	0.1383*** [0.0156]	0.1405*** [0.0166]	0.1359*** [0.0156]	0.1381*** [0.0166]	0.1310*** [0.0161]	0.1315*** [0.0171]	0.1260*** [0.0169]	0.1251*** [0.0179]

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Appendix Table 2A **Second Step: Entire Sample, Dependent Variable: Life Satisfaction** *(continued)*

Dependent variable: Life Satisfaction, O-10 scale	Entire sample (without residuals)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Do not have shortage of income to cover food costs	0.4960*** [0.0411]	0.4852*** [0.0442]	0.4872*** [0.0408]	0.4914*** [0.0441]	0.4897*** [0.0409]	0.4846*** [0.0442]	0.5007*** [0.0417]	0.4963*** [0.0449]	0.4768*** [0.0445]	0.4813*** [0.0475]
Do not have shortage of income to cover household costs	0.2109*** [0.0519]	0.1676*** [0.0552]	0.2208*** [0.0515]	0.1920*** [0.0550]	0.2198*** [0.0517]	0.1793*** [0.0552]	0.2144*** [0.0527]	0.1869*** [0.0561]	0.2250*** [0.0564]	0.2127*** [0.0599]
Safe walk	0.0984*** [0.0335]	0.5578*** [0.0789]								
Safe walk residuals		-1.0821*** [0.1731]								
Stolen			-0.0824** [0.0400]	-0.1346 [0.0971]						
Stolen residuals				0.0873 [0.1910]						

Appendix Table 2A

Second Step: Entire Sample, Dependent Variable: Life Satisfaction (*continued*)

Dependent
variable: Life
Satisfaction,
0–10 scale

Entire sample (without residuals)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mugged					-0.0675 [0.0507]	-0.3915*** [0.1175]				
Mugged residuals						0.6292*** [0.2148]				
Gangs							-0.0606* [0.0343]	-0.3060*** [0.0863]		
Gangs residuals								0.5208*** [0.1865]		
Drugs									-0.0845** [0.0373]	-0.2484*** [0.0896]
Drugs residuals										0.3424* [0.1904]
Number of observations	11,813	10,521	11,962	10,644	11,937	10,624	11,317	10,107	10,079	9,070
Pseudo R-squared	0.0621	0.0621	0.0619	0.0613	0.0617	0.0613	0.0618	0.0610	0.0612	0.0605

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 2B Second Step: Entire Sample, Dependent Variable: Health Score

Dependent variable: Health Score (EQ-5D)		Entire sample (without residuals)					
	(1)	(2)	(3)	(4)	(5)	(6)	
Male	0.0516*** [0.0071]	0.0482*** [0.0075]	0.0512*** [0.0071]	0.0478*** [0.0075]	0.0454*** [0.0071]	0.0413*** [0.0076]	
Age (years)	-0.0036*** [0.0011]	-0.0038*** [0.0012]	-0.0037*** [0.0011]	-0.0038*** [0.0012]	-0.0036*** [0.0011]	-0.0034*** [0.0012]	
Age-squared	-0.0000* [0.0000]	-0.0000 [0.0000]	-0.0000* [0.0000]	-0.0000 [0.0000]	-0.0000* [0.0000]	-0.0000* [0.0000]	
Complete primary education	0.0312*** [0.0100]	0.0303*** [0.0109]	0.0315*** [0.0100]	0.0307*** [0.0109]	0.0319*** [0.0100]	0.0309*** [0.0110]	
Complete secondary education	0.0451*** [0.0115]	0.0396*** [0.0124]	0.0480*** [0.0115]	0.0426*** [0.0124]	0.0468*** [0.0116]	0.0400*** [0.0125]	
Complete superior education	0.0418*** [0.0149]	0.0428*** [0.0159]	0.0465*** [0.0148]	0.0471*** [0.0159]	0.0436*** [0.0150]	0.0432*** [0.0159]	
Married	0.0051 [0.0088]	0.0104 [0.0094]	0.0052 [0.0088]	0.0102 [0.0094]	0.0058 [0.0089]	0.0099 [0.0094]	
Divorced	-0.0338** [0.0142]	-0.0280* [0.0151]	-0.0339** [0.0142]	-0.0283* [0.0151]	-0.0336** [0.0144]	-0.0289* [0.0152]	

Appendix Table 2B

Second Step: Entire Sample, Dependent Variable: Health Score (continued)

Dependent variable: Health Score (EQ-5D)

Entire sample (without residuals)

	(1)	(2)	(3)	(4)	(5)	(6)
Widowed	-0.0205 [0.0152]	-0.0146 [0.0167]	-0.0215 [0.0152]	-0.0148 [0.0167]	-0.0218 [0.0154]	-0.0139 [0.0168]
Have one child	-0.0006 [0.0090]	0.0026 [0.0096]	-0.0002 [0.0090]	0.0031 [0.0096]	-0.0007 [0.0091]	0.0020 [0.0097]
Have two or more children	-0.0051 [0.0090]	-0.0106 [0.0095]	-0.0037 [0.0090]	-0.0089 [0.0095]	-0.0044 [0.0091]	-0.0105 [0.0096]
Consider religion to be important	0.0078 [0.0093]	0.0080 [0.0097]	0.0068 [0.0092]	0.0074 [0.0097]	0.0065 [0.0094]	0.0072 [0.0098]
Have friends	0.0420*** [0.0087]	0.0438*** [0.0093]	0.0404*** [0.0087]	0.0416*** [0.0093]	0.0405*** [0.0087]	0.0411*** [0.0094]
Have employment	0.0328*** [0.0074]	0.0313*** [0.0078]	0.0329*** [0.0073]	0.0317*** [0.0078]	0.0305*** [0.0074]	0.0294*** [0.0079]
Household income (monthly per capita in PPP U.S. dollars)	0.0155*** [0.0042]	0.0163*** [0.0046]	0.0157*** [0.0042]	0.0166*** [0.0046]	0.0147*** [0.0043]	0.0155*** [0.0046]

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Appendix Table 2B **Second Step: Entire Sample, Dependent Variable: Health Score** *(continued)*

Dependent variable: Health Score (EQ-5D)	Entire sample (without residuals)					
	(1)	(2)	(3)	(4)	(5)	(6)
Live in urban area	-0.0031 [0.0073]	-0.0050 [0.0078]	-0.0008 [0.0073]	-0.0019 [0.0078]	0.0021 [0.0074]	0.0008 [0.0082]
Access to running water service	-0.0211* [0.0116]	-0.0167 [0.0126]	-0.0239** [0.0116]	-0.0192 [0.0125]	-0.0235** [0.0118]	-0.0190 [0.0126]
Access to electricity service	-0.0011 [0.0187]	-0.0017 [0.0204]	-0.0046 [0.0187]	-0.0059 [0.0204]	-0.0015 [0.0189]	-0.0015 [0.0206]
Access to telephone service	0.0004 [0.0081]	-0.0017 [0.0086]	0.0022 [0.0081]	-0.0004 [0.0086]	0.0020 [0.0081]	0.0003 [0.0086]
Asset index	0.0065** [0.0031]	0.0069** [0.0033]	0.0075** [0.0031]	0.0078** [0.0033]	0.0067** [0.0031]	0.0073** [0.0033]
Do not have shortage of income to cover food costs	0.0929*** [0.0077]	0.0926*** [0.0084]	0.0911*** [0.0077]	0.0900*** [0.0084]	0.0932*** [0.0078]	0.0927*** [0.0084]
Do not have shortage of income to cover household costs	0.0201** [0.0090]	0.0229** [0.0098]	0.0210** [0.0090]	0.0226** [0.0097]	0.0221** [0.0091]	0.0250** [0.0098]

Dependent variable: Health Score (EQ-5D)

	Entire sample (without residuals)					
	(1)	(2)	(3)	(4)	(5)	(6)
Mugged	-0.0473*** [0.0098]	-0.0331 [0.0268]				
Mugged residuals		-0.0182 [0.0499]				
Stolen			-0.0661*** [0.0079]	-0.0702*** [0.0217]		
Stolen residuals				0.0212 [0.0434]		
Safe walk					0.0520*** [0.0067]	0.0477** [0.0188]
Safe walk residuals						0.0168 [0.0409]
Constant term	1.1321*** [0.0626]	1.1194*** [0.0684]	1.0426*** [0.0469]	1.1096*** [0.0676]	1.1060*** [0.0627]	1.0763*** [0.0669]
Number of observations	12,019	10,643	12,044	10,663	11,890	10,539
Pseudo <i>R</i> -squared	0.195	0.186	0.200	0.191	0.197	0.190

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 3A Second Step: Mugged, Dependent Variable: Life Satisfaction

Dependent variable:
Life Satisfaction, 0–10

Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74	Income below median		Income above median	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Male	-0.1601*** [0.0370]			-0.1770*** [0.0544]	-0.1779*** [0.0646]	-0.0383 [0.0993]	-0.1666*** [0.0552]	-0.1572*** [0.0509]	
Age (years)	-0.0510*** [0.0058]	-0.0494*** [0.0076]	-0.0521*** [0.0090]	-0.1659*** [0.0449]	-0.1094 [0.0915]	-0.0056 [0.1868]	-0.0590*** [0.0082]	-0.0434*** [0.0083]	
Age-squared	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0005*** [0.0001]	0.0025*** [0.0009]	0.0012 [0.0010]	0.0001 [0.0015]	0.0005*** [0.0001]	0.0004*** [0.0001]	
Health score (EQ-5D)	1.3524*** [0.1416]	1.2129*** [0.1803]	1.5468*** [0.2305]	0.9308*** [0.2444]	1.4317*** [0.2581]	1.5349*** [0.2618]	1.2672*** [0.1957]	1.4533*** [0.2084]	
Complete primary education	0.0144 [0.0683]	0.0397 [0.0914]	-0.0388 [0.1030]	0.0895 [0.1274]	-0.0920 [0.1215]	-0.0442 [0.1271]	0.0799 [0.0831]	-0.1582 [0.1242]	
Complete secondary education	0.0605 [0.0728]	0.0585 [0.0977]	0.0448 [0.1100]	0.1622 [0.1295]	-0.0573 [0.1283]	0.0993 [0.1550]	0.1473 [0.0932]	-0.1275 [0.1257]	
Complete superior education	0.2351*** [0.0851]	0.2205* [0.1154]	0.2465* [0.1283]	0.3276** [0.1496]	0.1490 [0.1456]	0.2020 [0.1972]	0.3405*** [0.1301]	0.0393 [0.1355]	
Married	0.0036 [0.0461]	0.0355 [0.0609]	-0.1084 [0.0744]	0.0125 [0.0633]	0.0057 [0.0915]	-0.1055 [0.1492]	-0.0261 [0.0657]	0.0284 [0.0658]	

