# Randomizing Religion: The Impact of Protestant Evangelism on Economic Outcomes\*

Gharad Bryan, James J. Choi, Dean Karlan

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#### **Abstract**

We study the causal impact of religiosity through a randomized evaluation of an evangelical Protestant Christian values and theology education program. We analyze outcomes for 6,276 ultrapoor Filipino households six months after the program ended. We find increases in religiosity and income, no statistically significant changes in total labor supply, consumption, food security, or life satisfaction, and a decrease in perceived relative economic status. Exploratory analysis suggests that the income treatment effect may operate through increasing grit. We conclude that this church-based program may represent a robust method of building non-cognitive skills and reducing poverty among adults in developing countries.

Keywords: religion, economics, poverty, non-cognitive skills

JEL: D12; I30; O12

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<sup>\*</sup> Bryan: g.t.bryan@lse.ac.uk London School of Economics, Innovations for Poverty Action and the M.I.T. Jameel Poverty Action Lab; Choi: james.choi@yale.edu Yale University and NBER; Karlan: karlan@northwestern.edu Innovations for Poverty Action, the M.I.T. Jameel Poverty Action Lab, NBER and CEPR. This study was registered, along with a pre-analysis plan, in the American Economic Association Registry for randomized control trials under trial number AEARCTR-0001060. Institutional Review Board approval by Innovations for Poverty Action (#1185), NBER (#17\_116), and Yale University (#1410014779). For funding, we thank the Bill and Melinda Gates Foundation for funding related and overlapping data collection on access to savings, Celia and Joseph Grenny, NIH grant P01AG005842, and the Yale University Economic Growth Center. We thank Nate Barker, Leah Bridle, Rebecca Hughes, Marius Karabaczek, Sana Khan, Megan McGuire, Neil Mirochnick, Isabel Oñate, Nassreena Sampaco-Baddiri, Cornelius Saunders, Martin Sweeney, and Sneha Stephen from Innovations for Poverty Action for research assistance and management support. We thank Peter Aronow, Latika Chaudhary, Gregory Cox, Dan Hungerman, Laurence Iannaccone, and numerous seminar audiences for helpful comments. We thank Lincoln Lau, David Sutherland, Peter Nitchke, Daniel Mayhugh, Zaldy Rodriguez, the ICM Metrics team, Danilo Mijares and the ICM Bacolod staff, Lilian Barinas and the ICM Dumaguete staff, Jonathan Sanchez and the ICM Koronadal staff, and Evren Managua and the ICM General Santos staff for their collaboration, patience, flexibility, and curiosity throughout the design and implementation of this study.

A literature dating back at least to Adam Smith and Max Weber finds that religiosity is associated with a set of characteristics that promote economic success, including diligence, thriftiness, trust, and cooperation (Iannaccone 1998; Iyer 2016). More recent research has linked religiosity to positive outcomes in domains such as physical health (Ellison 1991), crime rates (Freeman 1986), drug and alcohol use (Gruber and Hungerman 2008), income (Gruber 2005), and educational attainment (Freeman 1986; Gruber 2005). However, demonstrating that religion *causes* outcomes is challenging because people choose their religion. Naturally occurring religious affiliation is likely to be correlated with unobserved personal characteristics that may be the true drivers of the observed correlations. Iannaccone (1998) writes that "nothing short of a (probably unattainable) 'genuine experiment' will suffice to demonstrate religion's causal impact."<sup>2</sup>

To study the causal impact of religiosity, we partnered with International Care Ministries (ICM), an evangelical Protestant anti-poverty organization that operates in the Philippines, to conduct an evaluation that randomly assigned invitations to attend Christian theology and values training. There are 285 million evangelical Christians in the world, comprising 13% of Christians and 36% of Protestants (Hackett and Grim 2011).<sup>3</sup> ICM is representative of an important sector that attempts to generate religiosity while alleviating poverty.

ICM's program, called Transform, normally consists of three components—Protestant Christian theology, values, and character virtues ("V"), health behaviors ("H"), and livelihood (i.e., self-employment) skills ("L")—taught over 15 weekly meetings (plus a 16th meeting for a graduation ceremony). Each meeting lasts 90 minutes, spending 30 minutes per component. ICM's leadership believes that the V curriculum lies firmly in the mainstream of evangelical belief. Since 2009, 194,000 people have participated in Transform. The basic structure of the program, using a set series of classes outside of a Sunday worship service to evangelize, is a common model. For example, over 24 million people in 169 countries have taken the evangelistic Alpha course since

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<sup>&</sup>lt;sup>2</sup> A notable example of a natural experiment is Clingingsmith, Khwaja, and Kremer (2009), who study a randomized lottery in Pakistan for participation in the hajj. Laboratory experiments that study religious effects by exogenously varying the salience of religion include Shariff and Norenzyan (2007), Mazar, Amir, and Ariely (2008), Hilary and Hui (2009), Horton, Rand, and Zeckhauser (2011), and Benjamin, Choi, and Fisher (2016). See Shariff et al. (2016)for a review of the laboratory literature.

<sup>&</sup>lt;sup>3</sup> The National Association of Evangelicals lists four defining characteristics of evangelical Christians that have been identified by historian David Bebbington: "the belief that lives need to be transformed through a 'born-again' experience and a life long process of following Jesus," "the expression and demonstration of the gospel in missionary and social reform efforts," "a high regard for and obedience to the Bible as the ultimate authority," and "a stress on the sacrifice of Jesus Christ on the cross as making possible the redemption of humanity." (<a href="https://www.nae.net/what-is-an-evangelical/">https://www.nae.net/what-is-an-evangelical/</a>, accessed April 20, 2018)

1977 (Bell 2013), and Samaritan's Purse has enrolled 11 million children in about 100 countries in its evangelistic Greatest Journey course since 2010 (Samaritan's Purse 2017). Like Transform, these are courses of approximately a dozen sessions.

We randomly assigned communities to receive the full Transform curriculum (VHL), to receive only the health and livelihoods components of the curriculum (HL), to receive only the values component of the curriculum (V), or to be a no-curriculum control (C). We identify the effect of religiosity by the comparison of invited households in VHL communities to invited households in HL communities, and invited households in V communities to households in C communities that would have been invited had that community been assigned to be treated.

Religiosity is not a singular concept, and its causal impact will likely depend on many factors. An important distinction is noted by Johnson, Tompkin, and Webb (2008), who differentiate between "organic" exposure to religion over a prolonged period of time (e.g., through one's upbringing at home) and "intentional" exposure through participation in a specific program targeting a specific set of individuals. Both are important channels of religious propagation, and the type of religiosity produced may depend on the channel. Our study is about intentionally generated religiosity<sup>4</sup> of a specific kind (evangelical Protestant Christian), and a significant aim of our study is to establish, in the context of a randomized controlled trial, that intentional exposure to a religious program can generate the critical first stage: an exogenous change in religiosity.

We measure outcomes approximately six months after the training sessions ended and analyze them in accordance with a pre-analysis plan. We find that those who were invited to receive the values curriculum have significantly higher religiosity than those who did not receive the values curriculum, demonstrating that the treatment had its intended first-stage effect. Examining downstream economic outcomes while correcting for multiple hypothesis tests, we find that the values curriculum increased household income, but it had no statistically significant effect on total labor supply, assets, consumption of a subset of goods, food security, or life satisfaction, and it decreased perceptions of relative economic status within one's community. Post-hoc analysis on the health and livelihoods curriculum finds that it had no significant treatment effects on income and perceived relative economic status; this serves as a placebo test that strengthens the case that

<sup>&</sup>lt;sup>4</sup> Gruber and Hungerman (2008), Gruber (2005), and Bottan and Perez-Truglia (2015), who use naturally occurring shocks to religious participation, are likely estimating the effect of organic exposure to religion.

<sup>&</sup>lt;sup>5</sup> Although we find no significant increase in consumption, the confidence intervals are such that we cannot reject the hypothesis that the entire increase in income is consumed.

the values curriculum treatment effects are operating through religiosity rather than some other mechanism associated with attending classes run by ICM. Additional post-hoc analysis shows that the income effect is strongly concentrated on the Transform invitee and is not significant for other household members' labor income, suggesting that the estimated income effect is not a Type I error.

Exploratory regressions suggest that the religiosity treatment effect operates by increasing grit—specifically, the portion of grit associated with perseverance of effort. We find no consistent movement in the other potential mechanisms that we measured: social capital, locus of control (other than the belief that God is in control, which increases), optimism, and self-control.

Our paper is related to a recent literature that argues that non-cognitive skills are important drivers of economic outcomes and can be improved through specific interventions (Duckworth et al. 2007; Kautz et al. 2014; Blattman, Jamison, and Sheridan 2015). This body of work raises the possibility that programs to improve non-cognitive skills might have large positive impacts on the lives of the most disadvantaged people, but three obstacles need to be overcome to meet this goal. First, with a few exceptions (e.g., Blattman, Jamison, and Sheridan 2015), existing studies concentrate on developed countries, while most of the world's poorest people live in the developing world. Even if we can assume that non-cognitive skills are similarly malleable in the developing world, it is not clear that the environment and market structures allow for economic gains. Second, much of the literature concentrates on children, and little is known about the ability to improve the non-cognitive skills of adults, although Kautz et al. (2014) notes that non-cognitive skills are more malleable later in life than cognitive skills. Finally, it is unclear whether interventions that create large improvements can be delivered in a cost-effective, scalable manner. Our results suggest that church-based programs might be a solution. Church-based programs make use of a large existing infrastructure, teach a well-understood and developed set of values, and are often low cost because they leverage the intrinsic motivation of church members.

## I. The ICM Transform Program

Transform's Values curriculum begins by teaching participants to recognize the goodness of the material world and their own high worth as God's creation. The theme then shifts towards humanity's rebellion against God and its negative consequences, while contrasting that with the message that "believers of Jesus will discover joy in sorrow, strength in weakness, timely provision in time of poverty, and peace in the midst of problems and pain." (Transform does not, however, teach prosperity theology—the belief that following God will guarantee economic prosperity and physical health. The Protestant doctrine of salvation by grace—a person cannot earn her way into heaven by performing good works, but can only be saved by putting her faith in Jesus, upon which God forgives her sins as a free act of grace—is taught. The proper response to God's grace is to do good works out of gratitude. The final section of the curriculum covers what such good works would be. They include stopping wasting money on gambling and drinking, saving money, treating everyday work as "a sacred ministry," and becoming active in a local church community. Participants are encouraged to find hope in the midst of disasters through faith and generally see that "life's trials and troubles" are "God's pruning knife" that will result in "more fruitfulness." In other words, the curriculum teaches students that their suffering has meaning and purpose, and aims to build the ability to persevere through setbacks. These curricular elements dovetail with the growing literature on non-cognitive skills that emphasizes the importance of characteristics like conscientiousness, grit, resilience to adversity, self-esteem, and the ability to engage productively in society (Kautz et al. 2014)..

The Health training focuses on building health knowledge and changing health and hygiene practices in the household. Additionally, ICM staff identify participants experiencing malnourishment and common health issues such as diarrhea, tuberculosis, and skin problems. They then receive nutritional supplements, deworming pills, other medical treatments, and follow-up care.

The Livelihood section of the program consists of training in small business management skills, training in one of several different livelihood options (for example, an introduction to producing compost through vermiculture), and being invited to a savings group. Minor agricultural assistance is given in the form of small seed kits. These activities are intended to provide key tools for achieving a more sustainable income and smoothing economic shocks.

The health and livelihoods components are led by two employees of ICM, while the religious training is led by a local pastor following an ICM-provided curriculum. The local pastor is not compensated by ICM but does receive training and support. Six lay volunteers from the pastor's

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<sup>&</sup>lt;sup>6</sup> The teacher's manual for the Values curriculum says that "we also see ordinary and simple people who enthrone God as their Lord and Savior discover the deep satisfaction and contentment that make them happy even in their relative poverty."

church serve as counselors who offer support and encouragement to the participants. For a small number of participants, ICM arranges treatment for serious medical needs.

The teacher's manuals used by ICM are available on the authors' websites.

## II. Experimental Design

For the experiment, ICM recruited 160 pastors to each choose two communities in which (s)he did not already minister and that were at least ten kilometers away from each other. Selected communities were required to be predominantly Catholic or Protestant—which meant that Muslim-majority communities were excluded—and not to have been previously contacted by ICM. Within each community, the pastor created a list of 40 households that (s)he considered the poorest and thus eligible for participation in Transform, and interacted with these households to assess their willingness to participate in the program should it be launched in their village. One member of the household—usually the female head of household or the female spouse of the male head of household—was identified as a potential invitee to Transform. ICM staff then administered a poverty verification questionnaire, based on indicators such as the quality of a home's construction materials, access to electricity, clean water and sanitation, and household income—most of which do not rely upon self-reports. The previously identified individuals in the 30 households deemed poorest, were invited to participate in the program if their community was selected for treatment.

The randomization was a two-stage clustered design. In the first stage, the pastors were randomly assigned to either group VHL-C or group HL-V. In the second stage, pastors in VHL-C had one of their communities randomly assigned to receive the full Transform program (VHL) and the other to be a no-treatment control group (C). Pastors in HL-V had one of their communities randomly assigned to receive only the health and livelihoods component of Transform (HL), and the other to receive only the Christian values component of Transform (V). We implemented this randomization scheme because each pastor had capacity to provide values training in only one community, and thus the scheme allowed every invited pastor to be involved in exactly one Transform implementation. This design also meant that the total amount of religious outreach done

<sup>7</sup> There is only one ICM base (located in Mindanao) that is close to any communities that are predominantly Muslim.

<sup>&</sup>lt;sup>8</sup> Both HL and V communities were also assisted by six counselors recruited by the pastors prior to the random assignment.

by ICM was not altered due to the study. Since the treatments were assigned at the community level, the estimated effect of the Values treatment on downstream economic outcomes should be interpreted as the effect of increasing religious engagement for a group of individuals in a community, rather than the effect for an isolated individual. We view this as a desirable feature, since religion is most often experienced and practiced in a communal context.

The four-month Transform program ran from February to May 2015. HL/VHL households on average attended 8.9 class sessions, and 83% attended at least one. Participants in the VHL, HL, and V treatment arms also received food supplements, and ICM arranged treatment for serious medical needs (<1% of participants). We will show that the food supplements and medical treatment do not explain the V curriculum treatment effect, because the HL curriculum, which is also accompanied by food supplements and medical treatment, does not have a comparable treatment effect.

#### III. Data Collection

Approximately six months after Transform ended (between August 12, 2015 and January 14, 2016), we sent surveyors to the poorest 25 households selected by the pastors in each community and completed surveys in 6,276 households. To reduce the correlation between treatment assignment and social desirability bias in survey response, we used surveyors from a nonprofit research organization unaffiliated with ICM, Innovations for Poverty Action (IPA). Respondents were not told of any relationship between ICM and IPA, and the informed consent script introduced the survey as follows: "Hello, my name is \_\_\_\_\_ with the research organization Innovations for Poverty Action. I am working to learn about the economic and social conditions and well-being of families in the Philippines. You are being invited to be one of the participants in this study. We expect the results from this survey will help Filipino NGOs and international organizations to develop policies and procedures that improve the lives of people." Respondents were compensated with 100 PHP (about 2.50 USD), irrespective of whether they completed the survey.

Surveyors attempted to interview, in descending order of preference, (a) the person previously identified as a potential Transform invitee, (b) the female head of household if the head of

<sup>9</sup> ICM did not track attendance in the V group. If somebody was sent in the place of an invited individual, ICM recorded that individual as present. We cannot distinguish these substitute attendances from regular attendances.

<sup>&</sup>lt;sup>10</sup> We sampled the 25 poorest households, rather than the full 30 identified by ICM, because of budget constraints and the programmatic importance of measuring the impact on the poorer individuals within the sample.

household was female, (c) the female spouse/partner of the male head of household, or (d) the person reporting to be responsible for health and household expense decisions. Out of 7,999 households targeted for surveying, we successfully surveyed 6,507 (81%). Insurgent violence and political opposition prevented the field teams from surveying in six communities (150 households), and some households either refused to be surveyed (60 households), could not be contacted (1,252 households), or suffered from survey data issues (30 households).

Management data and internal control checks identified five instances (out of the 157 pastors whose communities we surveyed) in which ICM and the pastor switched the assignments within a community pair, treating one with what the other was supposed to receive, and vice versa. Because of the paired randomization, we drop these five community pairs in our analysis without harming internal validity. There was also one community that was supposed to receive the V treatment but did not. We retain this community in our regressions, since the compliance issue was not present in both communities in the pair. Thus, we only use data from 6,276 households in our main analyses. Online Appendix Table 1 shows that the attrition rate and the number of days between program end and survey date do not differ significantly across the four experimental groups.

Before the intervention, we intended to conduct a baseline survey of the 7,999 households. However, we underestimated the time it would take to conduct the baseline, and we were unable to delay the start of Transform in order to complete the baseline. Online Appendix Table 1 shows that the four experimental groups are well-balanced on characteristics measured in the six-month survey that are unlikely to have changed in response to the treatment.

We filed a pre-analysis plan with the American Economic Association RCT Registry before seeing any follow-up data. In accordance with our first filing, we then examined the follow-up data blinded to treatment assignment and filed a supplement to the pre-analysis plan.<sup>12</sup>

All data supporting the findings of this study, stripped of individual-identifying information, will be posted on the IPA and JPAL Dataverse before publication.

<sup>&</sup>lt;sup>11</sup> We show in Online Appendix Tables 2-4 the full set of analyses including the five pairs dropped in the main regressions, using the assigned treatment status for each community. Relative to Tables 1-3, the only treatment effect estimate of the V curriculum on primary outcomes that moves across the 5% or 10% significance boundaries is for perceived relative economic status, which is now significant only at the 10% level. Examining mechanisms and secondary outcomes, in the pooled specification, the negative V effect on the life orientation index loses significance even at the 10% level, while the positive V effect on grit and the negative V effect on self-control move from 10% significance to 5% significance.

<sup>&</sup>lt;sup>12</sup> In accordance with the first phase of our pre-analysis plan, we analyzed the data blinded to treatment status to determine whether including available baseline observations as control variables increased the efficiency of our estimates. We did not find any efficiency gains, so we decided not to use the baseline survey in our final analysis.

#### IV. Outcome Variables

Our pre-analysis plan divided outcomes into primary religious outcomes, primary economic outcomes, mechanisms, and secondary outcomes. Index variables are standardized so that the control group has zero mean and unit variance. The Appendix describes the construction of the variables in fuller detail, and Appendix Table 1 shows all of the questions that comprise each of our variables.

The primary religious outcomes are the intrinsic religious orientation scale and the sum of the two extrinsic religious orientation scales of Gorsuch and McPherson (1989), a general religion index that consolidates responses to nine religious belief and practice questions, and the average of two binary indicators for whether the respondent reports that "I have made a personal commitment to Jesus Christ that is still important to me today" and "I have read or listened to the Bible in the past week." These last two binary indicators are elicited using list randomization, a technique for eliciting responses to sensitive questions that conceals any given individual's response from the interviewer (Droitcour et al. 2011; Karlan and Zinman 2012). We do this to minimize experimenter demand and social desirability effects. In a list-randomized elicitation, participants are randomly selected to receive either a list of n non-sensitive statements or these same n statements plus a sensitive statement. They are asked to answer how many of the statements are true without specifying which ones are true. The difference in the average number of statements reported to be true between participants who received n statements and n+1 statements is the estimated fraction of participants for whom the sensitive statement is true.

