Overcoming Intersectarian Divisions through Contact and Leadership: Evidence from a Field Experiment*

Zain Chaudhry, Karrar Hussain and Obeid Ur Rehman†

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Abstract

In the developing world, significant inter-sectarian divisions exist that remain largely unexplored in contrast to ethnic and racial divisions. We run a field experiment with 302 worshipers in 24 mosques in Pakistan to overcome divisions between Shias (the minority sect) and Sunnis (the majority sect) - the two major sectarian groups within Islam. In the first treatment arm, we send volunteer Sunni worshipers to pray in Shia mosques, exploiting the fact that each sect prays in a visibly different way. In the second treatment arm, the leader of the Sunni mosque delivers a religious message in support of intersectarian harmony. In the third treatment arm, we offer both treatments. All treatments are implemented for 12 consecutive days. We find that the combined treatment (but not the stand-alone treatments) reduces prejudice: more Sunni worshipers choose to hire a Shia plumber and purchase books about Shias. We show that the reduction in prejudice is driven by preferences, not beliefs, regarding

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†Chaudhry: The World Bank, zchaudhry@worldbank.org; Hussain: Department of Economics, FAU Erlangen-Nuremberg, karrar.hussain@fau.de; Ur Rehman: Toronto Metropolitan University, obeid@torontomu.ca

Shias: post-treatment Sunnis perceive Shias as being more peaceful and reasonable, but our treatment does not change their knowledge about Shias.

JEL Classification: C93, D91, J15, O15, Z13.

1 Introduction

For a long time, researchers in economics and political science treated identity-based preferences (for example, for one's own race or ethnicity) as exogenous. This research recognized the benefits and costs of diversity, with greater creativity and innovation (Jha, 2013; Marx et al., 2021; Montalvo and Reynal-Querol, 2021) offset by lower cooperation, lower quality of governance, and heightened risk of violence and corruption (Alesina et al., 1999; Habyarimana et al., 2009; Fearon and Laitin, 2003; Easterly and Levine, 1997; Garcia and Reynal-Querol, 2005). The standard models showed that the gains from ethnic diversity could only be greater than the costs in developed countries, which have institutions that keep the costs low (Alesina and La Ferrara, 2005).[1]

However, more recently, social scientists have started to explore whether various types of contact can lower prejudice and create unity, thus reducing the costs of diversity. This work has explored contact in settings such as sports and schools (Lowe, 2021; Mousa, 2020; Scacco and Warren, 2018) and (historical) nation building (Assouad, 2020; Bazzi et al., 2019; Blouin and Mukand, 2019). Both strands of the literature have shown that it is often hard to change culture (Giuliano and Nunn, 2021) and that nations have been built with great violence, which leaves fewer options to create more diverse societies today. Hence, a deeper understanding of feasible policies that can reduce prejudice is necessary.

We explore an element of identity that has received less attention in the literature: sectarian identity. In many developing countries, this identity holds great meaning, particularly the identity of interest to us: the Shia-Sunni divide within Islam.[2] Around 15 percent of

[1] In their model, ethnic diversity is beneficial only at higher levels of development because less developed societies do not have institutional features to cope with the conflict intrinsic to diversity.

[2] While we focus on this particular sectarian divide, other important sectarian divides such as between

Muslims globally are Shias——most of the rest are Sunnis——with large numbers of both living together in countries such as India, Iraq, Pakistan, and Syria. Over the last forty years, with competition between Saudi Arabia and Iran, this divide has attained even greater significance because of the potential for violent conflict. The majority sect, Sunni Islam, has been primarily responsible for violence against the minority sect, Shia Islam. We argue that such sectarian identities and divisions differ from those based on ethnicity, caste, and race in multiple ways. First, when sectarian divisions exist, they relegate ethnic or racial divisions to lower importance. Second, sectarian identity is not correlated with economic activity, unlike, say, castes in India: Shias and Sunnis do not specialize in a particular sector, nor do they belong to one particular income class. Third, while sectarian identities can be a source of division, members of both sects are still part of one overarching religion, which can be a source of unity.

Today, a large majority of the Sunni sect holds incorrect, extreme beliefs about the religiosity of the Shia sect. Around 35 percent of Sunni respondents in Pakistan say that they do not consider Shias to be Muslims (Kalin and Siddiqui, 2014). One reason Sunnis hold this belief is that they think Shias either do not pray. These beliefs about the observance of a particular religious ritual matter greatly because formal daily prayers are of great importance for Muslims.[3] These incorrect beliefs about religiosity and adherence to religious rituals can lead to discriminatory behavior and even violence. In our sample's baseline data, 78 percent of Sunnis hold incorrect beliefs about the number of prayers Shias pray.

Catholics and Protestants have been important in recent and distant history in places such as Ireland.

[3]The way a typical Muslim prayer, for both Shias and Sunnis, is conducted is with *takbir* (formal start of the prayer), *qayyam* (recitation of Quran while standing), *rukku* (bowing down) and *sujjud* (prostration). The only difference between Shia and Sunni prayers is in the second component: *qayyam* . While standing, Sunnis hold both hands on their stomach and Shias leave their arms open.