Appendix Table 3A

Second Step: Mugged, Dependent Variable: Life Satisfaction *(continued)*Dependent variable:
Life Satisfaction, 0–10
scale

	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Divorced	-0.0349 [0.0836]	-0.0577 [0.1052]	-0.0046 [0.1372]	-0.2278 [0.1711]	-0.0712 [0.1246]	0.1107 [0.2071]	-0.1532 [0.1264]	0.0602 [0.1137]
Widowed	0.1050 [0.0949]	0.1667 [0.1100]	-0.0867 [0.1961]	0.0601 [0.3919]	0.0671 [0.1966]	0.0182 [0.1691]	0.2080 [0.1305]	-0.0435 [0.1393]
Have one child	-0.0149 [0.0473]	-0.1271** [0.0647]	0.1371* [0.0703]	0.1361** [0.0687]	-0.1254 [0.0809]	-0.2226 [0.1412]	-0.0622 [0.0771]	-0.0080 [0.0635]
Have two or more children	-0.0152 [0.0482]	-0.0408 [0.0648]	0.0090 [0.0734]	0.1226* [0.0719]	-0.0776 [0.0841]	-0.3831*** [0.1436]	-0.0680 [0.0709]	0.0525 [0.0717]
Consider religion to be important	0.2321*** [0.0435]	0.1618** [0.0632]	0.3117*** [0.0614]	0.3084*** [0.0603]	0.1445* [0.0795]	0.1271 [0.1309]	0.1934*** [0.0666]	0.2696*** [0.0590]
Have friends	0.4343*** [0.0533]	0.5118*** [0.0708]	0.3283*** [0.0820]	0.4418*** [0.0913]	0.3954*** [0.0847]	0.4149*** [0.1195]	0.3720*** [0.0673]	0.5015*** [0.0890]
Have employment	0.0893** [0.0391]	0.0261 [0.0532]	0.1841*** [0.0619]	0.0901 [0.0571]	0.1070 [0.0698]	0.1604 [0.1051]	0.0759 [0.0575]	0.0949* [0.0548]

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Appendix Table 3A **Second Step: Mugged, Dependent Variable: Life Satisfaction** *(continued)*Dependent variable:
Life Satisfaction, 0–10
scale

	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Household income (monthly per capita in PPP U.S. dollars)	0.2189*** [0.0253]	0.1887*** [0.0332]	0.2588*** [0.0387]	0.2416*** [0.0374]	0.2312*** [0.0446]	0.1207* [0.0673]	0.1766*** [0.0441]	0.2542*** [0.0475]
Live in urban area	-0.0088 [0.0395]	0.0129 [0.0537]	-0.0374 [0.0589]	0.0137 [0.0573]	0.0581 [0.0699]	-0.2047** [0.1037]	-0.0080 [0.0548]	-0.0043 [0.0586]
Access to running water service	0.0036 [0.0665]	-0.0058 [0.0893]	0.0154 [0.1009]	0.1040 [0.0961]	-0.0956 [0.1123]	-0.0244 [0.1871]	-0.0103 [0.0814]	0.0580 [0.1170]
Access to electricity service	0.4117*** [0.1184]	0.3630** [0.1598]	0.4985*** [0.1758]	0.4585** [0.1836]	0.3701** [0.1828]	0.2399 [0.3113]	0.2866** [0.1359]	0.7135*** [0.2525]
Access to telephone service	0.1682*** [0.0428]	0.1716*** [0.0575]	0.1689*** [0.0643]	0.1553** [0.0605]	0.1750** [0.0764]	0.2370* [0.1214]	0.2262*** [0.0622]	0.0896 [0.0606]
Asset index	0.1381*** [0.0166]	0.1533*** [0.0232]	0.1220*** [0.0243]	0.1342*** [0.0242]	0.1468*** [0.0299]	0.1530*** [0.0443]	0.1455*** [0.0257]	0.1326*** [0.0227]
Do not have shortage of income to cover food costs	0.4846*** [0.0442]	0.5515*** [0.0586]	0.3727*** [0.0683]	0.4397*** [0.0663]	0.5302*** [0.0738]	0.5960*** [0.1162]	0.3704*** [0.0569]	0.6427*** [0.0701]

Appendix Table 3A

Second Step: Mugged, Dependent Variable: Life Satisfaction *(continued)*

Dependent variable:
Life Satisfaction, 0–10

scale	Entire sample (1)	Women (2)	Men (3)	Age 15–35 (4)	Age 35–54 (5)	Age 55–74 (6)	Income below median (7)	Income above median (8)
Do not have shortage of income to cover household costs	0.1793*** [0.0552]	0.0492 [0.0752]	0.3616*** [0.0816]	0.1653** [0.0837]	0.1255 [0.0905]	0.2856* [0.1543]	0.1721** [0.0690]	0.1636* [0.0922]
Mugged	-0.3915*** [0.1175]	-0.4712*** [0.1551]	-0.2832 [0.1847]	-0.4291*** [0.1455]	-0.4736* [0.2438]	0.1735 [0.3779]	-0.5800*** [0.1970]	-0.3023** [0.1493]
Mugged residuals	0.6292*** [0.2148]	0.8192*** [0.2808]	0.3555 [0.3408]	0.7745*** [0.2661]	0.5278 [0.4429]	-0.3601 [0.6922]	0.9174** [0.3600]	0.4886* [0.2736]
Number of observations	10,624	5,892	4,732	5,094	3,544	1,652	5,180	5,444
Pseudo <i>R</i> -squared	0.0613	0.0597	0.0664	0.0578	0.0635	0.0637	0.0510	0.0521

Note: Robust standard errors in brackets.
****p* < 0.01; ***p* < 0.05; **p* < 0.1.

Appendix Table 3B Second Step: Mugged, Dependent Variable: Life Satisfaction

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Male	-0.1617*** [0.0370]			-0.1804*** [0.0543]	-0.1789*** [0.0647]	-0.0379 [0.0990]	-0.1669*** [0.0551]	-0.1603*** [0.0509]
Age (years)	-0.0511*** [0.0058]	-0.0499*** [0.0076]	-0.0518*** [0.0090]	-0.1653*** [0.0447]	-0.1152 [0.0915]	0.0109 [0.1861]	-0.0584*** [0.0082]	-0.0442*** [0.0083]
Age-squared	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0005*** [0.0001]	0.0025*** [0.0009]	0.0013 [0.0010]	-0.0000 [0.0015]	0.0005*** [0.0001]	0.0004*** [0.0001]
Health score (EQ-5D)	1.3417*** [0.1417]	1.1985*** [0.1810]	1.5387*** [0.2304]	0.9124*** [0.2443]	1.4166*** [0.2592]	1.5247*** [0.2610]	1.2680*** [0.1955]	1.4361*** [0.2090]
Complete primary education	0.0109 [0.0682]	0.0378 [0.0914]	-0.0462 [0.1027]	0.0886 [0.1272]	-0.1063 [0.1215]	-0.0418 [0.1270]	0.0744 [0.0830]	-0.1612 [0.1240]
Complete secondary education	0.0623 [0.0728]	0.0614 [0.0979]	0.0436 [0.1094]	0.1615 [0.1293]	-0.0637 [0.1281]	0.1066 [0.1553]	0.1378 [0.0932]	-0.1148 [0.1256]
Complete superior education	0.2419*** [0.0852]	0.2295** [0.1157]	0.2502* [0.1280]	0.3302** [0.1496]	0.1474 [0.1454]	0.2183 [0.1968]	0.3429*** [0.1296]	0.0511 [0.1356]
Married	0.0048 [0.0460]	0.0360 [0.0608]	-0.1070 [0.0742]	0.0115 [0.0631]	0.0066 [0.0915]	-0.0981 [0.1494]	-0.0262 [0.0655]	0.0297 [0.0658]