The primary economic outcomes are household expenditure on a sample of consumption goods, a food security index, household income, total household adult labor supply in hours, an index of life satisfaction, and perceived relative economic status.

The mechanism outcomes are three measures of social capital (a general trust index, a strength of social safety net index, and a participation in community activities index), three measures of a sense that one has control over one's life (a perceived stress index, the Levenson (1981) Powerful Others index modified to apply to God's control of one's life, and a locus of control index that combines the internality and chance subscales of Levenson (1981) and the World Values Survey locus of control question), three measures of optimism (the Life Orientation Test - Revised index (Scheier, Carver, and Bridges 1994), an index of expectations about one's life satisfaction and

relative economic status five years in the future, and a general optimism index), the Short Grit Scale (Duckworth and Quinn 2009), and a subset of the Brief Self-Control Scale (Tangney, Baumeister, and Boone 2004).

The secondary outcomes are an index of belief in the Protestant doctrine of salvation by grace (an outcome of interest to ICM because the doctrine is taught in the V curriculum), an asset index, a financial inclusion index, a health index, two hygienic practice variables, a home quality index, a migration and remittance index, an absence of domestic discord index, absence of domestic violence, child labor supply, and the number of children enrolled in school.

# V. Econometric Strategy

Treatment effects are estimated using ordinary least squares regressions with the following explanatory variables: treatment indicator variables, an indicator variable for the respondent's gender, an indicator variable for the respondent being married, an indicator variable for the respondent being divorced or separated, the respondent's years of educational attainment, <sup>13</sup> the number of adults in the household (age  $\geq$  17), the number of children in the household (age < 17), and the number of days between June 1, 2015 and the interview date. We cluster standard errors by community (the unit of randomization).

We estimate the treatment effect on list-randomized variables by stacking the responses of those who did and did not receive the sensitive statement in a regression that controls for treatment assignment indicator variables, an indicator variable for whether the individual received the sensitive statement, the interaction between receiving the sensitive statement and each treatment indicator variable, and all the other non-treatment variable controls from the main specification. The coefficients on the interaction variables are the treatment effects of interest. We estimate the control mean by calculating within the control group the difference (without adjusting for covariates) in the mean response between those who did get the sensitive statement and those who did not. When two list-randomized variables are combined to form an outcome variable, we stack

<sup>&</sup>lt;sup>13</sup> Pre-school only is coded as 0.5 years, some grade 12 education without high school graduation is coded as 12 years, high school graduation is coded as 13 years, partial vocational education is coded as 14 years, complete vocational education is coded as 15 years, partial college is coded as 16 years, and college graduation is coded as 17 years. In data cleaning, we discovered 27 observations in which the respondent's name was not in the household roster, and thus respondent demographic information was missing. We code the respondent demographic variables as equaling zero for these 27 observations and control for an indicator variable equal to one if respondent demographic information is missing.

the responses for both variables into a single regression while retaining the same control variables as above. The coefficient on the interaction variable in this case is the treatment effect on the average of the two outcomes of interest.

We test for the effect of religiosity by comparing VHL to HL respondents, and V to control respondents. We do not reject the hypothesis that the V and HL curricula have additive effects when testing jointly across all outcomes of interest; the *p*-values for this test are 0.344, 0.634, 0.890, and 0.234 when looking across religious primary outcomes, all primary outcomes, all primary outcomes and mechanisms, and all outcomes, respectively. Therefore, we focus—following our pre-analysis plan—on a pooled specification that estimates the effect of being invited to receive any V curriculum, while controlling for whether the household was invited to receive any HL curriculum. This pooled specification has greater statistical power than a specification that separately estimates the VHL-versus-HL and V-versus-control effects.

Since we conducted a matched-pair randomization, our pooled specification controls for fixed effects for each pair of communities chosen by a given pastor ("community-pair fixed effects"). In our disaggregated specification, where we estimate VHL, HL, and V treatment effects separately, the estimation of the VHL treatment effect versus control also controls for community-pair fixed effects. However, the community-pair fixed effects are not possible to control for when estimating the HL and V treatment effects versus control because no pastor who selected an HL or V community also selected a control community. Thus, the disaggregated specification's treatment estimates are generated from two independently estimated regressions: one to estimate the treatment effect for VHL relative to control with community-pair fixed effects, and a second to estimate the treatment effects for HL and V relative to control with fixed effects for which of the four ICM bases the community is associated with.<sup>14</sup>

Because of the large number of hypotheses tested, we follow Banerjee et al. (2015): for each primary test in our pre-analysis plan we calculate a *q*-value—the minimum false discovery rate (i.e., the expected proportion of rejected null hypotheses that are actually true) at which the null hypothesis would be rejected for that test (Benjamini and Hochberg 1995; Anderson 2008),

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<sup>&</sup>lt;sup>14</sup> Our pre-analysis plan stated that we would control for community-pair fixed effects in all regressions. We have deviated from the plan here because it is mathematically impossible to control for community-pair fixed effects in the disaggregated specification while estimating every single treatment effect. Due to the randomized design, the inability to control for community-pair fixed effects when estimating the HL and V treatment effects relative to control does not bias our estimates, but it does reduce our statistical power.

given the other tests run within the family. <sup>15</sup> For the purposes of this correction, and in accordance with our pre-analysis plan, we consider the tests on primary religious outcomes to be one family (because they are a test of the study's first stage, a null result here would eliminate the justification for examining the non-religious outcomes), and the tests on primary non-religious outcomes to be another family. We implement adjustments once among the pooled specification regressions, and separately among the disaggregated specifications. In other words, the tests run within the pooled specification do not affect the *q*-values from the disaggregated specifications, and vice versa. Following our pre-analysis plan, we do not apply multiple hypothesis test corrections to our tests of hypothesized mechanisms and secondary outcomes because these analyses are exploratory.

# VI. Results

The majority of our sample (69%) self-identifies as Catholic, and 21% as Protestant. The control group means in Online Appendix Tables 5-8 summarize the sample's baseline level of religiosity and indicate that many are not maximally religiously fervent. For example, when asked, "To what extent do you consider yourself a religious person?," the average control respondent rates herself at 2.8 on a 4-point scale, where higher numbers indicate greater religiosity. Only 66% say that they have made a personal commitment to Jesus Christ that is still important to them today, and 56% have read or listened to the Bible in the past week.

Table 1 shows the treatment effects on the primary religious outcomes. The pooled specification (Panel A) finds that the V curriculum, offered either on its own or in conjunction with the HL curriculum, increases all four measures of religiosity, three of them at q < 0.01. The effect on the three significant indices ranges from 0.08 to 0.13 standard deviations. The change in the list randomization outcome—which we have lower statistical power to detect, both because list-randomized questions measure the outcome of interest in only half the sample and because we only have two such questions—is positive, and its 4.8 percentage point magnitude (corresponding to a 0.10 standard deviation movement given the 60.6% control group mean) is economically significant and in line with the magnitudes (in standard deviation space) we get from the three

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<sup>&</sup>lt;sup>15</sup> Within each of our outcome families, let  $p_1 \le p_2 \le ... \le p_m$  be the set of ordered *p*-values that correspond to the *m* hypotheses tested. For a given false discovery rate *α*, let *k* be the largest value of *i* such that  $p_i \le i\alpha/m$ , and reject all hypotheses with rank  $i \le k$ . The *q*-value of a hypothesis, an analog to the *p*-value, is the smallest *α* for which the hypothesis would be rejected (Anderson 2008).

<sup>&</sup>lt;sup>16</sup> Although intrinsic and extrinsic religious orientation were originally conceived of as opposing concepts on a unidimensional scale, empirical work has found the two to be orthogonal to each other (Kirkpatrick and Hood 1990).

direct elicitation measures. Unfortunately, the 95% confidence interval for the list-randomization index treatment effect also encompasses zero. Thus, we believe nothing should be concluded from the treatment effect estimates on the list randomization outcome. The statistically significant first-stage effect of the treatment on directly elicited religiosity justifies examining differences in downstream non-religious outcomes across treatment groups to gain insight into the effects of religiosity.

We also present results for a disaggregated specification in Panel B where we estimate the impact of the V curriculum by separately comparing VHL to HL and V to control. Although the point estimates of VHL's effect on religiosity relative to HL are always positive, they are not statistically significant. On the other hand, V significantly increases extrinsic religious orientation  $(0.20 \, sd, se = 0.06, q = 0.013)$  and marginally significantly increases intrinsic religious orientation  $(0.12 \, sd, se = 0.05, q = 0.059)$  relative to the control group. Therefore, while we report all treatment effect estimates on downstream outcomes from the disaggregated specification, we only discuss and interpret these outcomes for the V versus control comparisons, and only correct for multiple hypothesis tests within the V versus control comparisons.

In unplanned comparisons, we find no evidence that any aspect of Transform increased the share of respondents identifying as Protestants, and only marginally statistically significant evidence that the V curriculum decreased identification as a Catholic (Online Appendix Table 37).

The primary economic outcome effects are reported in Table 1. We find no statistically significant treatment effects on consumption, food security, total adult labor supply, or life satisfaction. We have enough statistical power to reject, at the 95% confidence level, increases in these variables of more than 0.06 standard deviations and decreases of more than 0.04 standard deviations. However, we do find a statistically significant 9.2% increase in income (386 PHP  $\approx$  8.6 USD per month, se = 127 PHP  $\approx$  2.8 USD, control group mean = 4,213 PHP  $\approx$  94 USD, q = 0.016) in the pooled specification (Panel A). In the disaggregated specification (Panel B), where we have less statistical power (the standard errors are over twice as large as in the pooled specification), the 574 PHP income effect for V compared to C is statistically significant before correcting for multiple hypothesis tests but not after (p = 0.045, q = 0.271). We also find a significant decrease in perceived relative economic status (-0.11 points on a 10-point scale, which

<sup>&</sup>lt;sup>17</sup> Results become more statistically significant when income is winsorized at the 95th or 99th percentile, or when we use the log of income (see Online Appendix Table 35).

corresponds to -0.05 sd, se = 0.05, q = 0.050) in the pooled specification. Perceived relative economic status is measured by one question that asks respondents to place themselves on a ladder of life where the top rung (10) represents the best-off people in their community and the bottom rung (1) the poorest people in their community. We discuss potential interpretations of these results in Section VII.

In order for the V treatment effect to tell us about the effect of religiosity, the V curriculum must affect economic outcomes only through its effect on religiosity, rather than through other channels such as increased socialization with other classmates, time spent away from the home in order to attend class, the food supplements and medical treatment received, etc. The HL treatment effect estimates can be viewed as a placebo test of this assumption, since the HL curriculum also brought participants together for ICM-sponsored classes but had no religious content. Table 1 shows that the HL curriculum had no significant effect (even without multiple testing corrections) on any of the outcomes where we found significant V curriculum effects.

Table 2 reports tests of mechanisms that might generate the primary economic effects and potentially cause further changes in the primary economic outcomes in the future. The V curriculum teaches that God's love continues during adversity, which he ultimately uses for good, so participants can find hope in the midst of hardship. Correspondingly, we find in the pooled specification (Panel A) that the V curriculum leads to increases in the sense that God is in control (Powerful Others index,  $0.09 \, sd$ , se = 0.03)<sup>18</sup> and a marginally significant increase in grit ( $0.04 \, sd$ , se = 0.02). However, there is no consistent effect on the three measures of optimism. Perceived self-control falls by a marginally significant extent ( $-0.03 \, sd$ , se = 0.02), which could be due to the V curriculum increasing the number of behaviors participants believe to be undesirable temptations rather than an actual reduction in self-control. There is also a marginally significant reduction in perceived locus of control ( $-0.04 \, sd$ , se = 0.02), although subcomponent analysis finds that V recipients report that *both* personal initiative and chance play larger roles in their life (Online Appendix Table 20).

Finally, we examine treatment effects on secondary outcomes (Table 3). In the pooled specification, we find that the V curriculum leads to statistically significant (p = 0.0002) increases

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<sup>&</sup>lt;sup>18</sup> Although our pre-analysis plan treats the Powerful Others index as a potential mechanism rather than a primary outcome, the increase in its value could also be seen as evidence that the V curriculum succeeded in increasing religiosity. Relative to our other primary religious outcomes, this measure may be less prone to social desirability bias.

in hygienic behaviors not measured by list randomization (avoiding open defecation and keeping animals in a sanitary way), but no statistically significant increase in the list-randomization response regarding washing hands after using the bathroom and treating water. We note that we find via list randomization an increase in reported domestic violence, although it is only significant at the 10% level. This finding is a potentially important impact of the program that could be interpreted either as an increase in identifying behaviors as abuse or an increase in actual abuse. Although we do not observe a statistically significant change in the non-list-randomized discord index, we do observe a significant increase in one of its components, major arguments regarding interactions with relatives (2.2 percentage points, se = 0.8 percentage points, Online Appendix Table 32). The remainder of the secondary outcomes are not significant at the 5% level. <sup>19</sup>

#### VII. Discussion and Conclusion

A potential puzzle regarding the treatment effect on income is that we do not observe movement in other variables that would be expected to rise with income: total labor supply, consumption, food security, and assets.

For labor supply, while there is no change in total hours, we do see a shift from agriculture to non-agricultural self-employment, livestock tending, fishing, and other employment of unclear formality (Online Appendix Table 12), which could increase income. Furthermore, we cannot observe labor effort per hour worked, which may increase with grit and which the V curriculum encourages as "a sacred ministry" that "merits heavenly reward." In post hoc analysis, we examine two subscales within the grit index (Duckworth et al. 2007) and find that all of the movement in the grit index is coming from the "perseverance of effort" subscale and not the "consistency of interests" subscale. This is consistent with the doctrine of hard work promoted by the V curriculum (in Online Appendix Table 23, columns 2, 5, 8 and 9 are the subcomponents for perseverance of effort, and columns 3, 4, 6 and 7 are the subcomponents for consistency of interests).

<sup>&</sup>lt;sup>19</sup> We also find an unexpected, marginally significant, decrease in the index for the belief in the doctrine of salvation by grace. This may be because of the counterintuitive nature of the doctrine, which requires one to disagree with two of the three statements in our index: "I follow God's laws so that I can go to heaven" and "If I am good enough, God will cleanse me of my sins." In becoming more religiously fervent, subjects may have felt that they should agree more strongly with these pious-sounding statements despite the efforts of the V curriculum. The V curriculum also increases agreement with the third statement in the index, "I will go to heaven because I have accepted Jesus Christ as my personal savior," even though that statement is *consistent* with salvation by grace. The pattern of responses is consistent with the V curriculum increasing agreement with *all* pious-sounding statements.

A simple explanation could account for the lack of observed movement in consumption and assets: all of the additional income was consumed, but we do not have the statistical precision to detect this. The upper bound of the 95% confidence interval for the consumption effect (195 PHP) is well above the lower bound of the 95% confidence interval for the income effect (138 PHP). There may also have been an increase in consumption of the goods and services that we did not measure.<sup>20</sup>

Of course, it is possible that the income result is spurious despite the multiple-testing correction. Further evidence, however, seems inconsistent with this interpretation. Among the 88% of households where the individual identified as a potential Transform invitee was the survey respondent, the "any V" effect on labor income is 236 PHP (p = 0.0006) for the respondent herself and 164 PHP (p = 0.151) summed across all other household members. Hence, the labor income effect is strongly concentrated on the Transform beneficiary.

It also seems unlikely that the V curriculum is causing respondents to falsely inflate reported income for social desirability reasons, since there is no V treatment effect on other economic outcomes—in particular, self-reported life satisfaction, a more subjective outcome than income that seems at least as susceptible to social desirability motives. Another possibility is that control group respondents are understating their income to the surveyor as part of a general practice of understating their resources in order to avoid having to share them with others, and the V curriculum raises reported income because it causes respondents to be more honest about their income. But this is inconsistent with the lack of an effect on the number of meals the household gave to others in the local community in the past 30 days (Online Appendix Table 16).

The negative effect on perceived relative economic status is surprising considering the positive effect on income and the lack of negative effects on other economic outcomes. The result could arise from participants realizing that Transform targeted those in extreme poverty. However, the HL treatment used the same targeting process, and we do not observe a significant negative effect on perceived relative economic status for the HL curriculum. Furthermore, Banerjee et al. (2015) finds that other programs that target those in extreme poverty do not generate a negative effect on perceived relative wellbeing, although their measurements occurred two years after program

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<sup>&</sup>lt;sup>20</sup> For example, we did not collect data on tithing. ICM reports that its pastors collect on average 570 PHP per month from their entire congregation, and the average congregation has about 25 adults. Thus, the gap between the income and consumption treatment effect point estimates is unlikely to be entirely explained by tithing.

completion rather than six months. The V treatment did move participants into work activities where they earned more per hour, which may have increased their contact with more economically successful individuals, thus lowering their perceived relative economic standing. Alternatively, the values program, by attempting to build hope and aspiration, may make poignant to people how others are living without as much economic hardship.

Our work demonstrates that a randomized controlled trial is a viable tool for shifting attitudes towards and practices of religion in order to study the effect of religiosity on social and economic outcomes. As with all program evaluations, our results are, strictly speaking, specific to the program and setting we study. Having said that, Transform's curriculum and dissemination method are similar to efforts by many religious organizations around the world, and evangelization of Catholics by evangelical Protestants is a widespread phenomenon (Pew Research Center 2014).