Appendix Table 3B

Second Step: Mugged, Dependent Variable: Life Satisfaction *(continued)*

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Divorced	-0.0385 [0.0833]	-0.0648 [0.1049]	-0.0019 [0.1362]	-0.2297 [0.1696]	-0.0809 [0.1239]	0.1093 [0.2076]	-0.1689 [0.1256]	0.0653 [0.1137]
Widowed	0.0993 [0.0943]	0.1599 [0.1091]	-0.0874 [0.1956]	0.0520 [0.3907]	0.0473 [0.1926]	0.0306 [0.1689]	0.1944 [0.1292]	-0.0378 [0.1391]
Have one child	-0.0167 [0.0472]	-0.1274** [0.0648]	0.1383** [0.0698]	0.1385** [0.0686]	-0.1196 [0.0806]	-0.2514* [0.1409]	-0.0611 [0.0768]	-0.0110 [0.0633]
Have two or more children	-0.0149 [0.0480]	-0.0419 [0.0647]	0.0139 [0.0733]	0.1234* [0.0717]	-0.0784 [0.0841]	-0.3803*** [0.1424]	-0.0653 [0.0705]	0.0545 [0.0717]
Consider religion to be important	0.2322*** [0.0435]	0.1620** [0.0631]	0.3124*** [0.0612]	0.3082*** [0.0604]	0.1441* [0.0788]	0.1261 [0.1305]	0.1921*** [0.0663]	0.2706*** [0.0590]
Have friends	0.4394*** [0.0533]	0.5177*** [0.0707]	0.3329*** [0.0821]	0.4483*** [0.0911]	0.4025*** [0.0850]	0.4096*** [0.1192]	0.3822*** [0.0672]	0.5076*** [0.0890]
Have employment	0.0889** [0.0391]	0.0272 [0.0532]	0.1788*** [0.0620]	0.0886 [0.0571]	0.1100 [0.0700]	0.1521 [0.1053]	0.0711 [0.0574]	0.0976* [0.0548]

(continued on next page)

Appendix Table 3B **Second Step: Mugged, Dependent Variable: Life Satisfaction** *(continued)*

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Household income (monthly per capita in PPP U.S. dollars)	0.2189*** [0.0252]	0.1901*** [0.0332]	0.2577*** [0.0386]	0.2416*** [0.0374]	0.2296*** [0.0447]	0.1233* [0.0673]	0.1769*** [0.0441]	0.2546*** [0.0474]
Live in urban area	-0.0117 [0.0397]	0.0142 [0.0536]	-0.0493 [0.0596]	0.0175 [0.0572]	0.0500 [0.0711]	-0.2034* [0.1040]	-0.0263 [0.0550]	0.0035 [0.0589]
Access to running water service	-0.0014 [0.0663]	-0.0085 [0.0893]	0.0098 [0.1004]	0.1061 [0.0958]	-0.1139 [0.1114]	-0.0231 [0.1867]	-0.0118 [0.0813]	0.0430 [0.1160]
Access to electricity service	0.4070*** [0.1186]	0.3504** [0.1595]	0.5065*** [0.1768]	0.4539** [0.1846]	0.3695** [0.1833]	0.2302 [0.3130]	0.2837** [0.1356]	0.7252*** [0.2534]
Access to telephone service	0.1730*** [0.0427]	0.1756*** [0.0575]	0.1749*** [0.0643]	0.1649*** [0.0604]	0.1784** [0.0766]	0.2220* [0.1205]	0.2283*** [0.0620]	0.0988 [0.0606]
Asset index	0.1405*** [0.0166]	0.1563*** [0.0232]	0.1237*** [0.0242]	0.1348*** [0.0241]	0.1513*** [0.0299]	0.1566*** [0.0439]	0.1478*** [0.0255]	0.1358*** [0.0227]
Do not have shortage of income to cover food costs	0.4914*** [0.0441]	0.5570*** [0.0585]	0.3823*** [0.0684]	0.4492*** [0.0663]	0.5355*** [0.0738]	0.5875*** [0.1160]	0.3877*** [0.0567]	0.6405*** [0.0701]

Appendix Table 3B

Second Step: Mugged, Dependent Variable: Life Satisfaction (continued)

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Do not have shortage of income to cover household costs	0.1920*** [0.0550]	0.0592 [0.0749]	0.3750*** [0.0813]	0.1798** [0.0837]	0.1436 [0.0898]	0.2763* [0.1530]	0.1947*** [0.0684]	0.1742* [0.0922]
Stolen	-0.1346 [0.0971]	-0.2632** [0.1294]	0.0343 [0.1486]	-0.1703 [0.1211]	-0.1563 [0.2072]	0.0833 [0.3516]	-0.0300 [0.1590]	-0.2247* [0.1255]
Stolen residuals	0.0873 [0.1910]	0.3394 [0.2513]	-0.2473 [0.2957]	0.2225 [0.2372]	0.0544 [0.4090]	-0.3549 [0.6887]	-0.0244 [0.3123]	0.1582 [0.2465]
Number of observations	10,644	5,902	4,742	5,104	3,547	1,659	5,192	5,452
Pseudo <i>R</i> -squared	0.0613	0.0598	0.0664	0.0576	0.0638	0.0635	0.0506	0.0525

Note: Robust standard errors in brackets.

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

Appendix Table 3C Second Step: Safe Walk, Dependent Variable: Life Satisfaction

Dependent variable: Life Satisfaction, 0–10 scale		Entire sample		Men		Age 15–35		Age 35–54		Age 55–74		Income below median		Income above median	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)						
Male		-0.1700*** [0.0374]			-0.1864*** [0.0546]	-0.1942*** [0.0654]	-0.0149 [0.1006]	-0.1707*** [0.0557]	-0.1741*** [0.0515]						
Age (years)		-0.0518*** [0.0059]	-0.0508*** [0.0077]	-0.0521*** [0.0092]	-0.1711*** [0.0449]	-0.1073 [0.0921]	-0.0089 [0.1884]	-0.0580*** [0.0083]	-0.0458*** [0.0085]						
Age-squared		0.0005*** [0.0001]	0.0004*** [0.0001]	0.0005*** [0.0001]	0.0026*** [0.0009]	0.0012 [0.0010]	0.0001 [0.0015]	0.0005*** [0.0001]	0.0004*** [0.0001]						
Health score (EQ-5D)		1.3094*** [0.1426]	1.1740*** [0.1806]	1.4970*** [0.2351]	0.8924*** [0.2470]	1.4620*** [0.2563]	1.3815*** [0.2641]	1.1888*** [0.1974]	1.4492*** [0.2098]						
Complete primary education		0.0025 [0.0688]	0.0191 [0.0921]	-0.0392 [0.1037]	0.1154 [0.1280]	-0.1391 [0.1228]	-0.0701 [0.1281]	0.0669 [0.0834]	-0.1722 [0.1256]						
Complete secondary education		0.0601 [0.0733]	0.0609 [0.0986]	0.0380 [0.1107]	0.1827 [0.1301]	-0.0653 [0.1294]	0.0981 [0.1562]	0.1387 [0.0939]	-0.1203 [0.1269]						
Complete superior education		0.2341*** [0.0858]	0.2204* [0.1166]	0.2430* [0.1291]	0.3433** [0.1502]	0.1549 [0.1469]	0.1692 [0.1990]	0.3150** [0.1312]	0.0508 [0.1369]						
Married		0.0101 [0.0464]	0.0437 [0.0614]	-0.1044 [0.0748]	0.0198 [0.0632]	0.0079 [0.0924]	-0.1084 [0.1503]	-0.0351 [0.0660]	0.0490 [0.0664]						

Appendix Table 3C

Second Step: Safe Walk, Dependent Variable: Life Satisfaction *(continued)*

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Divorced	-0.0294 [0.0834]	-0.0632 [0.1055]	0.0178 [0.1358]	-0.1979 [0.1685]	-0.0771 [0.1249]	0.0772 [0.2105]	-0.1528 [0.1258]	0.0731 [0.1138]
Widowed	0.1128 [0.0950]	0.1832* [0.1097]	-0.1030 [0.2010]	0.0394 [0.3947]	0.1051 [0.1934]	0.0236 [0.1721]	0.2386* [0.1309]	-0.0525 [0.1397]
Have one child	-0.0098 [0.0475]	-0.1266* [0.0654]	0.1487** [0.0701]	0.1402** [0.0688]	-0.1022 [0.0814]	-0.2649* [0.1418]	-0.0704 [0.0774]	-0.0017 [0.0638]
Have two or more children	-0.0101 [0.0483]	-0.0348 [0.0651]	0.0132 [0.0735]	0.1258* [0.0718]	-0.0690 [0.0848]	-0.3742*** [0.1438]	-0.0718 [0.0712]	0.0546 [0.0718]
Consider religion to be important	0.2287*** [0.0439]	0.1584** [0.0637]	0.3037*** [0.0620]	0.3043*** [0.0608]	0.1414* [0.0797]	0.0936 [0.1340]	0.2013*** [0.0669]	0.2549*** [0.0595]
Have friends	0.4186*** [0.0534]	0.5033*** [0.0710]	0.3030*** [0.0821]	0.4333*** [0.0911]	0.3676*** [0.0850]	0.3739*** [0.1202]	0.3593*** [0.0675]	0.4811*** [0.0892]
Have employment	0.0508 [0.0397]	-0.0048 [0.0539]	0.1353** [0.0630]	0.0627 [0.0576]	0.0555 [0.0710]	0.0559 [0.1083]	0.0254 [0.0581]	0.0657 [0.0557]
Household income (monthly per capita in PPP U.S. dollars)	0.2203*** [0.0253]	0.1901*** [0.0331]	0.2607*** [0.0389]	0.2470*** [0.0371]	0.2170*** [0.0448]	0.1369** [0.0689]	0.1917*** [0.0438]	0.2553*** [0.0478]

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Appendix Table 3C **Second Step: Safe Walk, Dependent Variable: Life Satisfaction** *(continued)*

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample		Men		Age 15–35		Age 35–54		Age 55–74		Income below median		Income above median	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Live in urban area	0.0491 [0.0411]	0.0650 [0.0564]	0.0286 [0.0608]	0.0487 [0.0586]	0.1372* [0.0742]	0.0247 [0.1161]	0.0488 [0.0579]	0.0523 [0.0605]						
Access to running water service	-0.0029 [0.0665]	-0.0191 [0.0895]	0.0167 [0.1010]	0.1067 [0.0964]	-0.1079 [0.1118]	-0.0413 [0.1863]	-0.0041 [0.0818]	0.0261 [0.1165]						
Access to electricity service	0.4495*** [0.1184]	0.4082*** [0.1579]	0.5332*** [0.1780]	0.4658** [0.1828]	0.4214** [0.1842]	0.3734 [0.3261]	0.3172** [0.1354]	0.7730*** [0.2535]						
Access to telephone service	0.1719*** [0.0429]	0.1821*** [0.0579]	0.1615** [0.0643]	0.1550** [0.0607]	0.1835** [0.0765]	0.2492** [0.1224]	0.2336*** [0.0624]	0.0903 [0.0609]						
Asset index	0.1406*** [0.0167]	0.1554*** [0.0234]	0.1251*** [0.0244]	0.1341*** [0.0242]	0.1540*** [0.0301]	0.1544*** [0.0446]	0.1491*** [0.0257]	0.1357*** [0.0229]						
Do not have shortage of income to cover food costs	0.4852*** [0.0442]	0.5633*** [0.0586]	0.3565*** [0.0684]	0.4483*** [0.0663]	0.5298*** [0.0737]	0.5310*** [0.1178]	0.3762*** [0.0567]	0.6398*** [0.0702]						
Do not have shortage of income to cover household costs	0.1676*** [0.0552]	0.0438 [0.0752]	0.3390*** [0.0816]	0.1694** [0.0838]	0.1087 [0.0894]	0.1787 [0.1557]	0.1668** [0.0685]	0.1500 [0.0928]						

Appendix Table 3C

Second Step: Safe Walk, Dependent Variable: Life Satisfaction (*continued*)

Dependent variable: Life Satisfaction, 0–10 scale	Entire sample (1)	Women (2)	Men (3)	Age 15–35 (4)	Age 35–54 (5)	Age 55–74 (6)	Income below median (7)	Income above median (8)
Safe walk	0.5578*** [0.0789]	0.4914*** [0.1045]	0.6450*** [0.1214]	0.3554*** [0.0967]	0.8443*** [0.1651]	1.6496*** [0.3589]	0.6393*** [0.1299]	0.5210*** [0.1028]
Safe walk residuals	-1.0821*** [0.1731]	-0.9295*** [0.2285]	-1.2667*** [0.2662]	-0.7163*** [0.2161]	-1.6605*** [0.3574]	-3.3551*** [0.7676]	-1.3118*** [0.2829]	-0.9486*** [0.2272]
Number of observations	10,521	5,821	4,700	5,069	3,507	1,624	5,133	5,388
Pseudo <i>R</i> -squared	0.0621	0.0606	0.0671	0.0582	0.0655	0.0657	0.0517	0.0534

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 4A Second Step: Mugged, Dependent Variable: Health Score

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.0482*** [0.0075]			0.0333*** [0.0126]	0.0692*** [0.0128]	0.0472*** [0.0156]
Age (years)	–0.0038*** [0.0012]	–0.0061*** [0.0015]	–0.0005 [0.0019]	–0.0158 [0.0104]	–0.0030 [0.0168]	–0.0134 [0.0318]
Age-squared	–0.0000 [0.0000]	0.0000 [0.0000]	–0.0000** [0.0000]	0.0002 [0.0002]	–0.0000 [0.0002]	0.0001 [0.0002]
Complete primary education	0.0303*** [0.0109]	0.0306** [0.0140]	0.0257 [0.0176]	–0.0018 [0.0233]	0.0322* [0.0180]	0.0168 [0.0193]
Complete secondary education	0.0396*** [0.0124]	0.0448*** [0.0159]	0.0270 [0.0200]	0.0077 [0.0246]	0.0490** [0.0203]	0.0443* [0.0244]
Complete superior education	0.0428*** [0.0159]	0.0510** [0.0203]	0.0279 [0.0257]	0.0190 [0.0301]	0.0267 [0.0249]	0.0360 [0.0342]
Married	0.0104 [0.0094]	0.0152 [0.0117]	–0.0056 [0.0159]	0.0179 [0.0146]	–0.0071 [0.0170]	–0.0270 [0.0245]
Divorced	–0.0280* [0.0151]	–0.0214 [0.0181]	–0.0393 [0.0273]	–0.0389 [0.0327]	–0.0459** [0.0227]	–0.0682** [0.0324]

Appendix Table 4A

Second Step: Mugged, Dependent Variable: Health Score (continued)

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Widowed	-0.0146 [0.0167]	0.0010 [0.0195]	-0.0458 [0.0332]	0.0173 [0.0850]	-0.0511 [0.0321]	-0.0219 [0.0280]
Have one child	0.0026 [0.0096]	0.0084 [0.0122]	-0.0076 [0.0155]	-0.0160 [0.0167]	0.0218 [0.0152]	-0.0028 [0.0212]
Have two or more children	-0.0106 [0.0095]	-0.0120 [0.0122]	-0.0128 [0.0152]	-0.0324** [0.0163]	0.0008 [0.0160]	-0.0077 [0.0214]
Consider religion to be important	0.0080 [0.0097]	0.0303** [0.0133]	-0.0141 [0.0144]	0.0178 [0.0144]	-0.0149 [0.0173]	0.0174 [0.0243]
Have friends	0.0438*** [0.0093]	0.0502*** [0.0117]	0.0315** [0.0154]	0.0485*** [0.0181]	0.0294** [0.0141]	0.0546*** [0.0184]
Have employment	0.0313*** [0.0078]	0.0177* [0.0101]	0.0499*** [0.0125]	-0.0044 [0.0129]	0.0476*** [0.0126]	0.0699*** [0.0169]
Household income (monthly per capita in PPP U.S. dollars)	0.0163*** [0.0046]	0.0103* [0.0058]	0.0236*** [0.0074]	0.0109 [0.0076]	0.0183** [0.0080]	0.0265*** [0.0094]

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Appendix Table 4A **Second Step: Mugged, Dependent Variable: Health Score** *(continued)*

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Live in urban area	-0.0050 [0.0078]	-0.0001 [0.0099]	-0.0090 [0.0124]	0.0046 [0.0130]	-0.0036 [0.0130]	-0.0020 [0.0160]
Access to running water service	-0.0167 [0.0126]	-0.0291* [0.0165]	0.0012 [0.0193]	-0.0131 [0.0194]	-0.0309 [0.0214]	-0.0002 [0.0301]
Access to electricity service	-0.0017 [0.0204]	0.0035 [0.0276]	-0.0074 [0.0305]	0.0109 [0.0341]	0.0212 [0.0336]	-0.0322 [0.0441]
Access to telephone service	-0.0017 [0.0086]	0.0095 [0.0109]	-0.0167 [0.0138]	0.0224 [0.0145]	-0.0150 [0.0141]	-0.0521*** [0.0186]
Asset index	0.0069** [0.0033]	0.0041 [0.0043]	0.0112** [0.0051]	-0.0042 [0.0056]	0.0134** [0.0056]	0.0179*** [0.0067]
Do not have shortage of income to cover food costs	0.0926*** [0.0084]	0.1030*** [0.0105]	0.0746*** [0.0140]	0.1003*** [0.0139]	0.0921*** [0.0135]	0.0672*** [0.0181]
Do not have shortage of income to cover household costs	0.0229** [0.0098]	0.0111 [0.0125]	0.0459*** [0.0158]	0.0242 [0.0159]	0.0447*** [0.0155]	-0.0227 [0.0232]

Appendix Table 4A

Second Step: Mugged, Dependent Variable: Health Score (continued)

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Mugged						
	-0.0331 [0.0268]	-0.0884** [0.0351]	0.0310 [0.0406]	0.0024 [0.0342]	-0.1234** [0.0541]	-0.1132 [0.0706]
Mugged residuals						
	-0.0182 [0.0499]	0.0695 [0.0647]	-0.1210 [0.0759]	-0.1195* [0.0639]	0.1603 [0.1015]	0.1848 [0.1273]
Constant term	1.1194*** [0.0684]	1.2191*** [0.0946]	1.0426*** [0.1010]	1.4243*** [0.1655]	0.8652** [0.3780]	1.2235 [1.0150]
Number of observations	10,643	5,906	4,737	5,105	3,548	1,656
Pseudo <i>R</i> -squared	0.186	0.211	0.153	0.115	0.164	0.170

Note: Robust standard errors in brackets. Convergence was not achieved in the estimation process when the sample was divided into two groups using median income.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 4B Second Step: Stolen, Dependent Variable: Health Score

Dependent variable: Health Score (EQ-5D)	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Male	0.0478*** [0.0075]			0.0316** [0.0126]	0.0707*** [0.0128]	0.0462*** [0.0156]	0.0430*** [0.0104]	0.0512*** [0.0109]
Age (years)	-0.0038*** [0.0012]	-0.0063*** [0.0015]	-0.0004 [0.0019]	-0.0135 [0.0104]	-0.0032 [0.0168]	-0.0142 [0.0317]	-0.0047*** [0.0016]	-0.0025 [0.0017]
Age-squared	-0.0000 [0.0000]	0.0000 [0.0000]	-0.0000** [0.0000]	0.0002 [0.0002]	-0.0000 [0.0002]	0.0001 [0.0002]	-0.0000 [0.0000]	-0.0000 [0.0000]
Complete primary education	0.0307*** [0.0109]	0.0310** [0.0139]	0.0260 [0.0176]	0.0003 [0.0233]	0.0319* [0.0179]	0.0166 [0.0192]	0.0234* [0.0134]	0.0443** [0.0189]
Complete secondary education	0.0426*** [0.0124]	0.0484*** [0.0159]	0.0288 [0.0199]	0.0132 [0.0246]	0.0497** [0.0202]	0.0485** [0.0244]	0.0227 [0.0161]	0.0643*** [0.0202]
Complete superior education	0.0471*** [0.0159]	0.0570*** [0.0203]	0.0298 [0.0257]	0.0256 [0.0301]	0.0308 [0.0248]	0.0381 [0.0342]	0.0226 [0.0247]	0.0656*** [0.0233]
Married	0.0102 [0.0094]	0.0150 [0.0117]	-0.0059 [0.0159]	0.0169 [0.0146]	-0.0056 [0.0169]	-0.0271 [0.0244]	0.0197 [0.0124]	-0.0085 [0.0143]
Divorced	-0.0283* [0.0151]	-0.0220 [0.0181]	-0.0392 [0.0272]	-0.0394 [0.0327]	-0.0467** [0.0225]	-0.0645** [0.0325]	-0.0402** [0.0201]	-0.0275 [0.0230]