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# **Table 1. Primary outcomes**

Panels A and B show treatment effect estimates relative to control. In Panel A, "Any V" refers to the "Values only" and "Values, Health, and Livelihood" treatment groups, and "Any HL" refers to the "Health and Livelihood only" and "Values, Health, and Livelihood" treatment groups. Dependent variables are indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p*-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Primary religi	ous outcomes			Primary economic outcomes				
								Adult		
	Religion	Religion	General	Religion -	Monthly	Food	Monthly	weekly	Life	Perceived
	intrinsic	extrinsic	religion	list	consumption	security	income	labor supply	satisfaction	relative
	index	index	index	randomized	(PHP)	index	(PHP)	(hours)	index	econ. status
				Panel A: Po	oled specification					
Any V	0.102***	0.130***	0.077***	0.048	-1.1	0.010	386.1***	0.926	0.019	-0.113**
	(0.024)	(0.024)	(0.023)	(0.037)	(100.4)	(0.023)	(126.8)	(1.091)	(0.022)	(0.047)
Any HL	0.014	-0.021	0.001	-0.028	-103.0	-0.044*	131.2	-1.822*	-0.010	-0.040
•	(0.024)	(0.024)	(0.023)	(0.038)	(93.3)	(0.023)	(126.3)	(1.095)	(0.022)	(0.047)
q-value for Any V	0.001	0.001	0.002	0.198	0.992	0.779	0.016	0.595	0.595	0.050
				Panel B: Disagg	regated specificat	ion				
VHL	0.115***	0.109***	0.077**	0.020	-102.2	-0.033	524.4***	-0.878	0.009	-0.151**
	(0.034)	(0.037)	(0.031)	(0.054)	(159.5)	(0.037)	(175.0)	(1.417)	(0.028)	(0.067)
HL	0.047	0.073	-0.029	-0.002	-314.3	-0.050	287.9	-0.149	-0.031	-0.073
	(0.055)	(0.065)	(0.054)	(0.055)	(203.0)	(0.051)	(278.4)	(2.390)	(0.056)	(0.112)
V	0.123***	0.204***	0.052	0.070	-167.4	-0.007	574.2**	2.951	-0.018	-0.133
•	(0.050)	(0.064)	(0.051)	(0.057)	(209.5)	(0.050)	(285.4)	(2.321)	(0.047)	(0.119)
q-value for VHL = HL	0.393	0.653	0.147	0.653						
q-value for $V = C$	0.059	0.013	0.416	0.393	0.638	0.886	0.271	0.529	0.850	0.529
				Panel C: Sun	nmary information	1				
Control mean	0	0	0	0.606	5,001	0	4,213	79.58	0	3.242
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,526	1,452	1,452	1,578	1,576
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,521	1,440	1,439	1,549	1,548
# observations in V	1,550	1,550	1,550	1,550	1,550	1,517	1,435	1,434	1,550	1,547
# observations in C	1,599	1,599	1,599	1,599	1,599	1,567	1,490	1,490	1,599	1,596

# **Table 2. Mechanisms**

Panels A and B show treatment effect estimates relative to control. In Panel A, "Any V" refers to the "Values only" and "Values, Health, and Livelihood" treatment groups, and "Any HL" refers to the "Health and Livelihood only" and "Values, Health, and Livelihood" treatment groups. Dependent variables are indicated in the column title. Indexes have been coded so that more positive numbers are better. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p*-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		Social capita	1	Lo	ocus of contro	ol		Optimism			
	Trust index	Social safety net index	Community activities index	Perceived stress scale index	Powerful others index	Locus of control index	Life orientation index	Expectations index	Optimism index	Grit index	Self- control index
Any V	0.004	0.026	0.005	-0.011	: Pooled spec 0.093***	-0.035*	-0.050*	-0.037	0.053**	0.041*	-0.034*
Ally V	(0.022)	(0.024)	(0.025)	(0.020)	(0.027)	(0.020)	(0.027)	(0.025)	(0.024)	(0.022)	(0.021)
Any HL	-0.023 (0.022)	-0.027 (0.024)	0.041 (0.025)	-0.018 (0.021)	0.044 (0.027)	-0.000 (0.020)	0.016 (0.027)	-0.016 (0.025)	-0.024 (0.024)	0.017 (0.022)	0.006 (0.020)
p-value for Any V	0.865	0.282	0.851	0.596	0.001	0.075	0.065	0.133	0.029	0.065	0.095
				Panel B: Di	saggregated s	pecification					
VHL	-0.019 (0.032)	0.000 (0.032)	0.045 (0.034)	-0.026 (0.026)	0.135*** (0.038)	-0.035 (0.029)	-0.034 (0.037)	-0.055* (0.032)	0.030 (0.032)	0.056* (0.029)	-0.027 (0.025)
HL	-0.023 (0.043)	-0.076 (0.048)	0.019 (0.058)	-0.009 (0.044)	0.031 (0.060)	-0.064 (0.057)	-0.046 (0.068)	-0.014 (0.056)	-0.007 (0.061)	0.030 (0.058)	0.039 (0.047)
V	-0.018 (0.046)	-0.023 (0.048)	-0.011 (0.059)	-0.007 (0.043)	0.073 (0.059)	-0.085* (0.050)	-0.103 (0.069)	-0.054 (0.057)	0.069 (0.066)	0.041 (0.058)	-0.001 (0.050)
p-value for VHL = HL $p$ -value for V = C	0.927 0.704	0.140 0.631	0.655 0.857	0.684 0.876	0.085 0.222	0.605 0.090	0.862 0.132	0.468 0.344	0.541 0.298	0.671 0.484	0.155 0.980
				Panel C:	Summary inf	ormation					
Control mean	0	0	0	0	0	0	0	0	0	0	0
# observations in VHL	1,578	1,578	1,561	1,577	1,578	1,578	1,578	1,542	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,542	1,549	1,549	1,549	1,549	1,508	1,549	1,549	1,549
# observations in V	1,550	1,550	1,534	1,549	1,550	1,550	1,550	1,518	1,550	1,550	1,550
# observations in C	1,599	1,599	1,592	1,599	1,599	1,599	1,599	1,567	1,599	1,599	1,599

# **Table 3. Secondary outcomes**

Panels A and B show treatment effect estimates relative to control. In Panel A, "Any V" refers to the "Values only" and "Values, Health, and Livelihood" treatment groups, and "Any HL" refers to the "Health and Livelihood only" and "Values, Health, and Livelihood" treatment groups. Dependent variables are indicated in the column title. Indexes have been coded so that more positive numbers are better. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p*-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
					Hygiene			Migration		No	Child	
	Salvation		Financial		index,	Hygiene,		and	No	domestic	labor	# children
	by grace	Assets	inclusion	Health	non-list	list	House	remittance	discord	violence,	supply	enrolled
	belief index	index	index	index	random.	random.	index	index	index	list rand.	(hours)	in school
				]	Panel A: Pool	ed specification	on					
Any V	-0.036*	-0.027	0.020	0.000	0.092***	0.043	0.030	0.027	-0.034	-0.072	0.244	-0.018
	(0.020)	(0.021)	(0.024)	(0.020)	(0.024)	(0.033)	(0.025)	(0.019)	(0.024)	(0.040)	(0.215)	(0.020)
Any HL	-0.005	-0.025	0.157***	0.015	0.030	0.066	0.007	-0.015	-0.029	-0.048	0.013	-0.018
•	(0.020)	(0.021)	(0.025)	(0.020)	(0.024)	(0.033)	(0.025)	(0.019)	(0.024)	(0.040)	(0.220)	(0.020)
p-value for Any V	0.079	0.211	0.396	0.985	0.000	0.191	0.239	0.153	0.164	0.078	0.256	0.376
				Pan	el B: Disaggre	gated specific	cation					
VHL	-0.040	-0.050	0.179***	0.015	0.121***	0.108**	0.036	0.012	-0.063*	-0.118**	0.264	-0.035
	(0.026)	(0.031)	(0.038)	(0.028)	(0.034)	(0.049)	(0.036)	(0.031)	(0.036)	(0.055)	(0.318)	(0.027)
HL	-0.021	0.014	0.124**	-0.027	0.136*	0.121***	0.045	-0.083**	-0.036	-0.081	-0.074	-0.019
	(0.045)	(0.057)	(0.048)	(0.042)	(0.070)	(0.043)	(0.059)	(0.038)	(0.052)	(0.058)	(0.376)	(0.043)
V	-0.061	0.008	-0.010	-0.044	0.208***	0.105**	0.068	-0.039	-0.049	-0.120**	0.116	-0.019
	(0.041)	(0.060)	(0.044)	(0.041)	(0.067)	(0.045)	(0.060)	(0.039)	(0.049)	(0.061)	(0.406)	(0.042)
p-value for VHL = HL	0.696	0.265	0.297	0.334	0.836	0.779	0.879	0.017	0.617	0.509	0.404	0.688
p-value for $V = C$	0.143	0.899	0.811	0.285	0.002	0.020	0.258	0.317	0.326	0.050	0.775	0.657
				P	anel C: Sumn	nary informati	on					
Control mean	0	0	0	0	0	0.606	0	0	0	0.903	1.555	1.896
# observations in VHL	1,578	1,578	1,578	1,578	1578	1578	1,578	1,578	1,267	1,579	1,452	1,366
# observations in HL	1,549	1,549	1,549	1,549	1549	1549	1,549	1,549	1,297	1,550	1,439	1,341
# observations in V	1,550	1,550	1,550	1,550	1550	1550	1,550	1,550	1,263	1,551	1,434	1,365
# observations in C	1,599	1,599	1,599	1,599	1599	1599	1,599	1,599	1,331	1,600	1,490	1,410

# **Appendix**

Appendix Table 1 shows the questions that constitute our outcome variables. Unless indicated otherwise in the table, the variable listed in the first column is created by summing its components listed in the second column. Some components are made up of sub-components, which are shown to the right of the components. For variables whose name includes the word "index," if the index is found in previous academic literature, we use the construction method from that literature, which in our cases always involves simply summing the components (which are sometimes reverse-coded, as indicated in the last column). If there is no pre-existing index, we use the index construction methodology of Kling, Liebman, and Katz (2007). We first sign all variables such that higher is telling a consistent story for each component of the index. Then we standardize each component by subtracting its control group mean and dividing by its control group standard deviation. We compute the sum of the standardized components and standardize the sum once again by the control group sum's standard deviation.

After data collection, we discovered an issue with our measure of intrinsic religious orientation. The indexes for intrinsic and extrinsic religious orientation were measured using one 14 question block, with eight questions constituting the intrinsic index and six constituting the extrinsic index. For each question, respondents were asked to state on a Likert scale a level of agreement with a statement. In 11 out of the 14 questions, stronger agreement corresponds to stronger religiosity. In the remaining three—all of which are part of the intrinsic index—weaker agreement corresponds to stronger religiosity. We believe that respondents did not perceive the subtle changes in the direction of the questions, causing them to use stronger agreement to express stronger religiosity even for the reversed questions.<sup>2</sup> Thirty-three percent of respondents answered "agree" or "strongly agree" to all 14 questions, regardless of whether the question was reversed, whereas only 0.02% of respondents answered "agree" or "strongly" to all non-reversed questions and "disagree" or "strongly disagree" to all reversed questions. (No respondents answered

<sup>&</sup>lt;sup>1</sup> For observations without information on one or more components of the index, we impute the missing component standardized values as the mean of the non-missing components' standardized values for that individual/household.

<sup>&</sup>lt;sup>2</sup> The finding that many subjects indiscriminately agree with statements to express a general support for religion goes back to the earliest research on intrinsic and extrinsic religious orientation. Allport and Ross (1967) write, "In responding to the religious items these individuals seem to take a superficial or 'hit and run' approach. Their mental set seems to be 'all religion is good.' 'My religious beliefs are what really lie behind my whole life'—Yes! 'Although I believe in my religion, I feel there are many more important things in my life'—Yes!" They classify such types as the "indiscriminately pro-religious" and find that they are likely to be less educated. This correlation would be consistent with the high prevalence of such types in our sample of the ultra-poor.

"disagree" or "strongly disagree" to all questions.) Agreement levels are positively correlated across all seven intrinsic orientation statements, regardless of whether greater agreement corresponds to greater religiosity or not. We conclude that our intrinsic religious orientation index should only include the five non-reversed questions, and this five-question intrinsic index is what we report in Table 1.

If we instead use the eight-question intrinsic measure, as stated in our pre-analysis plan, the point estimate of the "Any V" treatment effect on intrinsic religious orientation in the pooled regression specification is 0.04 standard deviations, and its q-value rises to 0.084. In the disaggregated regression specification, the point estimate of the V versus control effect on intrinsic religious orientation is 0.01 standard deviations (q = 0.899), and the point estimate of the VHL versus HL effect on intrinsic religious orientation is 0.074 standard deviations (q = 0.330). The q-values on the other religious outcomes are qualitatively similar regardless of whether we use the eight-question or five-question intrinsic measure. Therefore, even though the estimates of the V curriculum's effect on intrinsic religious orientation weaken when we use the eight-question measure, we still find robust first-stage effects on other measures of religiosity.

Online Appendix Tables 5-33 show the treatment effect estimates on each component of the outcome variables. We also include Online Appendix Table 34, which shows treatment effects on consumption of "temptation goods" (cigarettes and alcoholic beverages). The categories into which labor supply is decomposed in Online Appendix Tables 12 and 33 do not correspond exactly to the categories we asked respondents about. When we looked at the data, we realized that responses in the labor category of "other" could be manually reclassified into fishing, self-employment, and other employment with unclear formality. We have also consolidated in the table the categories of formal employment and operation of a business that is not the household's, fishing and livestock tending, and housework in an outside household and daily labor.

# **Appendix Table 1. Outcome Variable Construction**

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel A: Prir	mary religious outcomes	
Religion	I enjoy thinking about m	y religion	From Gorsuch and McPherson (1989).	1 Strongly disagree - 5 Strongly agree
intrinsic index	It is important to me to spand prayer	pend time in private thought	Index formed by adding together responses without first normalizing.	1 Strongly disagree - 5 Strongly agree
	I have often had a strong	sense of God's presence		1 Strongly disagree - 5 Strongly agree
	I try hard to live all my li religious beliefs	ife according to my		1 Strongly disagree - 5 Strongly agree
	My whole approach to li	fe is based on religion		1 Strongly disagree - 5 Strongly agree
	Although I am religious, life	I don't let it affect my daily	This question not used in our main analysis	1 Strongly agree - 5 Strongly disagree
	It doesn't much matter w good	hat I believe so long as I am	This question not used in our main analysis	1 Strongly agree - 5 Strongly disagree
	Although I believe in my are more important in life	religion, many other things	This question not used in our main analysis	1 Strongly agree - 5 Strongly disagree
Religion extrinsic index	I go to religious services make friends	because it helps me to	From Gorsuch and McPherson (1989). Index formed by adding together	1 Strongly disagree - 5 Strongly agree
	I pray mainly to gain reli	ef and protection	responses without first normalizing.	1 Strongly disagree - 5 Strongly agree
	What religion offers me trouble and sorrow	most is comfort in times of		1 Strongly disagree - 5 Strongly agree
	Prayer is for peace and h	appiness		1 Strongly disagree - 5 Strongly agree
	I go to religious services my friends	mostly to spend time with		1 Strongly disagree - 5 Strongly agree
	I go to religious services seeing people there	mainly because I enjoy		1 Strongly disagree - 5 Strongly agree
General religion index	To what extent do you coperson?	onsider yourself a religious	From the Brief Multidimensional Measure of Religiousness/Spirituality (Fetzer Institute 1999)	1 Not religious at all - 4 Very religious
	In the last month, have yelse to change the way the	ou tried to convince anyone ney think about God?	From ICM survey	No = 0, Yes = 1
	How many people [have	you tried to convince]?	Adapted from ICM survey	Integer $\geq 0$

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel A: Pri	mary religious outcomes	
	How often do you go to n  In how many of the past	7 days did you pray		Daily = 365, More than once a week = 104, Once a week = 52, Once or twice a month = 18, Every month or so = 9, Once or twice a year = 1.5, Never = 0. Integer $0-7$
		than at a place of worship?		
	How satisfied are you wi now?	th your spiritual life right	From ICM survey	1 Not at all satisfied - 5 Very satisfied
	The Bible is accurate in a	ll that it teaches	From ICM survey. These 3 responses are	1 Strongly disagree - 5 Strongly agree
	I believe the Bible has de say and do	cisive authority over what I	added together before standardizing, and then given triple weight when averaging	1 Strongly disagree - 5 Strongly agree
	I believe the Christian Go Spirit—is the only true G	od—Father, Son, and Holy od	the components to construct the general religion index. Asked only of Christians.	1 Strongly disagree - 5 Strongly agree
Religion – list randomized	I have made a personal contact is still important to n	ommitment to Jesus Christ ne today	Adapted from ICM survey. Both questions elicited using list	False = 0, True = 1
	I have read or listened to	the Bible in the past week	randomization. Outcome variable is average of two responses.	False = 0, True = 1
		Panel B: Prima	ry non-religious outcomes	
Monthly consumption	Food consumption in the	last week	Total amount spent in the last week on viand, rice/corn/beans/etc., bananas/cassava/potatoes/yams/starches/etc., fruits/vegetables, milk/eggs, non-alcoholic beverages. Multiplied by 30/7.	Amount in PHP (1 USD ≈ 45 PHP in 2015)
	Non-food consumption is	n the last week	Total amount spent in the last week on alcoholic beverages, cigarettes, phone credit, transportation, clothing/shoes, soaps/cosmetics, gifts. Multiplied by 30/7.	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
	Average weekly celebrat months	ion spending in last six	Total amount spent on weddings, funerals, festivals, anniversaries, and birthdays in the last six months divided by 6	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel B: Prima	ary non-religious outcomes	
Food security index	No household member last six months	has gone to bed hungry in	Constructed from question, "In the last 6 months, did you or any other person in this household ever go to bed hungry because there were not enough resources for food?"	No = 1; Yes = 0; Yes, but during lean season only = 0 [Lean season in the Philippines is usually July and August]
	No household member last six months outside	has gone to bed hungry in of lean season	Constructed from question, "In the last 6 months, did you or any other person in this household ever go to bed hungry because there were not enough resources for food?"	No = 1; Yes = 0; Yes, but during lean season only = 1 [Lean season in the Philippines is usually July and August]
	Number of days where gone to bed hungry in p	no household member has ast seven days	Constructed as 7 minus the number of days a member of the household has gone to bed hungry in past seven days	Integer 0 – 7
Monthly income	Total household paymer labor on behalf of non-h	nts received for agricultural nousehold member	Payments in the last 30 days	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
	Total household paymer	nts received for formal	Payments in the last 30 days	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
	Total household payme	nts received for housework	Payments in the last 30 days	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
	Total household paymer animals in an outside ho		Payments in the last 30 days	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
	Total household paymer business that is not the l	nts received for operating nousehold's	Payments in the last 30 days	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
			Payments in the last 30 days	Amount in PHP (1 USD ≈ 45 PHP in
	Total household paymen	nts for daily labor		2015)
	Total household payment outside the household	nts received for other work	Payments in the last 30 days	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
	Total profit from housel	nold businesses	In most recent month with normal sales	Amount in PHP (1 USD $\approx$ 45 PHP in 2015)

Variable	Components	Sub-components (if any)	Details	Possible answers
			ry non-religious outcomes	
Adult weekly labor supply	Total hours spent in outsic non-household member	de agricultural labor for	During past seven days, only household members age $\geq 17$	Integer
	Total hours spent in forma	al employment	During past seven days, only household members age $\geq 17$	Integer
	Total hours spent doing household	ousework in an outside	During past seven days, only household members age $\geq 17$	Integer
	Total hours spent tending household during past sev		During past seven days, only household members age $\geq 17$	Integer
	Total hours spent operation household's	ng business that is not the	During past seven days, only household members age $\geq 17$	Integer
	Total hours spent on daily	labor	During past seven days, only household members age $\geq 17$	Integer
	Total hours spent on other household	r work outside the	During past seven days, only household members age $\geq 17$	Integer
Life satisfaction index	Kessler K6 nonspecific distress scale	About how often during the past 30 days did you feel nervous?	From Kessler et al. (2002). Index formed by adding together responses without first normalizing.	1 All of the time - 5 none of the time
		About how often during the past 30 days did you feel hopeless?		1 All of the time - 5 none of the time
		About how often during the past 30 days did you feel restless or fidgety?		1 All of the time - 5 none of the time
		About how often during the past 30 days did you feel so depressed that nothing could you cheer you up?		1 All of the time - 5 none of the time
		About how often during the past 30 days did you feel that everything was difficult?		1 All of the time - 5 none of the time