Appendix Table 4B

Second Step: Stolen, Dependent Variable: Health Score (continued)

Dependent variable: Health Score (EQ-5D)	Entire sample (1)	Women (2)	Men (3)	Age 15–35 (4)	Age 35–54 (5)	Age 55–74 (6)	Income below median (7)	Income above median (8)
Widowed	-0.0148 [0.0167]	0.0008 [0.0194]	-0.0464 [0.0332]	0.0154 [0.0856]	-0.0467 [0.0316]	-0.0230 [0.0279]	0.0253 [0.0215]	-0.0704*** [0.0262]
Have one child	0.0031 [0.0096]	0.0087 [0.0122]	-0.0061 [0.0155]	-0.0152 [0.0166]	0.0234 [0.0152]	-0.0026 [0.0213]	-0.0000 [0.0143]	0.0037 [0.0133]
Have two or more children	-0.0089 [0.0095]	-0.0103 [0.0122]	-0.0113 [0.0152]	-0.0285* [0.0163]	0.0018 [0.0159]	-0.0075 [0.0213]	-0.0293** [0.0133]	0.0162 [0.0147]
Consider religion to be important	0.0074 [0.0097]	0.0285** [0.0133]	-0.0143 [0.0143]	0.0160 [0.0144]	-0.0136 [0.0171]	0.0171 [0.0242]	-0.0120 [0.0141]	0.0240* [0.0135]
Have friends	0.0416*** [0.0093]	0.0487*** [0.0117]	0.0290* [0.0154]	0.0452** [0.0181]	0.0286** [0.0140]	0.0534*** [0.0186]	0.0511*** [0.0117]	0.0246 [0.0156]
Have employment	0.0317*** [0.0078]	0.0191* [0.0101]	0.0497*** [0.0125]	-0.0050 [0.0129]	0.0466*** [0.0126]	0.0728*** [0.0169]	0.0256** [0.0107]	0.0394*** [0.0115]
Household income (monthly per capita in PPP U.S. dollars)	0.0166*** [0.0046]	0.0110* [0.0058]	0.0236*** [0.0074]	0.0114 [0.0076]	0.0185** [0.0079]	0.0271*** [0.0094]	0.0134* [0.0071]	0.0211** [0.0101]

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Appendix Table 4B **Second Step: Stolen, Dependent Variable: Health Score** *(continued)*

Dependent variable: Health Score (EQ-5D)	Entire sample	Women	Men	Age 15–35	Age 35–54	Age 55–74	Income below median	Income above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Live in urban area	-0.0019 [0.0078]	0.0026 [0.0100]	-0.0059 [0.0125]	0.0056 [0.0129]	0.0001 [0.0130]	0.0042 [0.0163]	-0.0100 [0.0105]	0.0077 [0.0118]
Access to running water service	-0.0192 [0.0125]	-0.0297* [0.0164]	-0.0039 [0.0193]	-0.0164 [0.0194]	-0.0348* [0.0211]	-0.0004 [0.0302]	-0.0043 [0.0145]	-0.0418* [0.0250]
Access to electricity service	-0.0059 [0.0204]	-0.0027 [0.0273]	-0.0084 [0.0305]	0.0042 [0.0341]	0.0190 [0.0334]	-0.0352 [0.0442]	0.0195 [0.0228]	-0.0898* [0.0468]
Access to telephone service	-0.0004 [0.0086]	0.0096 [0.0108]	-0.0142 [0.0139]	0.0261* [0.0144]	-0.0140 [0.0141]	-0.0514*** [0.0185]	0.0001 [0.0119]	-0.0033 [0.0124]
Asset index	0.0078** [0.0033]	0.0051 [0.0043]	0.0117** [0.0051]	-0.0033 [0.0055]	0.0145*** [0.0055]	0.0178*** [0.0067]	0.0102** [0.0048]	0.0055 [0.0046]
Do not have shortage of income to cover food costs	0.0900*** [0.0084]	0.1012*** [0.0105]	0.0708*** [0.0141]	0.0974*** [0.0140]	0.0897*** [0.0136]	0.0636*** [0.0183]	0.0856*** [0.0107]	0.0943*** [0.0135]
Do not have shortage of income to cover household costs	0.0226** [0.0097]	0.0103 [0.0123]	0.0454*** [0.0157]	0.0221 [0.0158]	0.0483*** [0.0153]	-0.0217 [0.0231]	0.0303*** [0.0117]	0.0077 [0.0170]

Appendix Table 4B

Second Step: Stolen, Dependent Variable: Health Score *(continued)*

Dependent variable: Health Score (EQ-5D)	Entire sample (1)	Women (2)	Men (3)	Age 15–35 (4)	Age 35–54 (5)	Age 55–74 (6)	Income below median (7)	Income above median (8)
Stolen								
	-0.0702*** [0.0217]	-0.1036*** [0.0277]	-0.0325 [0.0334]	-0.0480* [0.0279]	-0.1023** [0.0436]	-0.1757*** [0.0631]	-0.0847** [0.0338]	-0.0591** [0.0280]
Stolen residuals								
	0.0212 [0.0434]	0.0586 [0.0554]	-0.0112 [0.0669]	-0.0688 [0.0567]	0.0855 [0.0865]	0.3220*** [0.1247]	0.0476 [0.0673]	0.0055 [0.0560]
Constant term	1.0313*** [0.0520]	1.2263*** [0.0945]	0.9503*** [0.0794]	1.3592*** [0.1497]	0.9087** [0.3775]	1.1933 [1.0110]	1.0253*** [0.0814]	1.0924*** [0.0951]
Number of observations	10,663	5,916	4,747	5,115	3,551	1,663	5,205	5,458
Pseudo <i>R</i> -squared	0.191	0.219	0.154	0.120	0.170	0.175	0.228	0.156

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 4C

Second Step: Safe Walk, Dependent Variable: Health Score

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.0413*** [0.0076]			0.0241* [0.0127]	0.0649*** [0.0129]	0.0437*** [0.0158]
Age (years)	-0.0034*** [0.0012]	-0.0061*** [0.0015]	0.0003 [0.0019]	-0.0156 [0.0103]	-0.0049 [0.0170]	-0.0188 [0.0319]
Age-squared	-0.0000* [0.0000]	0.0000 [0.0000]	-0.0001*** [0.0000]	0.0002 [0.0002]	-0.0000 [0.0002]	0.0001 [0.0002]
Complete primary education	0.0309*** [0.0110]	0.0324** [0.0141]	0.0250 [0.0175]	-0.0041 [0.0233]	0.0344* [0.0181]	0.0183 [0.0194]
Complete secondary education	0.0400*** [0.0125]	0.0458*** [0.0161]	0.0278 [0.0198]	0.0084 [0.0245]	0.0483** [0.0204]	0.0481* [0.0246]
Complete superior education	0.0432*** [0.0159]	0.0531*** [0.0205]	0.0262 [0.0255]	0.0192 [0.0300]	0.0275 [0.0250]	0.0335 [0.0343]
Married	0.0099 [0.0094]	0.0135 [0.0118]	-0.0056 [0.0158]	0.0176 [0.0145]	-0.0075 [0.0172]	-0.0306 [0.0247]
Divorced	-0.0289* [0.0152]	-0.0244 [0.0183]	-0.0363 [0.0272]	-0.0396 [0.0329]	-0.0477** [0.0227]	-0.0654** [0.0331]
Widowed	-0.0139 [0.0168]	-0.0003 [0.0196]	-0.0473 [0.0334]	0.0054 [0.0852]	-0.0503 [0.0322]	-0.0217 [0.0282]

Appendix Table 4C

Second Step: Safe Walk, Dependent Variable: Health Score (continued)

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Have one child	0.0020 [0.0097]	0.0075 [0.0124]	-0.0070 [0.0154]	-0.0162 [0.0166]	0.0223 [0.0153]	-0.0097 [0.0215]
Have two or more children	-0.0105 [0.0096]	-0.0113 [0.0124]	-0.0130 [0.0151]	-0.0289* [0.0163]	-0.0026 [0.0161]	-0.0075 [0.0216]
Consider religion to be important	0.0072 [0.0098]	0.0279** [0.0135]	-0.0133 [0.0143]	0.0154 [0.0145]	-0.0140 [0.0174]	0.0202 [0.0248]
Have friends	0.0411*** [0.0094]	0.0489*** [0.0119]	0.0267* [0.0154]	0.0430** [0.0181]	0.0293** [0.0142]	0.0568*** [0.0186]
Have employment	0.0294*** [0.0079]	0.0126 [0.0102]	0.0508*** [0.0126]	-0.0062 [0.0130]	0.0478*** [0.0128]	0.0641*** [0.0174]
Household income (monthly per capita in PPP U.S. dollars)	0.0155*** [0.0046]	0.0091 [0.0059]	0.0233*** [0.0074]	0.0101 [0.0077]	0.0168** [0.0080]	0.0253*** [0.0094]
Live in urban area	0.0008 [0.0082]	0.0082 [0.0105]	-0.0063 [0.0129]	0.0080 [0.0133]	0.0011 [0.0138]	0.0020 [0.0183]
Access to running water service	-0.0190 [0.0126]	-0.0329** [0.0167]	-0.0002 [0.0193]	-0.0158 [0.0194]	-0.0354* [0.0215]	-0.0015 [0.0307]
Access to electricity service	-0.0015 [0.0206]	0.0035 [0.0281]	-0.0067 [0.0301]	0.0070 [0.0345]	0.0218 [0.0338]	-0.0223 [0.0444]

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Appendix Table 4C **Second Step: Safe Walk, Dependent Variable: Health Score** (*continued*)

Dependent variable: Health Score (EQ-5D)	Entire sample	Men	Women	Age 15–35	Age 35–54	Age 55–74
	(1)	(2)	(3)	(4)	(5)	(6)
Access to telephone service	0.0003 [0.0086]	0.0131 [0.0109]	-0.0164 [0.0138]	0.0231 [0.0144]	-0.0117 [0.0141]	-0.0484** [0.0188]
Asset index	0.0073** [0.0033]	0.0042 [0.0043]	0.0120** [0.0051]	-0.0045 [0.0055]	0.0147*** [0.0056]	0.0191*** [0.0067]
Do not have shortage of income to cover food costs	0.0927*** [0.0084]	0.1050*** [0.0105]	0.0721*** [0.0139]	0.0969*** [0.0139]	0.0975*** [0.0135]	0.0709*** [0.0182]
Do not have shortage of income to cover household costs	0.0250** [0.0098]	0.0146 [0.0126]	0.0466*** [0.0156]	0.0258 [0.0159]	0.0493*** [0.0154]	-0.0185 [0.0234]
Safe walk	0.0477** [0.0188]	0.0813*** [0.0240]	0.0060 [0.0293]	0.0490* [0.0251]	0.0472 [0.0362]	0.0348 [0.0553]
Safe walk residuals	0.0168 [0.0409]	-0.0505 [0.0520]	0.1110* [0.0637]	0.0284 [0.0554]	0.0118 [0.0784]	0.0720 [0.1180]
Constant term	1.0763*** [0.0669]	1.2287*** [0.0945]	0.9224*** [0.0969]	1.3568*** [0.1635]	1.1038*** [0.3889]	1.3938 [1.0139]
Number of observations	10,539	5,834	4,705	5,080	3,511	1,627
Pseudo <i>R</i> -squared	0.190	0.212	0.162	0.119	0.169	0.175

Note: Robust standard errors in brackets. Convergence was not achieved in the estimation process when the sample was divided into two groups using median income.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 5

Second Step: Sample Split by Homicide Rate, Dependent Variable: Life Satisfaction

Dependent variable: Life Satisfaction, 0–10 scale	All countries in sample	Countries with low homicide rate (below median for region)	Countries with high homicide rate (above median for region)
	(1)	(2)	(3)
Male	−0.1601*** [0.0370]	−0.0752 [0.0528]	−0.2452*** [0.0523]
Age (years)	−0.0510*** [0.0058]	−0.0489*** [0.0081]	−0.0554*** [0.0085]
Age-squared	0.0004*** [0.0001]	0.0004*** [0.0001]	0.0005*** [0.0001]
Health score (EQ-5D)	1.3524*** [0.1416]	1.1844*** [0.1861]	1.5398*** [0.2175]
Complete primary education	0.0144 [0.0683]	0.1323 [0.1043]	−0.0561 [0.0910]
Complete secondary education	0.0605 [0.0728]	0.1453 [0.1091]	0.0090 [0.0984]
Complete superior education	0.2351*** [0.0851]	0.2443** [0.1246]	0.2756** [0.1183]
Married	0.0036 [0.0461]	0.0563 [0.0677]	−0.0344 [0.0636]
Divorced	−0.0349 [0.0836]	−0.0205 [0.1129]	−0.0186 [0.1257]
Widowed	0.1050 [0.0949]	0.2047 [0.1327]	0.0285 [0.1376]
Have one child	−0.0149 [0.0473]	0.0335 [0.0682]	−0.0586 [0.0666]
Have two or more children	−0.0152 [0.0482]	0.0488 [0.0710]	−0.0762 [0.0666]
Consider religion to be important	0.2321*** [0.0435]	0.2724*** [0.0556]	0.1790** [0.0706]
Have friends	0.4343*** [0.0533]	0.5343*** [0.0813]	0.3638*** [0.0708]
Have employment	0.0893** [0.0391]	0.0760 [0.0560]	0.1018* [0.0550]

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Appendix Table 5

Second Step: Sample Split by Homicide Rate, Dependent Variable: Life Satisfaction (continued)

Dependent variable: Life Satisfaction, 0–10 scale	All countries in sample	Countries with low homicide rate (below median for region)	Countries with high homicide rate (above median for region)
	(1)	(2)	(3)
Household income (monthly per capita in PPP U.S. dollars)	0.2189*** [0.0253]	0.2339*** [0.0393]	0.2058*** [0.0332]
Live in urban area	–0.0088 [0.0395]	0.0008 [0.0585]	–0.0143 [0.0540]
Access to running water service	0.0036 [0.0665]	0.0515 [0.1046]	–0.0195 [0.0870]
Access to electricity service	0.4117*** [0.1184]	0.2339 [0.1914]	0.5415*** [0.1516]
Access to telephone service	0.1682*** [0.0428]	0.1641*** [0.0576]	0.1800*** [0.0648]
Asset index	0.1381*** [0.0166]	0.1465*** [0.0244]	0.1272*** [0.0229]
Do not have shortage of income to cover food costs	0.4846*** [0.0442]	0.5201*** [0.0625]	0.4508*** [0.0633]
Do not have shortage of income to cover household costs	0.1793*** [0.0552]	0.2023*** [0.0772]	0.1580** [0.0797]
Mugged	–0.3915*** [0.1175]	–0.2541 [0.1570]	–0.5378*** [0.1781]
Mugged residuals	0.6292*** [0.2148]	0.5441* [0.2814]	0.7560** [0.3307]
Number of observations	10,624	5,399	5,225
Pseudo R-squared	0.0613	0.0666	0.0530

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 6

Second Step: Sample Split by Security Perceptions, Dependent Variable: Life Satisfaction

Dependent variable: Life Satisfaction, 0–10 scale	All countries in sample	Countries with low perceptions of security (percentage of people feeling safe below median for region)	Countries with high perceptions of security (percentage of people feeling safe above median for region)
	(1)	(2)	(3)
Male	–0.1601*** [0.0370]	–0.2064*** [0.0488]	–0.1098* [0.0567]
Age (years)	–0.0510*** [0.0058]	–0.0578*** [0.0076]	–0.0464*** [0.0092]
Age-squared	0.0004*** [0.0001]	0.0005*** [0.0001]	0.0004*** [0.0001]
Health score (EQ-5D)	1.3524*** [0.1416]	1.5524*** [0.1866]	1.1601*** [0.2198]
Complete primary education	0.0144 [0.0683]	–0.0828 [0.0903]	0.1040 [0.1038]
Complete secondary education	0.0605 [0.0728]	–0.0866 [0.0974]	0.2048* [0.1103]
Complete superior education	0.2351*** [0.0851]	0.1654 [0.1151]	0.2950** [0.1277]
Married	0.0036 [0.0461]	0.0304 [0.0622]	–0.0019 [0.0686]
Divorced	–0.0349 [0.0836]	0.0289 [0.1113]	–0.1368 [0.1276]
Widowed	0.1050 [0.0949]	–0.0171 [0.1176]	0.3791** [0.1698]
Have one child	–0.0149 [0.0473]	–0.0245 [0.0639]	–0.0016 [0.0714]
Have two or more children	–0.0152 [0.0482]	–0.0308 [0.0647]	0.0052 [0.0731]
Consider religion to be important	0.2321*** [0.0435]	0.1640*** [0.0587]	0.3181*** [0.0658]
Have friends	0.4343*** [0.0533]	0.3764*** [0.0663]	0.5467*** [0.0908]
Have employment	0.0893**	0.1105**	0.0633

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Appendix Table 6

Second Step: Sample Split by Security Perceptions, Dependent Variable: Life Satisfaction (*continued*)

Dependent variable: Life Satisfaction, 0–10 scale	All countries in sample	Countries with low perceptions of security (percentage of people feeling safe below median for region)	Countries with high perceptions of security (percentage of people feeling safe above median for region)
	[0.0391]	[0.0520]	[0.0594]
Household income (monthly per capita in PPP U.S. dollars)	0.2189*** [0.0253]	0.2534*** [0.0342]	0.1937*** [0.0373]
Live in urban area	–0.0088 [0.0395]	–0.0283 [0.0541]	0.0061 [0.0580]
Access to running water service	0.0036 [0.0665]	0.0863 [0.0862]	–0.0942 [0.1049]
Access to electricity service	0.4117*** [0.1184]	–0.0677 [0.1769]	0.5932*** [0.1516]
Access to telephone service	0.1682*** [0.0428]	0.1771*** [0.0591]	0.1485** [0.0619]
Asset index	0.1381*** [0.0166]	0.0990*** [0.0218]	0.1879*** [0.0259]
Do not have shortage of income to cover food costs	0.4846*** [0.0442]	0.5121*** [0.0588]	0.4453*** [0.0675]
Do not have shortage of income to cover household costs	0.1793*** [0.0552]	0.1691** [0.0762]	0.1784** [0.0796]
Mugged	–0.3915*** [0.1175]	–0.4497*** [0.1667]	–0.3389** [0.1666]
Mugged residuals	0.6292*** [0.2148]	0.6942** [0.3068]	0.5608* [0.3012]
Number of observations	10,624	5,972	4,652
Pseudo R-squared	0.0613	0.0503	0.0675