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel B: Prima	ry non-religious outcomes	
		About how often during the past 30 days did you feel worthless?		1 All of the time - 5 none of the time
	Sum of 4 Gallup World Poll questions	Did you experience enjoyment during a lot of the day yesterday?		No = 0, Yes = 1
		Did you experience happiness during a lot of the day yesterday?		No = 0, Yes = 1
		Did you experience worry during a lot of the day yesterday?		No = 1, Yes = 0
		Did you experience sadness during a lot of the day yesterday?		No = 1, Yes = 0
	Did you smile or laugh a	lot yesterday?	From Gallup World Poll	No = 0, Yes = 1
	How would you describe	your satisfaction with life?	Elicited using Cantril's ladder	1 Very dissatisfied - 10 Very satisfied
	Taking all things together	, would you say you are	From World Values Survey	1 Not at all happy - 4 Very happy
Perceived relative economic status	Where would you place y ladder in terms of econom		Elicited using Cantril's ladder	1 Poorest individuals of your community - 10 Best-off members of your community
		Panel	C: Mechanisms	
Trust index	In general, would you say trusted or that most peopl			Most people can't be trusted = 0, Most people can be trusted = 1
	Do you think most people advantage of you if they g try to be fair?	e would try to take got a chance, or would they	From World Values Survey	Try to take advantage of you = 0, Try to be fair = 1
	Would you say that most helpful, or that they are methemselves?	of the time people try to be ostly just looking out for	From General Social Survey	Looking out for themselves = 0, Try to be helpful = 1

Variable	Components	Sub-components (if any)	Details	Possible answers
	•	Pane	l C: Mechanisms	
Social safety net index	not have 40 PHP availa	one in your household did ble for an urgent need, how d access this 40 PHP from a isehold?		1 Very unlikely - 5 Very likely
	not have 1000 PHP ava	one in your household did ilable for an urgent need, could access this 1000 PHP our household?		1 Very unlikely - 5 Very likely
	Do you discuss persona your close family?	l issues with anyone outside		No = 0, Yes = 1
	How often do you usual	lly speak to this person?		Daily = 365, A few times a week = 104, Weekly = 52, A few times a month = 24, Monthly = 12, Every month or so = 9, A few times a year = 6, Yearly = 1. If there is no such person, coded as 0.
		usehold receive any meals in your local community?		No = 0, Yes = 1
	How many meals [were	received]?	Top-coded at 99th percentile	Integer
	Did this household give another household in yo	any meals to anybody from our local community?		No = 0, Yes = 1
	How many meals [were	given]?	Top-coded at 99th percentile	Integer
Community activities index	Did you attend any villa last 6 months?	age leaders meetings in the		No = 0, Yes = 1
	In the past 6 months, ha community activities?	ve you participated in any		No = 0, Yes = 1
	How frequently did you activities?	participate in community		Daily = 365, A few times a week = 104, Weekly = 52, A few times a month = 24, Monthly = 12, Every month or so = 9, A few times a year = 6, Yearly = 1. If the respondent did not participate, coded as 0.

Variable	Components	Sub-components (if any)	Details	Possible answers
			C: Mechanisms	
Perceived stress scale index	How often have you felt control the important thi		From Cohen et al. (1983). Index formed by adding together responses without	1 Very Often - 5 Never
	How often have you felt to handle your personal	confident about your ability problems?	first normalizing.	1 Never - 5 Very Often
	How often have you felt way?	that things were going your		1 Never - 5 Very Often
	How often have you felt so high that you could no	difficulties were piling up ot overcome them?		1 Very Often - 5 Never
Powerful others index	I feel like what happens determined by God	in my life is mostly	From Levenson (1981) Powerful Others scale, modified to apply to God's control	1 Strongly disagree - 5 Strongly agree
	Although I might have g successful without appearance		of one's life. Index formed by adding together responses without first	1 Strongly disagree - 5 Strongly agree
	My life is chiefly contro	lled by God	normalizing.	1 Strongly disagree - 5 Strongly agree
	Getting what I want requ	ires pleasing God		1 Strongly disagree - 5 Strongly agree
	Whether or not I have an physically depends most	n accident and hurt myself aly on God		1 Strongly disagree - 5 Strongly agree
	In order to have my planthey fit with God's plan	s work, I make sure that for me		1 Strongly disagree - 5 Strongly agree
Locus of control index	Internality subscale	Whether or not I am successful depends mostly on my ability	From Levenson (1981). Index formed by adding together responses without first normalizing.	1 Strongly disagree - 5 Strongly agree
		Whether or not I have an accident and hurt myself depends mostly on how careful I am on a daily basis		1 Strongly disagree - 5 Strongly agree
		When I make plans, I am almost certain to make them work		1 Strongly disagree - 5 Strongly agree

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel	C: Mechanisms	
		How many friends I have depends on how nice a person I am		1 Strongly disagree - 5 Strongly agree
		I can pretty much determine what will happen in my life		1 Strongly disagree - 5 Strongly agree
		I am usually able to protect my personal interests		1 Strongly disagree - 5 Strongly agree
		When I get what I want it's usually because I worked hard for it		1 Strongly disagree - 5 Strongly agree
		My life is determined by my own actions		1 Strongly disagree - 5 Strongly agree
	Chance subscale	To a great extent my life is controlled by accidental happenings	From Levenson (1981). Index formed by adding together responses without first normalizing.	1 Strongly agree - 5 Strongly disagree
		Often there is no chance of protecting my personal interests from bad luck happening		1 Strongly agree - 5 Strongly disagree
	When I get what I want, it is usually because I am lucky		1 Strongly agree - 5 Strongly disagree	
		I have often found that what is going to happen will happen		1 Strongly agree - 5 Strongly disagree
		Whether or not I get into an accident and hurt myself physically is mostly a matter of luck		1 Strongly agree - 5 Strongly disagree

Variable	Components	Sub-components (if any)	Details	Possible answers
		Pane	C: Mechanisms	
		It is not wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune		1 Strongly agree - 5 Strongly disagree
		Whether or not I am successful depends on whether I am lucky enough to be in the right place at the right time		1 Strongly agree - 5 Strongly disagree
		It is chiefly a matter of fate whether or not I have a few friends or many friends		1 Strongly agree - 5 Strongly disagree
	World Values Survey locus of control	Which comes closest to your view on a scale on which (1) means "everything in life is determined by fate" and (10) means "people shape their fate themselves"?	From World Values Survey	1 fate - 10 people
Life orientation	In uncertain times, I usua	ally expect the best	From the Life Orientation Test – Revised	1 I disagree a lot - 5 I agree a lot
index	If something can go wron	ng for me, it will	index by Scheier et al. (1994). Index formed by adding together responses	1 I agree a lot - 5 I disagree a lot
	I'm always optimistic ab	out my future	without first normalizing.	1 I disagree a lot - 5 I agree a lot
	I hardly ever expect thing	gs to go my way		1 I agree a lot - 5 I disagree a lot
	I rarely count on good th	ings happening to me		1 I agree a lot - 5 I disagree a lot
	Overall, I expect more go than bad	ood things to happen to me		1 I disagree a lot - 5 I agree a lot
Expectations index	Which step [of the life sa believe you will be on in	ntisfaction ladder] do you 5 years?	Elicited using Cantril's ladder	1 Very dissatisfied - 10 Very satisfied

Variable	Components Sub-com	nponents (if any)	Details	Possible answers
			C: Mechanisms	
	Where do you think you will be on t economic status] ladder 5 years from		Elicited using Cantril's ladder	1 Poorest individuals - 10 Best-off members
Optimism index	How optimistic are you in general, on a scale of 1 to 7?		From Scale Optimism-Pessimism-2 by Kemper et al. (2015). Pessimism scale shown to respondents had 1 be "not at all pessimistic" and 7 be "very pessimistic"	1 Not at all optimistic - 7 Very optimistic
	How pessimistic are you in general, on a scale of 1 to 7?			1 Very pessimistic - 7 Not at all pessimistic
Grit index	New ideas and projects sometimes distract me from previous ones		From the Short Grit Scale (Duckworth and Quinn 2009). Index formed by adding together responses without first normalizing.	1 Very much like me - 5 Not like me at all
	Setbacks don't discourage me			1 Not like me at all - 5 Very much like me
	I have been obsessed with a certain idea or project for a short time but later lost interest I am a very hard worker I often set a goal but later choose to pursue a different one I have difficulty maintaining my focus on projects that take more than a few months I finish whatever I begin			1 Very much like me - 5 Not like me at all
				1 Not like me at all - 5 Very much like me
				1 Very much like me - 5 Not like me at all
				1 Very much like me - 5 Not like me at all
				1 Not like me at all - 5 Very much like me
	I am diligent			1 Not like me at all - 5 Very much like me
Self-control index	I have a hard time breaking bad hab	its	Subset of the Brief Self-Control Scale by Tangney, Baumeister, and Boone (2004).	1 Very much like me - 5 Not like me at all
	I get distracted easily  I say inappropriate things  I refuse things that are bad for me, even if they are fun		Index formed by adding together responses without first normalizing.	1 Very much like me - 5 Not like me at all
				1 Very much like me - 5 Not like me at all
				1 Not like me at all - 5 Very much like me

Variable	Components	Sub-components (if any)	Details	Possible answers
		Pane	l C: Mechanisms	
	I'm good at resisting te	mptation		1 Not like me at all - 5 Very much like me
	People would say that I discipline	have very strong self-	1 Not like me at all - 5 Very much like me	
	Pleasure and fun somet work done	1 Very much like me - 5 Not like me at all		
	I do things that feel goo later on	1 Very much like me - 5 Not like me at all		
	Sometimes I can't stop something, even if I known	1 Very much like me - 5 Not like me at all		
	I often act without thinl alternatives	1 Very much like me - 5 Not like me at all		
		Panel D:	Secondary outcomes	
Salvation by grace belief index	If I am good enough, G sins	od will cleanse me of my	Question asked only of Christians	1 Strongly agree - 5 Strongly disagree
	I follow God's laws so	that I can go to heaven	Question asked only of Christians	1 Strongly agree - 5 Strongly disagree
	Which of the following about what happens after	best describes your belief er death?		There is no life after death = 0; I will go to heaven because I tried my best to be a good person and to live a good life = 0; I will go to heaven because I tried to be involved in my religion, pray, and live the way I think God wants me to = 0; I will go to hell = 0; I'm not sure if I will go to heaven or hell = 0; I will be reincarnated = 0; My belief is not well-described by any of these choices = 0; I will go to heaven because I have accepted Jesus Christ as my personal savior = 1

Assets index	Chance that you, or someone would have 40 PHP available circumstance of urgent need.  Chance that you, or someone would have 1,000 PHP avail circumstance of urgent need.	e in your household, le for your use in this? e in your household, lable for your use in this	Secondary outcomes	1 Very unlikely - 5 Very likely  1 Very unlikely - 5 Very likely
Assets index	would have 40 PHP available circumstance of urgent need. Chance that you, or someone would have 1,000 PHP avail circumstance of urgent need.	e for your use in this? e in your household, lable for your use in this		
	would have 1,000 PHP avail circumstance of urgent need	lable for your use in this		1 Very unlikely - 5 Very likely
		?		J
	Number of productive assets months	acquired in last 6	Number of the following acquired in the last 6 months: tractors, sewing machines and farm tools. Top-coded at 99th percentile.	Integer $\geq 0$
	Value of the productive asse acquired in the last 6 months		Sum of the amount paid for the above categories of assets. Top-coded at 99th percentile.	Value of assets in PHP (1 USD $\approx 45$ PHP in 2015)
	Number of house assets acqu	aired in last 6 months	Number of the following acquired in the last 6 months: TV, VTR/VHS/VCD/DVD player, radio/transistor/stereo, electric fan, refrigerator/freezer, telephone/mobile phone, sala set, bicycle or pedicab, motorcab or motorcycle, boat, washing machine, chair/stool, bed or cot, table, watch or clock, jewelry, gas stove. Topcoded at 99th percentile.	Integer ≥ 0
	Value of the house assets accommonths	quired in the last 6	Sum of the amount paid for the above categories of assets. Top-coded at 99th percentile.	Value of assets in PHP (1 USD $\approx 45$ PHP in 2015)
	Number of productive assets	(level)	Number of tractors, sewing machines, and farm tools owned. Top-coded at 99th percentile.	Integer $\geq 0$
	Value of productive assets (I	evel)	Sum of the amount paid for the above assets. Top-coded at 99th percentile.	Value of assets in PHP (1 USD $\approx$ 45 PHP in 2015)

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel D:	Secondary outcomes	
	Number of house assets (lev	vel)	Number of the following owned: TV, VTR/VHS/VCD/DVD player, radio/transistor/stereo, electric fan, refrigerator/freezer, telephone/mobile phone, sala set, bicycle or pedicab, motorcab or motorcycle, boat, washing machine, chair/stool, bed or cot, table, watch or clock, jewelry, gas stove. Topcoded at 99th percentile.	Integer $\geq 0$
	Value of house assets (level	)	Sum of the amount paid for the above assets. Top-coded at 99th percentile.	Value of assets in PHP (1 USD $\approx$ 45 PHP in 2015)
	How much money do you h	ave set aside in savings?		Amount in PHP (1 USD $\approx$ 45 PHP in 2015)
Financial inclusion index	Do you or anyone in your he money set aside as savings?	ousehold currently have		No = 0, Yes = 1
	Do you—by yourself or wit currently have an account at			No = 0, Yes = 1
	Have you made a deposit at the past 6 months?	a financial institution in		No = 0, Yes = 1
Health index	Number of serious health ev (past 6 months)	vents in the household	We top-code at the 99th percentile and multiply by -1	Integer
	Total number of workdays in members due to illness in pa		We top-code each household member at 30 days and multiply by -1	Integer
	Number of household meml an illness that have kept the days)		We code this as the negative of the response	Integer

Variable	Components	Sub-components (if any)	Details	Possible answers
	•	Panel D:	Secondary outcomes	
Hygiene index, non-list	Own or lease animals that stable	at are not kept in a separate		No = 1, Yes = 0
randomized	At least one household n defecation	nember practices open	Coded yes if primary latrine is forest, bushes, fields, bodies of water, hanging latrine, uncovered pit latrine, open pit	No = 1, Yes = 0
Hygiene, list- randomized	•	lrinking it, for example by boiling it, or using a water	Both questions elicited using list randomization. Outcome variable is average of two components' responses	No = 0, Yes = 1
	I wash my hands after go	oing to the bathroom		No = $0$ , Yes = $1$
House index	Are all rooms leak-free?			No = $0$ , Yes = $1$
	Are at least some rooms	leak-free?		No = 0, Yes = 1
	Are all rooms able to be	safely locked?		No = $0$ , Yes = $1$
	Are at least some rooms	able to be safely locked?		No = 0, Yes = 1
	Primary source of energy	y for lighting is electricity		No = $0$ , Yes = $1$
	Primary latrine is inside	the house		No = $0$ , Yes = $1$
Migration and remittance index	Number of migrators in	the household	Number of household members who have slept outside the house for more than two consecutive nights for work in the past six months	Integer
	Number of days migrato gone in the last six mont			Integer
	Number of migrators wh brought money home to months	no sent remittances or the household in the last six		Integer
	Household had at least o remittances or brought c months			No = 0, Yes = 1
	Amount received in rem home by household mign	ittances or cash brought rators in the last six months		Amount in PHP (1 USD $\approx$ 45 PHP 2015)
	nome of nousehold lings	autoro in the fust six months		2013)

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel D:	Secondary outcomes	
No discord index	During the last one mon arguments with your spe spending on major hous			No = 1, Yes = 0
	_	th, did you have any major ouse or partner over saving		No = 1, Yes = 0
	During the last one mon arguments with your spot behavior and disciplining			No = 1, Yes = 0
	During the last one mon arguments with your spointeractions with relative			No = 1, Yes = 0
		th, did you have any major ouse or partner over alcohol		No = 1, Yes = 0
	During the last one mon arguments with your spoother issues?	th, did you have any major ouse or partner over any		No = 1, Yes = 0
No domestic violence, list randomized	Someone in my househo abuse	old is experiencing physical	Question elicited using list randomization.	No = 1, Yes = 0
Child labor supply	Total hours spent in out	side agricultural labor for	During past seven days, only household members age $\leq 16$	Integer
	Total hours spent in form	mal employment	During past seven days, only household members age $\leq 16$	Integer
	Total hours spent doing household	housework in an outside	During past seven days, only household members age $\leq 16$	Integer
	Total hours spent tendin household during past se	_	During past seven days, only household members age $\leq 16$	Integer

Variable	Components	Sub-components (if any)	Details	Possible answers
		Panel D:	Secondary outcomes	
	Total hours spent opera household's	ting business that is not the	During past seven days, only household members age $\leq 16$	Integer
	Total hours spent on da	ily labor	During past seven days, only household members age $\leq 16$	Integer
	Total hours spent on oth household	ner work outside the	During past seven days, only household members age $\leq 16$	Integer
# children enrolled in school			$Age \le 16$	Integer

## Online Appendix

# Randomizing Religion: The Impact of Protestant Evangelism on Economic Outcomes

Gharad Bryan, James J. Choi, Dean Karlan

### This file includes the following tables:

a. Balance across treatment groups

Online Appendix Table 1: Pre-treatment characteristics (collected in 6-month survey)

b. Main results including communities that switched treatments

Online Appendix Table 2: Primary outcomes (including communities that switched treatment status)

Online Appendix Table 3: Mechanisms (including communities that switched treatment status)

Online Appendix Table 4: Secondary outcomes (including communities that switched treatment status)

c. Results by components

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Online Appendix Table 12: Adult labor supply

Online Appendix Table 13: Life satisfaction index

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Online Appendix Table 19: Powerful Others Subscale

Online Appendix Table 20a: Locus of control index: Internality subscale

Online Appendix Table 20b: Locus of control index: Chance subscale and World Value Survey question

Online Appendix Table 21: Life orientation index

Online Appendix Table 22: Expectations index and optimism index

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Online Appendix Table 24: Self-control index

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Online Appendix Table 32: No discord index and no domestic violence – list randomized

Online Appendix Table 33: Child labor supply and children enrolled in school

#### d. Temptation goods

Online Appendix Table 34: Consumption of temptation goods

#### e. Robustness checks

Online Appendix Table 35: Income robustness checks

### f. Religion checks

Online Appendix Table 36: Summary statistics on religious affiliation by treatment group

Online Appendix Table 37: Treatment effects on binary variables for Catholic and Protestant respondents

Online Appendix Table 1. Pre-treatment characteristics (collected in 6-month survey)