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix Table 7

Second Step: Mugged, Dependent Variable: Having Friends

Dependent variable: Having Friends (0,1)		Entire sample		Men	Age 15-35	Age 35-54	Age 55-74	Income below median	Income above median
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Male		-0.0080 [0.0637]			-0.0163 [0.1072]	0.1254 [0.1026]	-0.2982** [0.1478]	0.0144 [0.0842]	-0.0451 [0.0992]
Age (years)		-0.0866*** [0.0102]	-0.0985*** [0.0141]	-0.0738*** [0.0151]	-0.1576* [0.0873]	-0.3075** [0.1378]	-0.2319 [0.2896]	-0.0877*** [0.0130]	-0.0921*** [0.0169]
Age-squared		0.0008*** [0.0001]	0.0009*** [0.0002]	0.0006*** [0.0002]	0.0022 [0.0017]	0.0034** [0.0016]	0.0018 [0.0023]	0.0008*** [0.0001]	0.0008*** [0.0002]
Health score (EQ-5D)		0.8990*** [0.1869]	1.0065*** [0.2328]	0.7683** [0.3205]	0.8892** [0.3886]	0.6789** [0.3045]	1.2050*** [0.3608]	1.2154*** [0.2386]	0.4196 [0.3137]
Complete primary education		0.0158 [0.0869]	0.0654 [0.1129]	-0.0546 [0.1379]	0.2007 [0.1625]	-0.1325 [0.1423]	0.2583 [0.1801]	0.0226 [0.1055]	0.0703 [0.1588]
Complete secondary education		0.1628 [0.1041]	0.2803** [0.1372]	0.0024 [0.1622]	0.3799** [0.1809]	0.0362 [0.1685]	0.2367 [0.2364]	0.1735 [0.1340]	0.1900 [0.1736]
Complete superior education		0.3626*** [0.1405]	0.6222*** [0.1940]	0.0787 [0.2091]	0.5974** [0.2451]	0.3372 [0.2178]	0.5533 [0.3366]	0.4233** [0.2139]	0.3734* [0.2107]

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Appendix Table 7 **Second Step: Mugged, Dependent Variable: Having Friends** (*continued*)

Dependent variable: Having Friends (0,1)	Entire sample		Men	Age 15–35		Age 35–54		Age 55–74		Income below median		Income above median	
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)				
Married	-0.1914** [0.0788]	-0.1540 [0.1044]		-0.2523** [0.1246]	-0.1825 [0.1170]	-0.1229 [0.1359]	-0.0550 [0.2082]	-0.1651* [0.0997]	-0.2465* [0.1316]				
Divorced	-0.1464 [0.1277]	0.0668 [0.1629]		-0.4774** [0.2076]	0.0531 [0.2923]	-0.0168 [0.1853]	-0.0800 [0.2904]	-0.0436 [0.1672]	-0.2672 [0.2016]				
Widowed	-0.1740 [0.1416]	-0.0813 [0.1772]		-0.4933** [0.2470]	-1.0017* [0.5468]	-0.3005 [0.2534]	-0.1201 [0.2447]	-0.0994 [0.1789]	-0.3115 [0.2350]				
Have one child	0.1379* [0.0821]	0.0741 [0.1096]		0.2323* [0.1267]	0.0452 [0.1420]	0.2959** [0.1277]	0.1633 [0.2078]	0.0930 [0.1138]	0.1975 [0.1273]				
Have two or more children	0.0666 [0.0801]	0.0621 [0.1078]		0.0565 [0.1213]	0.0940 [0.1431]	0.1069 [0.1243]	0.0774 [0.1998]	0.0545 [0.1055]	0.0840 [0.1368]				
Consider religion to be important	0.2405*** [0.0808]	0.3270*** [0.1148]		0.1519 [0.1140]	0.2683** [0.1231]	0.1166 [0.1374]	0.3490* [0.2047]	0.3425*** [0.1066]	0.1415 [0.1261]				
Have employment	-0.0837 [0.0658]	-0.2183** [0.0886]		0.0402 [0.1001]	-0.0270 [0.1102]	0.0149 [0.1051]	-0.2415 [0.1586]	-0.2051** [0.0857]	0.0775 [0.1033]				

Appendix Table 7

Second Step: Mugged, Dependent Variable: Having Friends (continued)

Dependent variable: Having Friends (0,1)	Entire sample (1)	Women (2)	Men (3)	Age 15–35 (4)	Age 35–54 (5)	Age 55–74 (6)	Income below median (7)	Income above median (8)
Household income (monthly per capita in PPP U.S. dollars)	0.2122*** [0.0387]	0.1934*** [0.0512]	0.2443*** [0.0600]	0.2392*** [0.0648]	0.1845*** [0.0615]	0.2434*** [0.0905]	0.2692*** [0.0554]	0.0786 [0.0965]
Live in urban area	-0.1306* [0.0669]	-0.1330 [0.0883]	-0.1077 [0.1027]	-0.1083 [0.1107]	-0.0080 [0.1113]	-0.2839 [0.1967]	-0.1933** [0.0864]	-0.0263 [0.1082]
Access to running water service	-0.0250 [0.0954]	-0.0216 [0.1284]	-0.0259 [0.1427]	0.0995 [0.1450]	-0.1354 [0.1519]	-0.0737 [0.2469]	0.0317 [0.1107]	-0.1447 [0.2008]
Access to electricity service	-0.0951 [0.1562]	0.0183 [0.2173]	-0.2349 [0.2262]	-0.2858 [0.2364]	-0.1757 [0.2572]	0.5165 [0.3887]	-0.3447* [0.1821]	0.7398** [0.3169]
Access to telephone service	0.0679 [0.0720]	0.1055 [0.0951]	0.0069 [0.1116]	-0.0291 [0.1242]	0.1123 [0.1136]	0.0358 [0.1715]	0.0767 [0.0968]	-0.0146 [0.1136]
Asset index	0.1646*** [0.0284]	0.1592*** [0.0386]	0.1685*** [0.0421]	0.2310*** [0.0483]	0.1179*** [0.0447]	0.1004 [0.0662]	0.1947*** [0.0387]	0.1332*** [0.0425]
Do not have shortage of income to cover food costs	0.2982*** [0.0692]	0.2278** [0.0907]	0.4034*** [0.1084]	0.3159*** [0.1185]	0.2006* [0.1106]	0.4290*** [0.1855]	0.1688* [0.0871]	0.4962*** [0.1141]

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Appendix Table 7 Second Step: Mugged, Dependent Variable: Having Friends (continued)

Dependent variable: Having Friends (0,1)	Entire sample (1)	Women (2)	Men (3)	Age 15–35 (4)	Age 35–54 (5)	Age 55–74 (6)	Income below median (7)	Income above median (8)
Do not have shortage of income to cover household costs	0.1146 [0.0769]	0.0990 [0.1015]	0.1146 [0.1195]	0.1181 [0.1262]	0.0214 [0.1259]	-0.0658 [0.2240]	0.0459 [0.0937]	0.2353* [0.1364]
Mugged	-2.0791*** [0.2539]	-2.3337*** [0.3877]	-1.8694*** [0.3362]	-1.3882*** [0.2183]	-3.8554*** [0.9237]	-4.2165 [3.9138]	-2.5714*** [0.4911]	-1.6733*** [0.2642]
Mugged residuals	3.9817*** [0.5022]	4.3970*** [0.7639]	3.6936*** [0.6682]	2.8866*** [0.4378]	7.2950*** [1.7952]	7.7709 [7.5325]	4.9948*** [0.9710]	3.1494*** [0.5157]
Constant term	-0.1293 [0.5814]	-0.3241 [0.6743]	-0.7122 [0.8139]	1.3335 [1.4830]	3.2922 [3.1155]	2.5927 [9.2803]	-0.3194 [0.8164]	0.6318 [0.9392]
Number of observations	10,643	5,906	4,737	5,105	3,548	1,652	5,191	5,450
Pseudo <i>R</i> -squared	0.0975	0.0996	0.105	0.102	0.0801	0.105	0.0931	0.0842

Note: Robust standard errors in brackets.

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

Appendix Table 8

Second Step: Mugged, Dependent Variables: Confidence in the Police, the Judiciary System, and the National Government

	Dependent variable: Confidence in the Police (1,0)	Dependent variable: Confidence in the Judiciary System (1,0)	Dependent variable: Confidence in the National Government (1,0)
	(1)	(2)	(3)
Male	0.0115 [0.0446]	0.0657 [0.0490]	0.1066** [0.0458]
Age (years)	0.0229*** [0.0070]	-0.0104 [0.0077]	0.0095 [0.0072]
Age-squared	-0.0001 [0.0001]	0.0001 [0.0001]	-0.0000 [0.0001]
Health score (EQ-5D)	1.0142*** [0.1579]	0.6494*** [0.1749]	0.5297*** [0.1638]
Complete primary education	-0.2967*** [0.0722]	-0.2812*** [0.0746]	-0.2332*** [0.0717]
Complete secondary education	-0.4646*** [0.0799]	-0.6228*** [0.0852]	-0.4827*** [0.0801]
Complete superior education	-0.4511*** [0.0985]	-0.7193*** [0.1080]	-0.3813*** [0.1003]
Married	-0.0099 [0.0550]	-0.0807 [0.0605]	0.1128** [0.0567]
Divorced	-0.0772 [0.0952]	-0.0222 [0.1057]	-0.0519 [0.0992]
Widowed	0.0607 [0.1147]	0.2196* [0.1195]	0.1983* [0.1153]
Have one child	0.0175 [0.0569]	0.1082* [0.0630]	-0.0183 [0.0583]
Have two or more children	-0.0077 [0.0579]	0.1269** [0.0644]	-0.0032 [0.0593]
Consider religion to be important	0.3871*** [0.0579]	0.4034*** [0.0673]	0.2498*** [0.0600]
Have friends	0.2777*** [0.0599]	0.2280*** [0.0679]	0.2304*** [0.0621]

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Appendix Table 8

Second Step: Mugged, Dependent Variables: Confidence in the Police, the Judiciary System, and the National Government (*continued*)

	Dependent variable: Confidence in the Police (1,0)	Dependent variable: Confidence in the Judiciary System (1,0)	Dependent variable: Confidence in the National Government (1,0)
	(1)	(2)	(3)
Have employment	0.0255 [0.0466]	-0.0476 [0.0513]	0.0357 [0.0481]
Household income (monthly per capita in PPP U.S. dollars)	-0.0182 [0.0284]	-0.0302 [0.0313]	-0.0533* [0.0292]
Live in urban area	-0.2185*** [0.0467]	-0.2793*** [0.0510]	-0.1500*** [0.0479]
Access to running water service	0.1452* [0.0771]	-0.0338 [0.0813]	-0.0358 [0.0782]
Access to electricity service	0.1926 [0.1251]	0.1945 [0.1339]	0.1004 [0.1249]
Access to telephone service	-0.0610 [0.0511]	-0.0294 [0.0565]	0.0813 [0.0524]
Asset index	-0.0382** [0.0194]	-0.0631*** [0.0214]	-0.0809*** [0.0200]
Do not have shortage of income to cover food costs	0.1219** [0.0519]	0.1250** [0.0573]	0.1381*** [0.0535]
Do not have shortage of income to cover household costs	0.0005 [0.0613]	0.0629 [0.0679]	0.0046 [0.0628]
Mugged	-0.9446*** [0.1439]	-0.1708 [0.1569]	-0.5497*** [0.1465]
Mugged residuals	0.7020*** [0.2630]	-0.2472 [0.2854]	0.2748 [0.2676]
Constant term	-1.9798*** [0.3459]	-0.0361 [0.3727]	-1.7204*** [0.4360]
Number of observations	10,308	10,146	10,199
Pseudo R-squared	0.0530	0.0832	0.0732

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Appendix A Propensity Score Matching Results

Safe walk (positive and significant treatment effect)

A. Average treatment effect on the treated (safe walk = 1)

Variable	Sample	Treated	Controls	Difference	Std. Err.	T-stat
wp16	ATT	5.871	5.740	0.130	0.052	2.49

B. Bootstrap of treatment effect (100 iterations)

Variable	Reps	Observed	Bias	Std. Err.	[95% Conf. Interval]	
_bs_1	100	0.130	-0.015	0.057	0.018	0.243 (N)
					0.022	0.235 (P)
					0.043	0.243 (BC)

Stolen (treatment effect is not significant)

A. Average treatment effect on the treated (stolen = 1)

Variable	Sample	Treated	Controls	Difference	Std. Err.	T-stat
wp16	ATT	5.758	5.818	-0.060	0.063	-0.94

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Appendix A

B. Bootstrap of treatment effect (100 iterations)

Variable	Reps	Observed	Bias	Std. Err.	[95% Conf. Interval]
_bs.1	100	-0.060	-0.029	0.069	-0.196 0.077 (N)
					-0.239 0.037 (P)
					-0.198 0.098 (BC)

Mugged (negative and significant treatment effect)

A. Average treatment effect on the treated (mugged = 1)

Variable	Sample	Treated	Controls	Difference	Std. Err.	T-stat
wp16	ATT	5.672	5.858	-0.186	0.076	-2.44

B. Bootstrap of treatment effect (100 iterations)

Variable	Reps	Observed	Bias	Std. Err.	[95% Conf. Interval]
_bs_1	100	-0.186	0.065	0.078	-0.340 -0.032 (N)
					-0.256 0.074 (P)
					-0.298 -0.110 (BC)

Appendix B Income Equivalence Calculations

Marginal effects, entire sample (n = 11,813)

variable	dy/dx	Std. Err.	z	P> z	[95% Conf. Int.]	X	Delta X	(B1 * Delta X)	Delta ln(y) = -(B1 * Delta X) / B2	New ln(y) = Initial ln(y) + Delta ln(y)	Monthly household income per capita (US\$)
sex*	-0.013	0.003	-4.88	0	-0.019 -0.008	0.443			Initial income:	5.1	160
age	-0.004	0.000	-9.05	0	-0.005 -0.003	39.043					
age2	0.000	0	7.23	0	0.000 0.000	1810.01					
EQ_index	0.095	0.010	9.08	0	0.074 0.115	0.912	-0.173	-0.016	0.93	6.0	406
educat-1*	-0.000	0.005	-0.06	0.952	-0.010 0.009	0.398					
educat-2*	0.006	0.005	1.16	0.244	-0.004 0.017	0.344					
educat-3*	0.020	0.007	3.06	0.002	0.007 0.033	0.114	1	0.020	-1.15	3.9	50
											Obtain a university degree

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Appendix B

Income Equivalence Calculations (continued)

Marginal effects, entire sample (n = 11,813)

variable	dy/dx	Std. Err.	z	P> z	[95% Conf. Int.]	X	Delta X	(B1 * Delta X)	Delta ln(y) = -(B1 * Delta X) / B2	New ln(y) = Initial ln(y) + Delta ln(y)	Monthly household income per capita (US\$)	
married*	-0.002	0.003	-0.47	0.638	-0.008	0.005	0.557	1	-0.002	0.09	5.2	175
divorced*	-0.004	0.006	-0.64	0.524	-0.016	0.008	0.065					
widow*	0.005	0.007	0.71	0.477	-0.009	0.019	0.055					
onechild*	0.001	0.004	0.24	0.81	-0.006	0.008	0.258					
morech-n*	-0.000	0.004	-0.03	0.974	-0.007	0.007	0.356					
religimp*	0.019	0.003	6.16	0	0.013	0.025	0.825	-1	-0.019	1.08	6.2	470
												Lose religious faith
friends*	0.031	0.003	9.2	0	0.024	0.038	0.847	-1	-0.031	1.77	6.8	940
job*	0.008	0.003	2.66	0.008	0.002	0.013	0.429	-1	-0.008	0.44	5.5	248
ln_ipc-p	0.018	0.002	9.36	0	0.014	0.021	5.074					
zone*	-0.001	0.003	-0.29	0.769	-0.007	0.005	0.611					

Appendix B Income Equivalence Calculations (continued)

Marginal effects, entire sample (n = 11,813)

variable	dy/dx	Std. Err.	z	P> z	[95% Conf. Int.]	X	Delta X	(B1 * Delta X)	Delta ln(y) = - (B1 * Delta X) / B2	New ln(y) = Initial ln(y) + Delta ln(y)	Monthly household income per capita (US\$)	
water*	0.004	0.005	0.88	0.38	-0.005	0.013	0.894	-1	-0.004	0.24	5.3	202
Lose water connection												
electr~y*	0.027	0.007	3.82	0	0.013	0.041	0.964					
teleph~e*	0.012	0.003	3.8	0	0.006	0.018	0.487					
assets	0.011	0.001	8.63	0	0.008	0.013	-0.032					
food*	0.037	0.003	12.09	0	0.031	0.043	0.636	-1	-0.037	2.13	7.2	1,344
Lack money to cover food costs												
shelter*	0.016	0.004	4.18	0	0.008	0.023	0.817					
swalk*	0.008	0.003	2.93	0.003	0.003	0.013	0.475	-1	-0.008	0.44	5.5	247
Safe Walk (no longer feeling safe to walk alone at night)												

Appendix C

Life Satisfaction Regressions with National Average Victimization Rates

Dependent variable:

Life Satisfaction

Entire sample (with national average victimization rates)

	(1)	(2)	(3)
Variables	LAC_swalk_AVG	LAC_stolen_AVG	LAC_mugged_AVG
sex	-0.1489***	-0.1363***	-0.1098***
age	-0.0453***	-0.0452***	-0.0434***
age2	0.0004***	0.0004***	0.0003***
EQ_index	1.1197***	1.1849***	1.2465***
education1	-0.0184	-0.0203	-0.0658
education2	-0.0550	-0.0173	-0.1224*
education3	0.0196	0.1017	-0.0355
married	-0.0048	0.0060	-0.0132
divorced	-0.0222	-0.0257	-0.0481
widow	0.0594	0.0643	0.0380
onechild	-0.0112	-0.0052	0.0102
morechildren	-0.0386	-0.0238	-0.0247
religimp	0.2727***	0.2452***	0.2743***
friends	0.4655***	0.4689***	0.4860***
job	0.1135***	0.1058***	0.0856**
ln_ipcf_ppp	0.2370***	0.2311***	0.2281***
zone	-0.0209	-0.0489	-0.0494
water	0.1684***	0.2088***	0.2230***
electricity	0.4625***	0.4020***	0.3050***
telephone	0.2989***	0.2780***	0.2742***
assets	0.1735***	0.1622***	0.1747***
food	0.5367***	0.5204***	0.5230***
shelter	0.1330***	0.1357***	0.1158**
swalk	0.1068***		
avg_swalk_country	2.7307***		
stolen		-0.0974**	

Appendix C

Second Step: Sample Split by Homicide Rate, Dependent Variable: Life Satisfaction (continued)

Dependent variable:

Life Satisfaction

Entire sample (with national average victimization rates)

	(1)	(2)	(3)
Variables	LAC_swalk_AVG	LAC_stolen_AVG	LAC_mugged_AVG
avg_stolen_country		-4.3081***	
mugged			-0.0759
avg_mugged_country			-3.0027***
Number of observations	11,813	11,962	11,937
N	11,813	11,962	11,937
Pseudo R-squared	0.0500	0.0498	0.0482

Note: Robust standard errors in brackets.

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