	Control	V	111	VIII	C vs. V,	C vs. HL,	C vs. VHL,	V vs. HL,	V vs. VHL,	HL vs. VHL,	p -value from joint test of
	Control	V	HL	VHL	p -value	p -value	p -value	p -value	p -value	p -value	equality across arms
Avone on mumb on of household	5.166	5.263	5.105	5.025	0.229	0.540	0.165	0.125	0.023	0.448	0.132
Average number of household members	(0.068)		(0.073)	(0.075)	0.328	0.340	0.163	0.125	0.023	0.448	0.132
	,	(0.073)	` ,	` /	0.440	0.416	0.550	0.066	0.207	0.104	0.407
Average number of adults	2.765	2.808	2.810	2.733	0.440	0.416	0.559	0.966	0.207	0.194	0.497
(age $\geq$ 17) in the household	(0.036)	(0.041)	(0.041)	(0.043)							
Average number of children	2.385	2.430	2.287	2.279	0.587	0.265	0.203	0.096	0.062	0.928	0.184
(age < 17) in the household	(0.060)	(0.057)	(0.064)	(0.058)							
% female respondents	0.832	0.849	0.833	0.834	0.444	0.967	0.923	0.520	0.518	0.963	0.863
	(0.016)	(0.016)	(0.019)	(0.017)							
% married respondents	0.794	0.741	0.786	0.771	0.018	0.712	0.281	0.052	0.210	0.488	0.102
	(0.013)	(0.018)	(0.015)	(0.016)							
Average years of education of	7.737	7.772	7.727	7.654	0.917	0.976	0.808	0.894	0.724	0.833	0.988
respondent	(0.239)	(0.225)	(0.246)	(0.248)							
% ICM Base: Koronoadal	0.246	0.232	0.234	0.241	0.849	0.865	0.951	0.984	0.896	0.913	0.997
	(0.051)	(0.050)	(0.050)	(0.050)							
% ICM Base: General Santos	0.233	0.245	0.241	0.237	0.863	0.912	0.956	0.951	0.906	0.956	0.998
	(0.047)	(0.050)	(0.050)	(0.048)							
% ICM Base: Bacolod	0.271	0.263	0.270	0.268	0.912	0.990	0.971	0.922	0.941	0.981	1.000
	(0.053)	(0.052)	(0.053)	(0.052)							
% ICM Base: Dumaguete	0.250	0.260	0.256	0.253	0.890	0.938	0.962	0.952	0.927	0.976	0.999
	(0.049)	(0.051)	(0.051)	(0.050)							
# days between June 1 2015 and	154.439	156.865	147.488	153.984	0.719	0.304	0.951	0.130	0.678	0.351	0.476
interview end date	(5.144)	(4.360)	(4.385)	(5.414)							
% households successfully	0.836	0.831	0.849	0.825	0.807	0.467	0.606	0.296	0.769	0.193	0.557
interviewed	(0.015)	(0.014)	(0.011)	(0.015)							
Number of observations	1,599	1,550	1,549	1,578							

These numbers exclude the five community pairs that did not comply with their treatment assignment. The average number of household members is not exactly equal to the sum of the average number of adults and the average number of children because of missing ages in the data. Standard errors clustered by community are in parentheses. The following educational categories are coded as corresponding to the following number of years of education: Pre-school only = 0.5, some grade 12 education without high school graduation = 12, high school graduation = 13, partial vocational education = 14, complete vocational education = 15, partial college = 16, college graduation = 17.

Online Appendix Table 2. Primary outcomes (including communities that switched treatment status)

	1	2	3	4	5	6	7	8	9	10
	Religion	Religion	General	Religion - list	Monthly	Food security	Monthly	Adult weekly	Life	Perceived
		extrinsic index		U	consumption (PHP)	index	income (PHP)	labor supply (hours)	satisfaction index	relative econ. status
Panel A: Pooled specification										
Any V	0.098***	0.129***	0.069***	0.053	4.907	0.013	380.3***	0.814	0.024	-0.105**
Tilly V	(0.023)	(0.023)	(0.022)	(0.036)	(98.76)	(0.022)	(123.9)	(1.057)	(0.022)	(0.046)
	[0.001]	[0.001]	[0.003]	[0.145]	[0.961]	[0.655]	[0.014]	[0.655]	[0.539]	[0.070]
Any HL	0.011	-0.023	-0.000	-0.018	-59.151	-0.034	111.9	-1.550	-0.012	-0.033
•	(0.023)	(0.023)	(0.022)	(0.036)	(91.50)	(0.022)	(123.4)	(1.070)	(0.022)	(0.046)
Panel B: Disaggregated specific	ation									
VHL	0.108***	0.106***	0.070**	0.035	-55.32	-0.020	500.8***	-0.773	0.012	-0.136**
	(0.033)	(0.036)	(0.029)	(0.052)	(154.8)	(0.036)	(171.5)	(1.362)	(0.027)	(0.065)
HL	0.044	0.089	-0.032	0.001	-297.47	-0.033	220.4	-0.208	-0.027	-0.099
	(0.053)	(0.063)	(0.052)	(0.053)	(195.2)	(0.050)	(270.1)	(2.327)	(0.055)	(0.109)
V	0.118**	0.219***	0.041	0.068	-187.38	0.002	531.0*	2.556	-0.010	-0.155
	(0.048)	(0.062)	(0.049)	(0.055)	(202.3)	(0.049)	(277.1)	(2.249)	(0.046)	(0.116)
p-value for VHL = HL test	0.255	0.793	0.056	0.467	0.233	0.786	0.292	0.809	0.484	0.737
q-value for VHL = HL test	[0.409]	[0.794]	[0.151]	[0.534]						
p-value for $V = C$ test	0.0154	0.0005	0.4040	0.2156	0.3549	0.9704	0.0563	0.2565	0.8351	0.1806
q-value for $V = C$ test	[0.062]	[0.005]	[0.534]	[0.409]	[0.533]	[0.971]	[0.338]	[0.514]	[0.971]	[0.514]
Panel C: Summary information										
Control group mean	0	0	0	0.609	4,995	0	4,241	79.86	0	3.236
# observations in VHL	1,646	1,646	1,646	1,646	1,646	1,594	1,520	1,520	1,646	1,644
# observations in HL	1,596	1,596	1,596	1,596	1,596	1,568	1,487	1,486	1,596	1,595
# observations in V	1,598	1,598	1,598	1,598	1,598	1,556	1,482	1,481	1,598	1,595
# observations in C	1,667	1,667	1,667	1,667	1,667	1,635	1,557	1,557	1,667	1,664

Results in this table include observations from communities that did not follow the original treatment assignment and switched treatment status. Panels A and B show treatment effect estimates relative to control. In Panel A, "Any V" refers to the "Values only" and "Values, Health, and Livelihood" treatment groups, and "Any HL" refers to the "Health and Livelihood only" and "Values, Health, and Livelihood" treatment groups. Dependent variables are indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses, and q-values are in brackets. The q-values in Panel A are for tests of effects relative to the control group. \*, \*\*, and \*\*\* indicate p-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 3. Mechanisms (including communities that switched treatment status)

	11	12	13	14	15	16	17	18	19	20	21
	Trust index	Social safety net index	Communit y activities index	Perceived stress scale index	Powerful others index	Locus of control index	Life orientation index	Expectations index	Optimism index	Grit index	Self-control index
Panel A: Pooled specification											
Any V	0.006	0.031	0.012	-0.008	0.093***	-0.037*	-0.034	-0.032	0.050**	0.056**	-0.040**
<b>3</b>	(0.022)	(0.023)	(0.025)	(0.020)	(0.027)	(0.019)	(0.027)	(0.024)	(0.024)	(0.022)	(0.020)
Any HL	-0.013	-0.026	0.033	-0.019	0.032	0.000	0.012	-0.026	-0.032	0.015	0.007
•	(0.022)	(0.023)	(0.025)	(0.020)	(0.027)	(0.019)	(0.027)	(0.025)	(0.023)	(0.022)	(0.020)
Panel B: Disaggregated specific	ation										
VHL	-0.007	0.006	0.045	-0.026	0.125***	-0.036	-0.022	-0.061*	0.018	0.067**	-0.031
	(0.032)	(0.031)	(0.034)	(0.025)	(0.038)	(0.028)	(0.036)	(0.031)	(0.032)	(0.029)	(0.024)
HL	-0.010	-0.070	0.020	-0.010	0.028	-0.059	-0.056	-0.027	-0.016	0.033	0.029
	(0.043)	(0.047)	(0.057)	(0.043)	(0.059)	(0.055)	(0.066)	(0.055)	(0.060)	(0.057)	(0.046)
V	-0.014	-0.013	0.005	-0.004	0.080	-0.082*	-0.093	-0.054	0.066	0.057	-0.020
	(0.045)	(0.047)	(0.059)	(0.042)	(0.058)	(0.049)	(0.068)	(0.055)	(0.065)	(0.058)	(0.049)
p-value for VHL = HL test	0.948	0.131	0.672	0.710	0.102	0.675	0.617	0.544	0.567	0.553	0.188
p-value for $V = C$ test	0.754	0.778	0.931	0.930	0.169	0.097	0.173	0.326	0.307	0.332	0.682
Panel C: Summary information											
Control group mean	0	0	0	0	0	0	0	0	0	0	0
# observations in VHL	1,646	1,646	1,629	1,645	1,646	1,646	1,646	1,610	1,646	1,646	1,646
# observations in HL	1,596	1,596	1,589	1,596	1,596	1,596	1,596	1,555	1,596	1,596	1,596
# observations in V	1,598	1,598	1,582	1,597	1,598	1,598	1,598	1,565	1,598	1,598	1,598
# observations in C	1,667	1,667	1,660	1,667	1,667	1,667	1,667	1,631	1,667	1,667	1,667

Results in this table include observations from communities that did not follow the original treatment assignment and switched treatment status. Panels A and B show treatment effect estimates relative to control. In Panel A, "Any V" refers to the "Values only" and "Values, Health, and Livelihood" treatment groups, and "Any HL" refers to the "Health and Livelihood only" and "Values, Health, and Livelihood" treatment groups. Dependent variables are indicated in the column title. Indexes have been coded so that more positive numbers are better. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 4. Secondary outcomes (including communities that switched treatment status)

	22	23	24	25	26	27	28	29	30	31	32	33
	Salvation by grace belief index	Assets index	Financial inclusion index	Health index	Hygiene index, non-list random.	Hygiene, list random.	House index	Migration and remittance index	No discord index	No domestic violence, list rand.	Child labor supply (hours)	# children enrolled in school
Panel A: Pooled specification												
Any V	-0.036*	-0.021	0.022	-0.000	0.078***	0.043	0.040	0.026	-0.037	-0.074*	0.334	-0.022
	(0.020)	(0.021)	(0.023)	(0.020)	(0.024)	(0.033)	(0.025)	(0.019)	(0.024)	(0.040)	(0.209)	(0.019)
Any HL	-0.006	-0.021	0.143***	0.021	0.030	0.070**	0.010	-0.007	-0.028	-0.054	-0.021	-0.016
	(0.020)	(0.021)	(0.025)	(0.019)	(0.024)	(0.033)	(0.025)	(0.019)	(0.024)	(0.040)	(0.215)	(0.019)
Panel B: Disaggregated specific	cation											
VHL	-0.043*	-0.041	0.165***	0.020	0.108***	0.111**	0.050	0.020	-0.064*	-0.127**	0.313	-0.038
	(0.025)	(0.030)	(0.038)	(0.027)	(0.034)	(0.049)	(0.036)	(0.030)	(0.034)	(0.054)	(0.306)	(0.026)
HL	-0.025	0.011	0.101**	-0.013	0.121*	0.127***	0.045	-0.062	-0.038	-0.100*	-0.076	-0.018
	(0.045)	(0.055)	(0.048)	(0.041)	(0.070)	(0.042)	(0.057)	(0.040)	(0.050)	(0.058)	(0.370)	(0.042)
V	-0.065	0.008	-0.016	-0.037	0.182***	0.108**	0.073	-0.028	-0.054	-0.135**	0.244	-0.025
	(0.041)	(0.058)	(0.044)	(0.040)	(0.067)	(0.044)	(0.059)	(0.039)	(0.048)	(0.059)	(0.396)	(0.041)
p-value for VHL = HL test	0.710	0.340	0.216	0.444	0.849	0.717	0.933	0.048	0.617	0.642	0.328	0.620
p-value for $V = C$ test	0.113	0.898	0.719	0.359	0.007	0.014	0.213	0.475	0.266	0.023	0.539	0.547
Panel C: Summary information	ı											
Control group mean	0	0	0	0	0	1	0	0	0	0	1	2
# observations in VHL	1,646	1,646	1,646	1,646	1,646	1,646	1,646	1,646	1,327	1,646	1,520	1,426
# observations in HL	1,596	1,596	1,596	1,596	1,596	1,596	1,596	1,596	1,342	1,596	1,486	1,384
# observations in V	1,598	1,598	1,598	1,598	1,598	1,598	1,598	1,598	1,306	1,598	1,481	1,406
# observations in C	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,390	1,667	1,557	1,472

Results in this table include observations from communities that did not follow the original treatment assignment and switched treatment status. Panels A and B show treatment effect estimates relative to control. In Panel A, "Any V" refers to the "Values only" and "Values, Health, and Livelihood" treatment groups, and "Any HL" refers to the "Health and Livelihood only" and "Values, Health, and Livelihood" treatment groups. Dependent variables are indicated in the column title. Indexes have been coded so that more positive numbers are better. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 5. Religion intrinsic index

	1	2	3	4	5	6	7	8	9
	Religion intrinsic index · 5 questions	I enjoy thinking about my religion	It is important to me to spend time in private thought and prayer	I have often had a strong sense of God's presence	I try hard to live all my life according to my religious beliefs	My whole approach to life is based on religion	Although I am religious, I don't let it affect my daily life (not used)		in my religion,
Panel A: Pooled specification									
Any V	0.102*** (0.024)	0.017 (0.014)	0.029* (0.015)	0.033** (0.016)	0.077*** (0.022)	0.133*** (0.030)	0.062*** (0.024)	0.029 (0.022)	0.079*** (0.029)
Any HL	0.014 (0.024)	-0.023* (0.014)	-0.005 (0.015)	0.014 (0.016)	0.043* (0.023)	0.012 (0.030)	0.008 (0.023)	0.004 (0.022)	0.024 (0.028)
Panel B: Disaggregated specific	cation								
VHL	0.115*** (0.034)	-0.007 (0.019)	0.023 (0.021)	0.047** (0.024)	0.120*** (0.031)	0.143*** (0.042)	0.070** (0.033)	0.032 (0.030)	0.102** (0.046)
HL	0.047 (0.055)	-0.010 (0.036)	0.003 (0.030)	0.032 (0.028)	0.060 (0.051)	0.047 (0.074)	0.077 (0.056)	0.038 (0.041)	0.115* (0.064)
V	0.123** (0.050)	0.028 (0.034)	0.028 (0.030)	0.049* (0.028)	0.084* (0.046)	0.162** (0.071)	0.125** (0.058)	0.057 (0.039)	0.154** (0.064)
p -value for VHL = HL test $p$ -value for V = C test	0.246 0.015	0.932 0.417	0.532 0.343	0.648 0.083	0.254 0.070	0.208 0.022	0.909 0.032	0.889 0.147	0.849 0.016
Panel C: Summary information	$\eta$								
Control group mean	0	4.570	4.710	4.701	4.341	3.766	4.236	4.530	3.868
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to greater religiosity. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*\*, and \*\*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 6. Religion extrinsic index

	1	2	3	4	5	6	7
_	Religion extrinsic index	I go to religious services because it helps me to make friends	I pray mainly to gain relief and protection	What religion offers me most is comfort in times of trouble and sorrow	Prayer is for peace and happiness	I go to religious services mostly to spend time with my friends	I go to religious services mainly because I enjoy seeing people there
Panel A: Pooled specification							
Any V	0.130***	0.151***	0.022	0.052***	0.002	0.201***	0.153***
	(0.024)	(0.032)	(0.017)	(0.019)	(0.010)	(0.035)	(0.030)
Any HL	-0.021	-0.060*	0.018	0.004	-0.005	-0.019	-0.031
	(0.024)	(0.032)	(0.017)	(0.020)	(0.010)	(0.035)	(0.031)
Panel B: Disaggregated specific	ation						
VHL	0.109***	0.090*	0.040	0.056**	-0.004	0.183***	0.123***
	(0.037)	(0.049)	(0.027)	(0.026)	(0.017)	(0.054)	(0.044)
HL	0.073	0.045	0.053	0.037	0.003	0.114	0.076
	(0.065)	(0.084)	(0.045)	(0.044)	(0.022)	(0.094)	(0.084)
V	0.204***	0.233***	0.057	0.084**	0.008	0.301***	0.230***
	(0.064)	(0.078)	(0.047)	(0.042)	(0.020)	(0.092)	(0.084)
p -value for VHL = HL test	0.596	0.597	0.788	0.688	0.802	0.460	0.575
p -value for $V = C$ test	0.002	0.003	0.225	0.047	0.704	0.001	0.006
Panel C: Summary information							
Control group mean	0	3.690	4.583	4.382	4.828	3.319	3.149
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to greater religiosity. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p*-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 7. General religion index

	1	2	3	4	5	6	7	8
	General religion index	To what extent do you consider yourself a religious person?	In the last month, have you tried to convince anyone else to change the way they think about God?	How many people?	In how many of the past 7 days did you pray privately in places other than at a place of worship?	How satisfied are you with your spiritual life right now?	How often do you go to religious service? (number of days in a year)	ICM religion
Panel A: Pooled specification								
Any V	0.077***	0.020	0.012	0.028	0.201***	-0.013	0.937	0.121***
	(0.023)	(0.017)	(0.009)	(0.052)	(0.066)	(0.020)	(0.621)	(0.039)
Any HL	0.001	-0.004	-0.026***	0.000	-0.111*	0.011	-1.382**	0.081**
	(0.023)	(0.016)	(0.009)	(0.053)	(0.064)	(0.020)	(0.621)	(0.040)
Panel B: Disaggregated specifi	cation							
VHL	0.077**	0.016	-0.014	0.026	0.092	-0.002	-0.438	0.202***
	(0.031)	(0.023)	(0.013)	(0.070)	(0.087)	(0.024)	(0.803)	(0.050)
HL	-0.029	-0.028	-0.042**	-0.063	-0.153	0.009	-0.668	0.047
	(0.054)	(0.035)	(0.021)	(0.119)	(0.162)	(0.042)	(1.438)	(0.087)
V	0.052	-0.009	-0.002	-0.022	0.109	-0.017	1.832	0.100
	(0.051)	(0.035)	(0.020)	(0.089)	(0.150)	(0.046)	(1.412)	(0.084)
p -value for VHL = HL test $p$ -value for V = C test	0.055	0.215	0.189	0.475	0.142	0.806	0.870	0.074
	0.312	0.790	0.933	0.801	0.469	0.718	0.196	0.232
Panel C: Summary information	ı							
Control group mean # observations in VHL # observations in HL # observations in V # observations in C	0	2.795	0.301	0.887	5.062	4.119	39.53	13.97
	1,578	1,578	1,578	1,577	1,578	1,578	1,576	1,473
	1,549	1,549	1,549	1,547	1,549	1,549	1,549	1,457
	1,550	1,550	1,550	1,548	1,550	1,550	1,548	1,455
	1,599	1,599	1,599	1,596	1,599	1,599	1,598	1,515

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to greater religiosity. See Appendix for details on variable construction. "ICM religion" is the sum of the agreement with three statements ("The Bible is accurate in all that it teaches," "I believe the Bible has decisive authority over what I say and do," and "I believe the Christian God—Father, Son, and Holy Spirit—is the only true God") that were scored from 1 to 5, where higher numbers represent more agreement. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate p -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 8. Religion - list randomized

	22	23	24
	Religion - list randomized	I have made a personal commitment to Jesus Christ that is still important to me today (list randomized)	I have read or listened to the Bible in the past week (list randomized)
Panel A: Pooled specification			
Any V	0.048	0.048	0.049
	(0.037)	(0.046)	(0.044)
Any HL	-0.028	0.013	-0.069
	(0.038)	(0.046)	(0.044)
Panel B: Disaggregated specification			
VHL	0.020	0.059	-0.019
	(0.054)	(0.066)	(0.061)
HL	-0.002	0.037	-0.041
	(0.055)	(0.069)	(0.065)
V	0.070	0.064	0.075
	(0.057)	(0.069)	(0.065)
p -value for VHL = HL test	0.653	0.720	0.710
p-value for $V = C$ test	0.222	0.355	0.247
Panel C: Summary information			
Control group mean	0.606	0.657	0.555
# observations in VHL	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables, elicited via list randomization, are indicated in the column title. If the statement in the column title is true, the observation is coded as a 1, and if false, it is coded as a 0. "Religion - list randomized" is the average of the two variables in the rightmost columns. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 9. Monthly consumption

	1	2	3	4
	Monthly consumption	Food consumption	Non-food	Celebration
	(PHP)	(PHP)	consumption (PHP)	spending (PHP)
Panel A: Pooled specification				
Any V	-1.078	40.07	-53.52	12.37
·	(100.4)	(72.97)	(44.07)	(9.447)
Any HL	-102.960	-24.54	-72.72*	-5.69
	(93.3)	(71.40)	(37.71)	(9.659)
Panel B: Disaggregated specificat	ion			
VHL	-102.2	16.13	-126.0*	7.660
	(159.5)	(121.0)	(65.65)	(16.65)
HL	-314.3	-167.26	-115.1	-31.950*
	(203.0)	(136.4)	(100.7)	(18.65)
V	-167.4	-76.51	-75.2	-15.717
	(209.5)	(136.7)	(108.5)	(20.38)
p -value for VHL = HL test	0.309	0.232	0.901	0.034
p -value for $V = C$ test	0.425	0.576	0.489	0.441
Panel C: Summary information				
Control group mean	5,001	3,439	1,461	100.8
# observations in VHL	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate p-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	1	2	3	4
	Food security index	No household member has gone hungry in last six months	No household member has gone to bed hungry in last six months outside of lean season	Number of days no member of the household went to bed hungry (last 7 days)
Panel A: Pooled specification				
Any V	0.010	0.008	0.007	-0.010
	(0.023)	(0.008)	(0.008)	(0.019)
Any HL	-0.044*	-0.017**	-0.011	-0.041**
	(0.023)	(0.008)	(0.008)	(0.019)
Panel B: Disaggregated specification				
VHL	-0.033	-0.009	-0.004	-0.051
	(0.037)	(0.013)	(0.013)	(0.031)
HL	-0.050	-0.019	-0.014	-0.043
	(0.051)	(0.019)	(0.019)	(0.041)
V	-0.007	0.000	0.002	-0.023
	(0.050)	(0.018)	(0.018)	(0.041)
p-value for VHL = HL test	0.728	0.595	0.554	0.845
p -value for $V = C$ test	0.885	0.993	0.913	0.579
Panel C: Summary information				
Control group mean	0	0.824	0.856	6.685
# observations in VHL	1,526	1,526	1,526	1,526
# observations in HL	1,521	1,521	1,521	1,519
# observations in V	1,517	1,517	1,517	1,516
# observations in C	1,567	1,567	1,567	1,565

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate p-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 11. Monthly income

	1	2	3	4	5	6	7	8
	Monthly income (PHP)	Agricultural labor income (last 30 days)	Livestock and fishing income (last 30 days)	Formal employment income (last 30 days)	Self- employment income (last 30 days)	Daily labor income (last 30 days)	Employment (formality unclear) income (last 30 days)	Business profit (most recent month with normal sales)
Panel A: Pooled specification								
Any V	386.1***	87.69	26.13	45.53	124.7***	32.65	54.98**	-5.161
,	(126.8)	(63.91)	(32.02)	(55.62)	(41.09)	(94.54)	(23.67)	(18.31)
Any HL	131.2	-59.09	105.58***	37.95	-46.4	53.31	33.13	-4.441
•	(126.3)	(62.62)	(28.31)	(57.34)	(41.54)	(95.68)	(21.47)	(18.27)
Panel B: Disaggregated specifica	tion							
VHL	524.4***	33.78	135.0***	88.39	79.67**	80.53	86.22***	-8.884
	(175.0)	(89.86)	(51.17)	(74.19)	(31.30)	(121.9)	(30.19)	(30.93)
HL	287.9	-219.24	28.4	57.49	43.79	369.68	38.20	-49.02
	(278.4)	(150.9)	(69.94)	(120.6)	(44.09)	(243.8)	(36.43)	(37.60)
V	574.2**	-85.07	-19.7	80.35	187.09**	362.81	67.14*	-45.02
	(285.4)	(158.5)	(61.53)	(103.2)	(91.48)	(231.7)	(40.11)	(43.48)
p -value for VHL = HL test	0.390	0.101	0.214	0.808	0.444	0.216	0.236	0.270
p -value for $V = C$ test	0.045	0.592	0.749	0.437	0.042	0.118	0.095	0.301
Panel C: Summary information								
Control group mean	4,213	1,078	163.4	645.5	113.8	1,998	110.1	123.9
# observations in VHL	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,578
# observations in HL	1,440	1,440	1,440	1,440	1,440	1,440	1,440	1,549
# observations in V	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,550
# observations in C	1,490	1,490	1,490	1,490	1,490	1,490	1,490	1,599

Panels A and B show treatment effect estimates relative to control. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 12. Adult labor supply

	1	2	3	4	5	6	7
	Adult weekly labor supply (hours)	Hours in agricultural labor (last 7 days)	Hours in livestock and fishing (last 7 days)	Hours in formal employment (last 7 days)	Hours in self employment (last 7 days)	Hours in daily labor (last 7 days)	Hours in employment with unclear formality (last 7 days)
Panel A: Pooled specification							
Any V	0.926	-2.072*	0.776*	-0.114	0.986***	0.806	0.544**
<b>,</b>	(1.091)	(1.149)	(0.439)	(0.563)	(0.272)	(1.141)	(0.234)
Any HL	-1.822*	-1.534	0.809*	-0.818	-0.350	-0.192	0.264
·	(1.095)	(1.147)	(0.420)	(0.587)	(0.269)	(1.144)	(0.225)
Panel B: Disaggregated specific	ation						
VHL	-0.878	-3.584**	1.598**	-0.889	0.634**	0.565	0.799**
	(1.417)	(1.407)	(0.636)	(0.842)	(0.311)	(1.476)	(0.338)
HL	-0.149	-2.394	0.550	-1.057	0.429	2.371	-0.047
	(2.390)	(3.158)	(0.973)	(1.357)	(0.483)	(2.842)	(0.395)
V	2.951	-3.469	1.163	-0.280	1.596**	3.652	0.290
	(2.321)	(3.096)	(1.253)	(1.320)	(0.624)	(2.748)	(0.393)
p -value for VHL = HL test	0.761	0.707	0.342	0.898	0.696	0.515	0.053
p-value for $V = C$ test	0.204	0.263	0.354	0.832	0.011	0.185	0.461
Panel C: Summary information							
Control group mean	79.58	26.66	3.016	10.21	1.856	35.93	1.912
# observations in VHL	1,452	1,452	1,452	1,452	1,452	1,452	1,452
# observations in HL	1,439	1,439	1,439	1,439	1,439	1,439	1,439
# observations in V	1,434	1,434	1,434	1,434	1,434	1,434	1,434
# observations in C	1,490	1,490	1,490	1,490	1,490	1,490	1,490

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 13. Life satisfaction index

	1	2	3	4	5	6	7	8	9	10	11	12
	·	·		About how o	often during t	he past 30 days	lid you feel.		<del></del>			
	Life satisfaction index	Kessler K6 nonspecific distress scale	Nervous	Hopeless	Restless or fidgety	So depressed that nothing could you cheer you up	That everything was difficult	Worthless	How would you describe your satisfaction with life?	Taking all things together, would you say you are happy?	Did you experience the following feelings during a lot of the day yesterday? Enjoyment + happiness - worry - sadness	Did you smile or laugh a lot yesterday?
Panel A: Pooled specification												
Any V	0.019 (0.022)	0.078 (0.100)	0.030 (0.023)	0.020 (0.021)	-0.052** (0.025)	-0.048** (0.024)	0.018 (0.026)	0.057*** (0.020)	-0.123* (0.073)	0.030** (0.012)	-0.006 (0.026)	0.009 (0.006)
Any HL	-0.010 (0.022)	0.291*** (0.099)	0.069*** (0.022)	0.004 (0.022)	0.064*** (0.024)	0.048** (0.023)	0.057** (0.026)	0.027 (0.020)	-0.176** (0.075)	-0.021* (0.012)	0.017 (0.026)	-0.004 (0.006)
Panel B: Disaggregated specifi	cation											
VHL	0.009	0.385***	0.100***	0.026	0.015	0.003	0.079**	0.088***	-0.301***	0.009	0.009	0.004
	(0.028)	(0.123)	(0.031)	(0.025)	(0.030)	(0.031)	(0.031)	(0.029)	(0.098)	(0.015)	(0.037)	(0.009)
HL	-0.031	0.314	0.040	-0.010	0.056	0.069	0.058	0.043	-0.161	-0.026	-0.016	-0.014
	(0.056)	(0.264)	(0.050)	(0.050)	(0.066)	(0.054)	(0.072)	(0.046)	(0.161)	(0.031)	(0.058)	(0.014)
V	-0.018	0.058	-0.000	-0.009	-0.063	-0.038	0.019	0.070	-0.187	0.022	-0.039	-0.003
	(0.047)	(0.250)	(0.048)	(0.050)	(0.060)	(0.052)	(0.064)	(0.045)	(0.156)	(0.025)	(0.056)	(0.013)
p-value for VHL = HL test	0.478	0.789	0.227	0.474	0.529	0.238	0.768	0.330	0.380	0.255	0.669	0.240
p-value for $V = C$ test	0.708	0.816	0.995	0.859	0.292	0.463	0.766	0.125	0.234	0.370	0.491	0.836
Panel C: Summary information	n											
Control group mean	0	21.50	3.127	3.950	3.464	3.836	3.045	4.242	5.666	3.134	0.420	0.897
# observations in VHL	1,578	1,577	1,574	1,569	1,571	1,569	1,571	1,568	1,575	1,562	1,578	1,578
# observations in HL	1,549	1,549	1,547	1,540	1,543	1,541	1,543	1,534	1,547	1,534	1,549	1,549
# observations in V	1,550	1,550	1,550	1,548	1,545	1,543	1,541	1,539	1,548	1,539	1,550	1,550
# observations in C	1,599	1,598	1,593	1,580	1,594	1,588	1,589	1,575	1,598	1,588	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to less psychological distress and higher life satisfaction. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	1
	Where would you place your
	household on the ladder in terms of economic status?
	economic status.
Panel A: Pooled specification	
Any V	-0.113**
	(0.047)
Any HL	-0.040
	(0.047)
Panel B: Disaggregated specification	
VHL	-0.151**
	(0.067)
HL	-0.073
	(0.112)
V	-0.133
	(0.119)
p -value for VHL = HL test	0.488
p -value for $V = C$ test	0.264
Panel C: Summary information	
Control group mean	3.242
# observations in VHL	1,576
# observations in HL	1,548
# observations in V	1,547
# observations in C	1,596

Panels A and B show treatment effect estimates relative to control. The dependent variable, indicated in the column title, has been coded so that more positive numbers correspond to higher perceived relative economic status. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate p-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	1	2	3	4
	Trust index	In general, would you say that most people can be trusted or that most people cannot be trusted?	Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?	Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?
Panel A: Pooled specification				
Any V	0.004 (0.022)	0.00 (0.010)	0.005 (0.010)	-0.001 (0.011)
Any HL	-0.023 (0.022)	-0.003 (0.010)	-0.002 (0.009)	-0.021** (0.011)
Panel B: Disaggregated specifica	tion			
VHL	-0.019 (0.032)	-0.003 (0.015)	0.003 (0.014)	-0.021 (0.015)
HL	-0.023 (0.043)	0.000 (0.019)	0.003 (0.020)	-0.030 (0.022)
V	-0.018 (0.046)	-0.005 (0.021)	-0.002 (0.022)	-0.013 (0.021)
p -value for VHL = HL test $p$ -value for V = C test	0.927 0.704	0.870 0.811	0.986 0.932	0.718 0.533
Panel C: Summary information				
Control group mean	0	0.458	0.637	0.582
# observations in VHL	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more trust. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 16. Social safety net index

	1	2	3	4	5	6	7	8	9
	Social safety net index	Likelihood that could access 40 PHP from a source outside household for urgent need	Likelihood that could access 1,000 PHP from a source outside household for urgent need	nerconal iccide with	How often do you usually speak to this person? (number of days in a year)	Household received meals from another household in local community (last 30 days)	Number of meals received	Household gave meals to another household in local community (last 30 days)	Number of meals given
Panel A: Pooled specification									
Any V	0.026	0.018	-0.025	0.020	0.250	0.004	0.344**	0.000	0.193
	(0.024)	(0.025)	(0.033)	(0.012)	(0.573)	(0.011)	(0.162)	(0.011)	(0.182)
Any HL	-0.027	-0.028	0.044	-0.001	0.165	-0.003	-0.264	-0.010	-0.539***
	(0.024)	(0.026)	(0.033)	(0.012)	(0.570)	(0.010)	(0.164)	(0.011)	(0.185)
Panel B: Disaggregated specifica	tion								
VHL	-0.000	-0.011	0.020	0.018	0.424	0.001	0.089	-0.010	-0.337
	(0.032)	(0.033)	(0.044)	(0.016)	(0.782)	(0.014)	(0.205)	(0.015)	(0.267)
HL	-0.076	-0.064	-0.009	0.004	-0.045	-0.036	-0.393	-0.036	-0.429
	(0.048)	(0.053)	(0.071)	(0.021)	(1.287)	(0.024)	(0.333)	(0.025)	(0.472)
V	-0.023	-0.023	-0.071	0.025	-0.075	-0.022	0.206	-0.026	0.081
	(0.048)	(0.053)	(0.072)	(0.024)	(1.109)	(0.022)	(0.386)	(0.023)	(0.494)
p -value for VHL = HL test $p$ -value for V = C test	0.140	0.346	0.692	0.496	0.696	0.136	0.159	0.302	0.846
	0.631	0.662	0.323	0.292	0.946	0.331	0.594	0.246	0.870
Panel C: Summary information									
Control group mean # observations in VHL # observations in HL # observations in V	0	3.617	2.359	0.387	8.480	0.557	4.497	0.683	5.260
	1,578	1,578	1,578	1,552	1,530	1,535	1,531	1,536	1,489
	1,549	1,549	1,549	1,538	1,518	1,528	1,525	1,520	1,471
	1,550	1,550	1,550	1,528	1,504	1,517	1,510	1,504	1,463
# observations in C	1,599	1,599	1,599	1,583	1,551	1,570	1,551	1,563	1,525

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more access to a social safety net. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 17. Community activities index

	1	2	3	4
	Community activities index	Did you attend any village leaders meetings? (last 6 months)	Have you participated in any community activities? (last 6 months)	How frequently did you participate in community activities? (number of days in a year)
Panel A: Pooled specification				
Any V	0.005	-0.019*	0.007	0.666
	(0.025)	(0.011)	(0.013)	(0.510)
Any HL	0.041	-0.001	0.014	1.354***
·	(0.025)	(0.011)	(0.012)	(0.507)
Panel B: Disaggregated specifica	tion			
VHL	0.045	-0.020	0.021	1.998**
	(0.034)	(0.015)	(0.016)	(0.800)
HL	0.019	-0.024	0.011	1.658*
	(0.058)	(0.025)	(0.031)	(0.996)
V	-0.011	-0.043*	0.009	1.126
	(0.059)	(0.026)	(0.031)	(0.975)
p -value for VHL = HL test	0.655	0.852	0.750	0.748
p-value for $V = C$ test	0.857	0.094	0.771	0.249
Panel C: Summary information				
Control group mean	0	0.651	0.527	9.165
# observations in VHL	1,561	1,554	1,546	1,533
# observations in HL	1,542	1,540	1,533	1,523
# observations in V	1,534	1,532	1,525	1,516
# observations in C	1,592	1,589	1,580	1,561

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more involvement in community activities. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

	1	2	3	4	5
	Perceived stress scale index	How often have you felt that you were unable to control the important things in your life?	How often have you felt confident about your ability to handle your personal problems?	How often have you felt that things were going your way?	How often have you felt difficulties were piling up so high that you could not overcome them?
Panel A: Pooled specification					
Any V	-0.011 (0.020)	0.055** (0.023)	-0.065*** (0.023)	-0.024 (0.022)	-0.005 (0.025)
Any HL	-0.018 (0.021)	-0.015 (0.023)	0.005 (0.024)	-0.049** (0.022)	0.022 (0.025)
Panel B: Disaggregated specification					
VHL	-0.026 (0.026)	0.042 (0.036)	-0.061* (0.035)	-0.072** (0.030)	0.021 (0.033)
HL	-0.009 (0.044)	0.069 (0.057)	-0.016 (0.056)	-0.079 (0.054)	0.010 (0.052)
V	-0.007 (0.043)	0.118** (0.057)	-0.064 (0.052)	-0.044 (0.049)	-0.035 (0.053)
p -value for VHL = HL test $p$ -value for V = C test	0.684 0.876	0.650 0.038	0.434 0.216	0.901 0.368	0.843 0.509
Panel C: Summary information					
Control group mean	0	2.896	3.430	2.936	3.265
# observations in VHL	1,577	1,572	1,574	1,567	1,569
# observations in HL	1,549	1,543	1,543	1,536	1,539
# observations in V	1,549	1,544	1,543	1,538	1,545
# observations in C	1,599	1,596	1,593	1,583	1,590

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to less stress. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 19. Powerful others index

	1	2	3	4	5	6	7
	Powerful others index	I feel like what happens in my life is mostly determined by God	Although I might have good ability, I will not be successful without appealing to God	My life is chiefly controlled by God	Getting what I want requires pleasing God	Whether or not I have an accident and hurt myself physically depends mostly on God	In order to have my plans work, I make sure that they fit with God's plan for me
Panel A: Pooled specification							
Any V	0.093***	0.109***	0.030*	0.088***	0.022	0.049	0.057***
<i>y</i> .	(0.027)	(0.024)	(0.017)	(0.022)	(0.023)	(0.031)	(0.019)
Any HL	0.044	0.021	0.026	0.044**	0.007	0.016	0.052***
•	(0.027)	(0.024)	(0.017)	(0.022)	(0.023)	(0.032)	(0.019)
Panel B: Disaggregated specifica	ation						
VHL	0.135***	0.128***	0.054***	0.131***	0.028	0.066	0.108***
	(0.038)	(0.035)	(0.020)	(0.032)	(0.032)	(0.047)	(0.027)
HL	0.031	0.037	-0.025	0.060	-0.031	0.029	0.046
	(0.060)	(0.051)	(0.037)	(0.052)	(0.048)	(0.073)	(0.041)
V	0.073	0.118**	-0.016	0.095*	-0.019	0.048	0.051
	(0.059)	(0.048)	(0.036)	(0.048)	(0.048)	(0.071)	(0.042)
p-value for VHL = HL test	0.085	0.068	0.033	0.175	0.246	0.614	0.123
p-value for $V = C$ test	0.222	0.015	0.659	0.050	0.689	0.501	0.229
Panel C: Summary information							
Control group mean	0	4.271	4.612	4.388	4.458	3.907	4.502
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to higher perception of God's role in determining outcomes in life. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 20a: Locus of control index: Internality subscale

	1	2	3	4	5	6	7	8	9	10
	Locus of control index	Internality subscale	Whether or not I am successful depends mostly on my ability	Whether or not I have an accident and hurt myself depends mostly on how careful I am on a daily basis	When I make plans, I am almost certain to make them work	How many friends I have depends on how nice a person I am	I can pretty much determine what will happen in my life	I am usually able to protect my personal interests	When I get what I want it's usually because I worked hard for it	My life is determined by my own actions
Panel A: Pooled specification										
Any V	-0.035* (0.020)	0.088*** (0.026)	0.091*** (0.020)	0.015 (0.021)	0.070** (0.033)	0.009 (0.017)	0.084** (0.036)	0.041 (0.028)	0.047*** (0.015)	0.014 (0.019)
Any HL	-0.000 (0.020)	-0.019 (0.026)	-0.023 (0.021)	-0.013 (0.021)	-0.018 (0.031)	-0.017 (0.017)	0.024 (0.036)	-0.006 (0.028)	0.015 (0.015)	-0.040** (0.018)
Panel B: Disaggregated specifica	ation									
VHL	-0.035 (0.029)	0.069* (0.035)	0.068** (0.031)	0.001 (0.032)	0.051 (0.040)	-0.008 (0.021)	0.108** (0.050)	0.035 (0.035)	0.060*** (0.020)	-0.026 (0.027)
HL	-0.064 (0.057)	0.002 (0.060)	0.028 (0.046)	-0.022 (0.042)	0.087 (0.081)	-0.042 (0.039)	0.014 (0.086)	-0.033 (0.069)	-0.006 (0.034)	-0.017 (0.038)
V	-0.085* (0.050)	0.103* (0.056)	0.145*** (0.042)	0.001 (0.043)	0.175** (0.078)	-0.022 (0.038)	0.067 (0.084)	0.011 (0.066)	0.025 (0.033)	0.033 (0.038)
p-value for VHL = HL test $p$ -value for V = C test	0.605 0.090	0.298 0.067	0.393 0.001	0.586 0.974	0.666 0.026	0.389 0.562	0.312 0.425	0.326 0.869	0.044 0.439	0.831 0.383
Panel C: Summary information										
Control group mean	0	0	4.218	4.123	3.108	4.510	2.333	3.402	4.578	4.309
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V # observations in C	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599	1,550 1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to higher perceptions of people's ability to control their life/fate. See Appendix for details on variable construction. The variables to the right of the second column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 20b. Locus of control index: Chance subscale and World Values Survey question

	11	12	13	14	15	16	17	18	19	20
	Chance subscale	To a great extent my life is controlled by accidental happenings	Often there is no chance of protecting my personal interests from bad luck happening	When I get what I want, it is usually because I am lucky		Whether or not I get into an accident and hurt myself physically is mostly a matter of luck	It is not wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune	Whether or not I am successful depends on whether I am lucky enough to be in the right place at the right time	matter of fate whether or not I have a few friends	a scale on which (1) "everything in life is determined by fate" and
Panel A: Pooled specification										
1 0	-0.098***	-0.135***	0.046	-0.075***	0.050	0.025	-0.101***	-0.029	-0.127***	-0.192**
Any V	(0.028)	(0.032)	-0.046 (0.028)	(0.028)	-0.058 (0.038)	-0.025 (0.030)	(0.037)	(0.026)	(0.032)	(0.079)
Any HL	0.004	-0.006	-0.019	0.008	-0.016	-0.026	0.016	0.010	0.057*	0.060
7 my TiL	(0.028)	(0.032)	(0.028)	(0.028)	(0.039)	(0.030)	(0.037)	(0.027)	(0.032)	(0.080)
Panel B: Disaggregated specific	eation									
VHL	-0.094**	-0.141***	-0.065*	-0.065*	-0.075	-0.051	-0.084	-0.019	-0.069*	-0.128
	(0.038)	(0.049)	(0.037)	(0.038)	(0.050)	(0.043)	(0.055)	(0.036)	(0.041)	(0.118)
HL	-0.064	-0.044	-0.090	0.014	-0.053	-0.050	-0.078	-0.012	-0.074	-0.168
	(0.076)	(0.102)	(0.073)	(0.077)	(0.082)	(0.067)	(0.090)	(0.059)	(0.102)	(0.204)
V	-0.157**	-0.152	-0.117	-0.072	-0.102	-0.046	-0.190**	-0.057	-0.219**	-0.343*
	(0.075)	(0.103)	(0.073)	(0.069)	(0.082)	(0.071)	(0.087)	(0.057)	(0.099)	(0.181)
p-value for VHL = HL test	0.708	0.343	0.738	0.313	0.796	0.992	0.945	0.909	0.958	0.843
p-value for $V = C$ test	0.036	0.140	0.110	0.297	0.216	0.512	0.029	0.317	0.028	0.060
Panel C: Summary information										
Control group mean	0	2.704	2.749	2.412	3.074	2.786	2.994	2.061	2.463	5.907
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,549
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to lower perception of chance's ability to determine outcomes in life. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 21. Life orientation index

	1	2	3	4	5	6	7
	Life orientation index	In uncertain times, I usually expect the best	If something can go wrong for me, it will	I'm always optimistic about my future.	I hardly ever expect things to go my way	I rarely count on good things happening to me	Overall, I expect more good things to happen to me than bad
Panel A: Pooled specification							
Any V	-0.050* (0.027)	-0.005 (0.017)	-0.081** (0.041)	0.015 (0.018)	-0.062** (0.026)	-0.008 (0.029)	0.002 (0.020)
Any HL	0.016 (0.027)	0.006 (0.017)	-0.013 (0.041)	0.005 (0.019)	-0.031 (0.026)	0.029 (0.029)	0.047** (0.020)
Panel B: Disaggregated specific	eation						
VHL	-0.034 (0.037)	0.002 (0.028)	-0.094* (0.056)	0.020 (0.026)	-0.093** (0.036)	0.023 (0.037)	0.048 (0.029)
HL	-0.046 (0.068)	0.052 (0.048)	-0.111 (0.089)	0.011 (0.046)	-0.086 (0.071)	-0.066 (0.107)	0.072 (0.052)
V	-0.103 (0.069)	0.043 (0.048)	-0.171* (0.093)	0.030 (0.043)	-0.110* (0.065)	-0.099 (0.101)	0.024 (0.050)
p -value for VHL = HL test $p$ -value for V = C test	0.862 0.132	0.316 0.372	0.854 0.065	0.857 0.494	0.917 0.089	0.415 0.326	0.637 0.633
Panel C: Summary information							
Control group mean	0	4.382	3.009	4.423	2.216	2.435	4.283
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more positive expectations. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 22. Expectations index and optimism index

	1	2	3	4	5	6
	Expectations index	Which step of the life satisfaction ladder do you believe you will be on in 5 years?	Where do you think you will be on the relative economic status ladder 5 years from now?	Optimism index	How optimistic are you in general, on a scale of 1 to 7?	How pessimistic are you in general, on a scale of 1 to 7?
Panel A: Pooled specification						
Any V	-0.037	-0.014	-0.136**	0.053**	0.056	0.100**
	(0.025)	(0.065)	(0.059)	(0.024)	(0.039)	(0.042)
Any HL	-0.016	-0.032	-0.026	-0.024	-0.022	-0.049
,	(0.025)	(0.069)	(0.059)	(0.024)	(0.038)	(0.042)
Panel B: Disaggregated specification	ation					
VHL	-0.055*	-0.054	-0.160**	0.030	0.036	0.051
	(0.032)	(0.090)	(0.076)	(0.032)	(0.047)	(0.062)
HL	-0.014	0.006	-0.010	-0.007	-0.076	0.057
	(0.056)	(0.139)	(0.147)	(0.061)	(0.105)	(0.096)
V	-0.054	-0.084	-0.119	0.069	0.001	0.203**
	(0.057)	(0.148)	(0.140)	(0.066)	(0.116)	(0.099)
p -value for VHL = HL test	0.468	0.672	0.314	0.541	0.276	0.955
p-value for $V = C$ test	0.344	0.569	0.393	0.298	0.990	0.040
Panel C: Summary information						
Control group mean	0	6.743	4.834	0	5.544	5.398
# observations in VHL	1,542	1,500	1,474	1,578	1,578	1,578
# observations in HL	1,508	1,467	1,444	1,549	1,549	1,549
# observations in V	1,518	1,480	1,465	1,550	1,550	1,550
# observations in C	1,567	1,541	1,494	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to higher optimism. See Appendix for details on variable construction. The variables in the second, third, fourth, and fifth columns have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

**Online Appendix Table 23. Grit index** 

	1	2	3	4	5	6	7	8	9
	Grit index	New ideas and projects sometimes distract me from previous ones	Setbacks don't discourage me	I have been obsessed with a certain idea or project for a short time but later lost interest	I am a very hard worker	I often set a goal but later choose to pursue a different one	I have difficulty maintaining my focus on projects that take more than a few months	I finish whatever I begin	I am diligent
Panel A: Pooled specification									
Any V	0.041* (0.022)	-0.011 (0.029)	0.075*** (0.025)	-0.006 (0.025)	0.082*** (0.019)	-0.040 (0.029)	-0.013 (0.025)	0.059*** (0.021)	0.026 (0.018)
Any HL	0.017 (0.022)	0.015 (0.028)	-0.030 (0.025)	0.020 (0.025)	0.002 (0.019)	0.006 (0.029)	0.072*** (0.024)	0.001 (0.021)	-0.014 (0.017)
Panel B: Disaggregated specification	ı								
VHL	0.056* (0.029)	0.005 (0.037)	0.040 (0.035)	0.015 (0.030)	0.084*** (0.027)	-0.036 (0.037)	0.059* (0.032)	0.058** (0.028)	0.011 (0.025)
HL	0.030 (0.058)	0.024 (0.069)	-0.075 (0.057)	0.048 (0.061)	0.006 (0.041)	-0.019 (0.069)	0.105* (0.063)	0.029 (0.052)	0.010 (0.042)
V	0.041 (0.058)	-0.011 (0.075)	0.036 (0.058)	-0.004 (0.063)	0.082** (0.041)	-0.082 (0.065)	-0.004 (0.062)	0.098** (0.048)	0.057 (0.040)
p-value for VHL = HL test $p$ -value for V = C test	0.671 0.484	0.782 0.882	0.045 0.528	0.591 0.954	0.064 0.046	0.809 0.211	0.474 0.953	0.587 0.043	0.974 0.156
Panel C: Summary information									
Control group mean	0	3.148	3.499	3.120	4.241	3.193	3.071	4.249	4.422
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more grit. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 24. Self-control index

	1	2	3	4	5	6	7	8	9	10	11
	Self control index	I have a hard time breaking bad habits	I get distracted easily	I say inappropriate things	I refuse things that are bad for me, even if they are fun.	I'm good at resisting temptation	People would say that I have very strong self- discipline	Pleasure and fun sometimes keep me from getting work done	I do things that feel good in the moment but regret later on	Sometimes I can't stop myself from doing something, even if I know it's wrong	I often act without thinking through all the alternatives
Panel A: Pooled specification											
Any V	-0.034* (0.021)	-0.043 (0.026)	-0.003 (0.026)	-0.026 (0.030)	0.019 (0.026)	-0.097*** (0.029)	-0.060** (0.027)	0.014 (0.026)	-0.041 (0.028)	-0.004 (0.029)	-0.008 (0.028)
Any HL	0.006 (0.020)	-0.036 (0.026)	-0.023 (0.026)	-0.020 (0.030)	0.039 (0.026)	-0.008 (0.029)	0.009 (0.027)	0.054** (0.026)	0.008 (0.028)	0.027 (0.029)	-0.008 (0.028)
Panel B: Disaggregated specif	ïcation										
VHL	-0.027 (0.025)	-0.076** (0.037)	-0.026 (0.039)	-0.045 (0.037)	0.057 (0.038)	-0.103** (0.040)	-0.050 (0.036)	0.068** (0.030)	-0.028 (0.034)	0.026 (0.038)	-0.015 (0.032)
HL	0.039 (0.047)	-0.046 (0.062)	-0.030 (0.065)	-0.022 (0.067)	0.060 (0.077)	0.019 (0.079)	0.005 (0.069)	0.153** (0.068)	0.063 (0.064)	0.073 (0.056)	0.008 (0.064)
v	-0.001 (0.050)	-0.050 (0.063)	-0.018 (0.061)	-0.026 (0.072)	0.018 (0.078)	-0.062 (0.081)	-0.050 (0.065)	0.100 (0.073)	0.019 (0.063)	0.049 (0.056)	0.012 (0.066)
p-value for VHL = HL test $p$ -value for V = C test	0.155 0.980	0.615 0.429	0.957 0.772	0.728 0.717	0.962 0.819	0.103 0.444	0.436 0.440	0.198 0.171	0.153 0.768	0.442 0.384	0.722 0.855
Panel C: Summary informatio	n										
Control group mean	0	3.032	2.863	3.014	3.135	3.358	3.219	3.136	2.947	2.961	2.946
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more self-control. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 25. Salvation by grace belief index

	1	2	3	4
	Salvation by grace belief index	If I am good enough, God will cleanse me of my sins	I follow God's laws so that I can go to heaven	I will go to heaven because I have accepted Jesus Christ as my personal savior
Panel A: Pooled specification				
Any V	-0.036*	-0.059***	-0.052***	0.019*
	(0.020)	(0.020)	(0.016)	(0.011)
Any HL	-0.005	-0.016	-0.006	0.003
	(0.020)	(0.020)	(0.016)	(0.011)
Panel B: Disaggregated specific	ation			
VHL	-0.040	-0.073**	-0.057***	0.022
	(0.026)	(0.032)	(0.022)	(0.014)
HL	-0.021	-0.060	-0.037	0.019
	(0.045)	(0.042)	(0.039)	(0.024)
V	-0.061	-0.100**	-0.085**	0.029
	(0.041)	(0.039)	(0.036)	(0.026)
p -value for VHL = HL test	0.696	0.792	0.616	0.901
p -value for $V = C$ test	0.143	0.011	0.019	0.268
Panel C: Summary information				
Control group mean	0	1.386	1.358	0.559
# observations in VHL	1,578	1,473	1,473	1,578
# observations in HL	1,549	1,457	1,457	1,549
# observations in V	1,550	1,455	1,455	1,550
# observations in C	1,599	1,515	1,515	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to greater belief in the doctrine of salvation by grace. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 26. Assets index

	1	2	3	4	5	6	7	8	9	10	11	12
	Assets index	Number of productive assets		Number of house assets	Value of house assets	Number of productive assets acquired in last 6 months	Value of productive assets acquired in last 6 months	Number of house assets acquired in last 6 months	Value of the house assets acquired in last 6 months	Money set aside in savings	Chance that would have 40 PHP available for urgent need	Chance that would have 1,000 PHP available for urgent need
Panel A: Pooled specification												
Any V	-0.027 (0.021)	-0.178*** (0.047)	-58.34 (66.27)	-0.048 (0.108)	305.0 (607.3)	-0.016** (0.007)	-4.034 (5.702)	-0.055 (0.041)	-204.5 (215.0)	-13.58 (44.97)	0.081*** (0.027)	0.015 (0.024)
Any HL	-0.025 (0.021)	-0.042 (0.048)	-129.64* (67.01)	-0.080 (0.110)	429.3 (627.3)	-0.004 (0.008)	0.974 (5.771)	-0.001 (0.041)	-0.2 (213.1)	-30.47 (43.29)	-0.016 (0.027)	-0.037 (0.024)
Panel B: Disaggregated specification	ation											
VHL	-0.050 (0.031)	-0.218*** (0.056)	-185.4* (96.90)	-0.129 (0.162)	755.6 (901.3)	-0.020** (0.010)	-3.049 (7.374)	-0.055 (0.047)	-209.2 (320.6)	-38.51 (71.37)	0.067* (0.037)	-0.019 (0.030)
HL	0.014 (0.057)	-0.011 (0.162)	-138.0 (191.1)	0.383 (0.265)	1,165.1 (1,212)	-0.006 (0.023)	15.807 (16.81)	0.034 (0.118)	-16.0 (497.0)	-153.54 (99.2)	0.008 (0.063)	-0.033 (0.060)
V	0.008 (0.060)	-0.163 (0.164)	-61.5 (208.2)	0.374 (0.266)	1,139.7 (1,166)	-0.020 (0.023)	10.288 (17.55)	-0.040 (0.113)	-208.4 (493.4)	-144.67 (106.3)	0.100* (0.056)	0.032 (0.055)
p -value for VHL = HL test $p$ -value for V = C test	0.265 0.899	0.193 0.322	0.795 0.768	0.056 0.161	0.746 0.329	0.557 0.397	0.278 0.558	0.465 0.722	0.698 0.673	0.202 0.174	0.352 0.079	0.818 0.556
Panel C: Summary information												
Control group mean	0	1.877	1,217	6.621	12,300	0.211	81.83	1.348	3,046	601.5	3.415	1.888
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,578	1,567	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,549	1,529	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,550	1,537	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,599	1,581	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more assets. Variables denoting monetary value are quoted in Philippine pesos. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 27. Financial inclusion index

	1	2	3	4
	Financial inclusion index	Do you or anyone in your household currently have money set aside as savings?	Do you by yourself or with other people currently have an account at a bank?	Have you made a deposit at a financial institution in the past 6 months?
Panel A: Pooled specification				
Any V	0.020	0.002	0.005	0.006
	(0.024)	(0.009)	(0.009)	(0.006)
Any HL	0.157***	0.052***	0.036***	0.027***
·	(0.025)	(0.010)	(0.009)	(0.006)
Panel B: Disaggregated specificat	tion			
VHL	0.179***	0.055***	0.042***	0.033***
	(0.038)	(0.015)	(0.012)	(0.009)
HL	0.124**	0.029	0.038*	0.019
	(0.048)	(0.024)	(0.021)	(0.013)
V	-0.010	-0.025	0.014	-0.003
	(0.044)	(0.022)	(0.018)	(0.012)
p-value for VHL = HL test	0.297	0.288	0.852	0.300
p-value for $V = C$ test	0.811	0.267	0.435	0.811
Panel C: Summary information				
Control group mean	0	0.265	0.143	0.059
# observations in VHL	1,578	1,578	1,504	1,493
# observations in HL	1,549	1,549	1,486	1,456
# observations in V	1,550	1,550	1,482	1,459
# observations in C	1,599	1,599	1,522	1,507

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to more financial inclusion. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 28. Health index

	1	2	3	4
		Negative of number	Negative of number of	
		of serious health	household members that	Negative of total number
	<b>Health index</b>	events in the	have suffered an illness that	of workdays missed due
		household (last 6	has kept them from working	to illness (last 30 days)
		months)	(last 30 days)	
Panel A: Pooled specification				
Any V	0	-0.024	0.003	0.166
•	(0.020)	(0.015)	(0.008)	(0.105)
Any HL	0.015	0.019	0.002	0.049
•	(0.020)	(0.015)	(0.008)	(0.109)
Panel B: Disaggregated specifica	ution			
VHL	0.015	-0.005	0.005	0.210
	(0.028)	(0.023)	(0.011)	(0.137)
HL	-0.027	0.024	-0.017	-0.293
	(0.042)	(0.027)	(0.018)	(0.215)
V	-0.044	-0.020	-0.016	-0.203
	(0.041)	(0.032)	(0.016)	(0.215)
p-value for VHL = HL test	0.334	0.318	0.263	0.018
p-value for $V = C$ test	0.285	0.523	0.319	0.345
Panel C: Summary information				
Control group mean	0	-0.313	-0.125	-1.247
# observations in VHL	1,578	1,577	1,527	1,527
# observations in HL	1,549	1,548	1,519	1,517
# observations in V	1,550	1,548	1,512	1,510
# observations in C	1,599	1,590	1,563	1,561

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to better health. See Appendix for details on variable construction. The variables of the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*\*, and \*\*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 29. Hygiene indices

	1	2	3	4	5	6
	Hygiene index - non-list randomized	Animals kept in sanitary way	No household members practice open defecation	Hygiene index - list randomized	I wash my hands after going to the bathroom (list randomized)	I treat my water before drinking it (list randomized)
Panel A: Pooled specification						
Any V	0.092***	0.024**	0.038***	0.043	0.032	0.055
	(0.024)	(0.010)	(0.011)	(0.033)	(0.041)	(0.044)
Any HL	0.030	-0.001	0.022*	0.066**	0.041	0.092**
·	(0.024)	(0.010)	(0.011)	(0.033)	(0.041)	(0.044)
Panel B: Disaggregated specific	cation					
VHL	0.121***	0.022	0.060***	0.108**	0.072	0.144**
	(0.034)	(0.014)	(0.016)	(0.049)	(0.058)	(0.065)
HL	0.136*	0.037	0.055*	0.121***	0.096*	0.146**
	(0.070)	(0.027)	(0.031)	(0.043)	(0.058)	(0.057)
V	0.208***	0.066**	0.074***	0.105**	0.086	0.124**
	(0.067)	(0.027)	(0.028)	(0.045)	(0.055)	(0.060)
p-value for VHL = HL test	0.836	0.588	0.870	0.779	0.694	0.976
p-value for $V = C$ test	0.002	0.016	0.009	0.020	0.116	0.040
Panel C: Summary information	ı					
Control group mean	0	0.700	0.648	0.606	0.657	0.555
# observations in VHL	1578	1578	1578	1578	1578	1578
# observations in HL	1549	1549	1549	1549	1549	1549
# observations in V	1550	1550	1550	1550	1550	1550
# observations in C	1599	1599	1599	1599	1599	1599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to better hygiene. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 30: House index

	1	2	3	4	5	6	7
	House index	All rooms leak-free	At least some rooms leak- free	All rooms able to be safely locked	At least some rooms able to be safely locked	Primary energy source for lighting is electricity	Primary latrine is inside the house
Panel A: Pooled specification							
Any V	0.030	0.003	0.002	-0.011	0.004	0.014	0.020**
Ž	(0.025)	(0.010)	(0.007)	(0.011)	(0.010)	(0.013)	(0.009)
Any HL	0.007	0.005	-0.008	0.004	0.004	0.004	0.002
	(0.025)	(0.010)	(0.007)	(0.011)	(0.010)	(0.013)	(0.009)
Panel B: Disaggregated specifica	tion						
VHL	0.036	0.008	-0.006	-0.008	0.008	0.018	0.022*
	(0.036)	(0.014)	(0.009)	(0.014)	(0.014)	(0.019)	(0.012)
HL	0.045	-0.027	0.013	0.000	-0.000	0.041	0.022
	(0.059)	(0.021)	(0.017)	(0.023)	(0.025)	(0.036)	(0.019)
V	0.068	-0.028	0.021	-0.019	-0.002	0.055	0.041**
	(0.060)	(0.021)	(0.016)	(0.023)	(0.026)	(0.034)	(0.018)
p-value for VHL = HL test	0.879	0.107	0.282	0.729	0.734	0.515	0.988
p -value for $V = C$ test	0.258	0.178	0.199	0.418	0.947	0.111	0.020
Panel C: Summary information							
Control group mean	0	0.320	0.871	0.275	0.580	0.665	0.109
# observations in VHL	1,578	1,578	1,578	1,578	1,578	1,578	1,578
# observations in HL	1,549	1,549	1,549	1,549	1,549	1,549	1,549
# observations in V	1,550	1,550	1,550	1,550	1,550	1,550	1,550
# observations in C	1,599	1,599	1,599	1,599	1,599	1,599	1,599

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to better house quality. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 31: Migration and remittance index

	1	2	3	4	5	6
	Migration and remittance index	Number of migrators in the household	Number of days migrators were away (last 6 months)	Number of migrators who sent remittances or brought money home (last 6 months)	Household had at least one migrator send remittances or bring money home (last 6 months)	Amount received in remittances or cash brought home (PHP - last 6 months)
Panel A: Pooled specification						
Any V	0.027	0.022**	1.565*	0.007	0.003	10.13
•	(0.019)	(0.010)	(0.891)	(0.008)	(0.006)	(77.68)
Any HL	-0.015	-0.002	-0.458	-0.008	-0.005	-78.91
·	(0.019)	(0.010)	(0.884)	(0.008)	(0.006)	(70.71)
Panel B: Disaggregated specific	cation					
VHL	0.012	0.021	1.081	-0.001	-0.002	-73.88
	(0.031)	(0.015)	(1.470)	(0.013)	(0.009)	(110.1)
HL	-0.083**	-0.036**	-2.356	-0.031*	-0.028***	-124.15
	(0.038)	(0.018)	(2.009)	(0.016)	(0.011)	(175.4)
V	-0.039	-0.010	-0.522	-0.014	-0.020*	-27.00
	(0.039)	(0.019)	(1.967)	(0.016)	(0.012)	(174.9)
p -value for VHL = HL test	0.017	0.003	0.086	0.070	0.021	0.755
p -value for $V = C$ test	0.317	0.596	0.791	0.360	0.094	0.877
Panel C: Summary information	ı					
Control group mean	0	0.176	12.680	0.141	0.104	709.500
# observations in VHL	1,578	1,578	1,568	1,574	1,572	1,504
# observations in HL	1,549	1,549	1,540	1,547	1,545	1,515
# observations in V	1,550	1,550	1,543	1,549	1,548	1,503
# observations in C	1,599	1,599	1,583	1,597	1,593	1,549

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to higher migration and remittances. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 32. No discord index and no domestic violence

	1	2	3	4	5	6	7	8
	During the last 1 month, did you have any major arguments with your spouse or partner over (higher = fewer arguments)							10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	No discord index	Spending on major household items or assets?	Saving decisions?	The behavior and disciplining of children?	Interactions with relatives?	Alcohol consumption?	Any other issues?	Someone in my household is experiencing physical abuse (list randomization - higher = less abuse)
Panel A: Pooled specification								
Any V	-0.034 (0.024)	-0.002 (0.011)	-0.007 (0.011)	-0.003 (0.012)	-0.022*** (0.008)	-0.012 (0.009)	-0.003 (0.009)	-0.072* (0.040)
Any HL	-0.029 (0.024)	-0.029*** (0.011)	0.002 (0.011)	-0.011 (0.012)	-0.012 (0.008)	-0.001 (0.009)	0.004 (0.008)	-0.048 (0.040)
Panel B: Disaggregated specifi	cation							
VHL	-0.063* (0.036)	-0.030* (0.016)	-0.004 (0.015)	-0.013 (0.016)	-0.034*** (0.011)	-0.014 (0.014)	0.001 (0.011)	-0.118** (0.055)
HL	-0.036 (0.052)	-0.036 (0.023)	-0.006 (0.022)	-0.025 (0.024)	0.007 (0.016)	0.010 (0.021)	-0.012 (0.019)	-0.081 (0.058)
V	-0.049 (0.049)	-0.013 (0.021)	-0.017 (0.020)	-0.017 (0.024)	-0.008 (0.016)	0.001 (0.019)	-0.021 (0.020)	-0.120** (0.061)
p -value for VHL = HL test $p$ -value for V = C test	0.617 0.326	0.799 0.538	0.942 0.403	0.627 0.482	0.013 0.606	0.257 0.977	0.473 0.316	0.509 0.050
Panel C: Summary information	ı							
Control group mean	0	0.716	0.745	0.530	0.859	0.782	0.826	0.903
# observations in VHL	1,267	1,266	1,267	1,266	1,267	1,266	1,266	1,579
# observations in HL	1,297	1,297	1,297	1,297	1,295	1,296	1,295	1,550
# observations in V	1,263	1,262	1,262	1,261	1,263	1,263	1,262	1,551
# observations in C	1,331	1,330	1,331	1,331	1,331	1,331	1,330	1,600

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. Variables have been coded so that more positive numbers correspond to less discord and abuse. See Appendix for details on variable construction. The variables to the right of the first column have not been standardized. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p*-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 33. Child labor supply and and children enrolled in school

	1	2	3	4	5	6	7	8
	Child labor supply (hours)	Hours in agricultural labor (last 7 days)	Hours in livestock and fishing (last 7 days)	Hours in formal employment (last 7 days)	Hours in self employment (last 7 days)	Hours in daily labor (last 7 days)	Hours in employment with unclear formality (last 7 days)	Number of children enrolled in school
Panel A: Pooled specification								
Any V	0.244	0.015	-0.047	0.006	-0.049	0.268	0.051	-0.018
	(0.215)	(0.104)	(0.042)	(0.045)	(0.032)	(0.173)	(0.032)	(0.020)
Any HL	0.013	-0.083	0.013	-0.024	-0.042	0.194	-0.045	-0.018
	(0.220)	(0.104)	(0.041)	(0.045)	(0.031)	(0.178)	(0.032)	(0.020)
Panel B: Disaggregated specific	ation							
VHL	0.264	-0.077	-0.031	-0.019	-0.087*	0.475*	0.004	-0.035
	(0.318)	(0.134)	(0.045)	(0.051)	(0.046)	(0.277)	(0.043)	(0.027)
HL	-0.074	-0.014	0.032	0.025	-0.020	-0.055	-0.043	-0.019
	(0.376)	(0.192)	(0.080)	(0.091)	(0.081)	(0.281)	(0.039)	(0.043)
V	0.116	0.025	-0.033	0.057	-0.020	0.033	0.055	-0.019
	(0.406)	(0.232)	(0.075)	(0.087)	(0.079)	(0.328)	(0.070)	(0.042)
p-value for VHL = HL test	0.404	0.750	0.398	0.624	0.343	0.075	0.275	0.688
p-value for $V = C$ test	0.775	0.913	0.656	0.512	0.797	0.920	0.439	0.657
Panel C: Summary information								
Control group mean	1.555	0.437	0.075	0.066	0.094	0.846	0.038	1.896
# observations in VHL	1,452	1,452	1,452	1,452	1,452	1,452	1,452	1,366
# observations in HL	1,439	1,439	1,439	1,439	1,439	1,439	1,439	1,341
# observations in V	1,434	1,434	1,434	1,434	1,434	1,434	1,434	1,365
# observations in C	1,490	1,490	1,490	1,490	1,490	1,490	1,490	1,410

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 34. Consumption of temptation goods

	1	2
	Consumption of alcoholic beverages (last week × 30 / 7, PHP)	Consumption of cigarettes (last week × 30 / 7, PHP)
Panel A: Pooled specification		
Any V	-1.994	0.125
•	(1.545)	(1.468)
Any HL	3.984**	-1.038
	(1.555)	(1.469)
Panel B: Disaggregated specification		
VHL	2.032	-0.824
	(2.220)	(2.093)
HL	1.632	1.341
	(3.539)	(3.345)
V	-3.567	2.647
	(2.557)	(3.327)
p-value for VHL = HL test	0.913	0.525
p-value for $V = C$ test	0.1640	0.4268
Panel C: Summary information		
Control group mean	21.88	36.79
# observations in VHL	1,566	1,556
# observations in HL	1,531	1,510
# observations in V	1,528	1,502
# observations in C	1,582	1,566

Panels A and B show treatment effect estimates relative to control. Dependent variables are indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses. \*, \*\*\*, and \*\*\* indicate *p* -values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 35: Income treatment effect robustness checks

	1	2	3	4
	Monthly income (PHP)	Monthly income (PHP) - winsorized 99th percentile	Monthly income (PHP) - winsorized 95th percentile	Log of monthly income (PHP)
Panel A: Pooled specification				
Any V	386.1***	356.4***	276.9***	0.102***
	(126.8)	(100.9)	(80.28)	(0.023)
	[0.016]	[0.003]	[0.004]	[0.001]
Any HL	131.2	83.5	26.0	-0.005
·	(126.3)	(100.3)	(80.10)	(0.023)
Panel B: Disaggregated specification				
VHL	524.4***	441.2***	301.6***	0.097***
	(175.0)	(141.9)	(112.1)	(0.032)
HL	287.9	287.0	288.8	0.045
	(278.4)	(226.1)	(186.0)	(0.056)
V	574.2**	591.3**	565.2***	0.154***
	(285.4)	(230.2)	(186.8)	(0.053)
p -value for VHL = HL test	0.390	0.494	0.945	0.343
q -value for VHL = HL test	<del></del>			
p -value for $V = C$ test	0.045	0.011	0.003	0.004
q-value for $V = C$ test	[0.271]	[0.065]	[0.017]	[0.024]
Panel C: summary information				
Control group mean	4,213	4,095	3,831	7.962
# observations in VHL	1,452	1,452	1,452	1,353
# observations in HL	1,440	1,440	1,440	1,359
# observations in V	1,435	1,435	1,435	1,349
# observations in C	1,490	1,490	1,490	1,393

Panels A and B show treatment effect estimates relative to control. See Appendix for details on variable construction. The dependent variable is shown in the columns. Standard errors clustered by community are in parentheses, and q-values are in brackets. The q-values in Panel A are for tests of effects relative to the control group. The q-values in each column represent what the q-value on the income treatment effect would be if the effect on income as defined in the column heading were tested along with the other primary economic outcomes. The q-values in a given column are computed independently of the q-values in the other columns. \*, \*\*, and \*\*\* indicate p-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.

Online Appendix Table 36. Summary statistics on religious affiliation by treatment group

Treatment group	Religion	mean	sd	min	ma
	Catholic	0.700	0.458	0	1
	Muslim	0.008	0.087	0	1
	Iglesia Filipina Independiente	0.022	0.147	0	1
С	Iglesia Ni Cristo	0.009	0.097	0	1
C	Jehovah's Witness	0.006	0.079	0	1
	Protestant (Evangelical, Baptist, etc.)	0.209	0.407	0	1
	Mormon	0.003	0.056	0	1
	Other	0.042	0.201	0	1
	Catholic	0.689	0.463	0	1
	Muslim	0.005	0.072	0	1
	Iglesia Filipina Independiente	0.018	0.134	0	1
V	Iglesia Ni Cristo	0.023	0.151	0	1
V	Jehovah's Witness	0.001	0.036	0	1
	Protestant (Evangelical, Baptist, etc.)	0.206	0.405	0	1
	Mormon	0.002	0.044	0	1
	Other	0.055	0.227	0	1
	Catholic	0.712	0.453	0	1
	Muslim	0.002	0.044	0	1
	Iglesia Filipina Independiente	0.007	0.084	0	1
***	Iglesia Ni Cristo	0.020	0.141	0	1
HL	Jehovah's Witness	0	0	0	0
	Protestant (Evangelical, Baptist, etc.)	0.200	0.400	0	1
	Mormon	0.003	0.051	0	1
	Other	0.056	0.230	0	1
	Catholic	0.665	0.472	0	1
	Muslim	0.001	0.036	0	1
	Iglesia Filipina Independiente	0.036	0.186	0	1
	Iglesia Ni Cristo	0.016	0.125	0	1
VHL	Jehovah's Witness	0.003	0.050	0	1
	Protestant (Evangelical, Baptist, etc.)	0.213	0.410	0	1
	Mormon	0.003	0.056	0	1
	Other	0.064	0.244	0	1
	Catholic	0.692	0.462	0	1
	Muslim	0.004	0.063	0	1
	Iglesia Filipina Independiente	0.021	0.143	0	1
	Iglesia Ni Cristo	0.017	0.130	0	1
Total	Jehovah's Witness	0.003	0.051	0	1
	Protestant (Evangelical, Baptist, etc.)	0.207	0.405	0	1
	Mormon	0.003	0.052	0	1
	Other	0.054	0.226	0	1

These summary statistics are calculated using only the religious affiliation of survey respondents (and not of other household members). The statistics exclude five community pairs that did not comply with their treatment assignment.

Online Appendix Table 37: Treatment effects on probability of identifying as Catholic or Protestant

	1	2		
	Catholic (dummy)	Protestant (dummy)		
Panel A: Pooled specification				
Any V	-0.027*	0.004		
	(0.015)	(0.012)		
Any HL	-0.004	-0.004		
	(0.015)	(0.013)		
Panel B: Simple specification				
Values, Health and Livelihood (VHL)	-0.032	0.000		
	(0.020)	(0.016)		
Health and Livelihood (HL)	0.007	-0.004		
	(0.039)	(0.035)		
Values (V)	-0.017	0.003		
	(0.038)	(0.032)		
p-value for VHL = HL test	0.334	0.910		
p-value for $V = C$ test	0.654	0.920		
Panel C: summary information				
Control group mean	0.700	0.209		
Number of observations in VHL	1,568	1,568		
Number of observations in HL	1,537	1,537		
Number of observations in V	1,539	1,539		
Number of observations in C	1,585	1,585		

Panels A and B show treatment effect estimates relative to control. The dependent variable is either an indicator variable for the survey respondent self-identifying as Catholic or the survey respondent self-identifying as Protestant, as indicated in the column title. See Appendix for details on variable construction. Standard errors clustered by community are in parentheses, and q-values are in brackets. \*, \*\*, and \*\*\* indicate p-values less than 0.1, 0.05, and 0.01, respectively, for tests relative to the control group.