To understand whether contact and leadership can reduce sectarian prejudice and increase economic interactions, we conducted a field experiment on contact and leadership inside Sunni mosques in Pakistan. We implement three treatments over twelve days across twenty-four mosques with 302 Sunni worshipers. We collect endline data one month after the intervention.

In the first treatment arm (contact), implemented in six mosques, we send volunteer Shia worshipers to Sunni mosques once every day for twelve consecutive days, thus exposing the host worshipers to Shia worshipers. We carefully instructed the volunteer Shia worshipers to visit the mosques during evening prayers and pray in the congregation but not engage in any additional activity. The Shia volunteers' sect is readily identifiable because the two sects pray in visibly different manners (the act of praying involves physical movement, which differs substantially between the two sects). The presence and actions of the Shia worshipers are unmissable by the Sunni worshipers because the number of worshipers during these daily prayers is around twelve people in our sample, while we always send three to four Shia volunteers to each mosque. We aim for the volunteer worshipers to be 20 percent of the worshipers in the host mosque.

In the second treatment arm (leadership), implemented in five mosques, we have the leader of the mosque, the imam, deliver a message of religious harmony shortly before the commencement of prayers for twelve consecutive days. This announcement includes a simple, famous verse recited in Arabic along with its translation in the local language, Urdu, from the Islamic holy book (sacrosanct for both Shias and Sunnis), the Quran. The verse focuses on unity and firmness in belief in Allah among all Muslims. This is an important message in a highly religious country where religious authority is revered and influences every sphere of

life. Thus, support from such an authority figure in one's community carries great weight.

In the third treatment arm (combined), implemented in five mosques, we combine our two treatments: the volunteer Shia worshipers pray in Sunni mosques for twelve consecutive days, and the imams deliver the unity message each of those days.

We conduct the experiment in Haripur District, Pakistan. Haripur is in northwest Pakistan, which has been affected substantially by the war on terror since 2002, including a wave of terrorism by the Taliban (a Sunni militant group) against the Shias. Pakistan is particularly relevant for Shia-Sunni relations because it has the world's largest population of Muslims after Indonesia and the world's largest population of Shias after Iran. The Shia-Sunni relationship has been difficult since the 1980s, when the Iranian revolution happened and Saudi Arabia and Iran waged a proxy war in Pakistan, which led to a wave of terrorism against Pakistani Shias starting in the 1990s. Sunnis, the majority sect in Pakistan, continue to hold discriminatory beliefs about Shias. Only around 20 percent of Sunnis express agreement with statements declaring openness to intersectarian marriage (Kalin and Siddiqui, 2014).

Our first set of findings focuses on a real-world economic activity. We offer worshipers discounted vouchers for services from two plumbers whose names are clearly either Shia or Sunni. We find economically and statistically significant effects for our combined treatment, which increases demand for Shia plumbers by 0.176 percentage points against a mean control-group demand of 0.153 percent . Importantly, Shias and Sunnis do not differ in any other relevant characteristic, including competence in plumbing. We find precise null effects for the stand-alone contact and leadership treatments. Our survey measures validate these results, as we find the combined treatment leads to greater openness to engaging in business with

Shias. These results are robust to the inclusion of control variables, dropping a random part of our sample, and different ways of calculating standard errors (bootstrapped standard errors and randomization inference).

Our second set of findings focuses on vouchers for purchasing books at a discount. We offer our respondents vouchers for two books from each sect. One book for each sect is about the history of the prophet and early Islam (a religious-history book) and the other book contains prayers for each sect (a religious-rituals book). We find that our combined treatment leads to a 0.244 percentage-point reduction in demand for books about Sunnis. This demand is coming from an increase in books about Shia rituals, not Shia history. We find statistically significant (at the 10 percent level) backlash effects for both the contact and leadership stand-alone treatments, though the backlash effect is much stronger for the contact treatment.

We believe both these results to be economically meaningful. Many economic activities occur within one's kin network in developing countries, and engaging in economic activity outside those networks is rare (Beaman, 2016; Dhillon and Afridi, 2022). Further, the nature of plumbing services is significant: a stranger is invited to work in one's home, which demonstrates trust in this person in this culture. Hence, respondents consider these decisions significant. Hiring the plumber requires the participant to expend time and take the risk of low-quality work that could increase future repair costs. The purchase of books signals a willingness by the Sunnis to learn about Shias. The vouchers' amounts are small but significant; thus we do not expect participants to waste them.

Finally, we find that our results are driven by a change in preferences rather than beliefs about the minority sect. We show that in response to our combined treatment, Sunnis are

more likely to trust Shias and have more favorable perceptions about personality traits such as reasonableness and peacefulness. No change occurs in their knowledge, such as the number of Shia prayers or knowledge about a leading Shia scholar.

Motivated by the contact hypothesis (Allport et al., 1954), we explore how certain types of contact between groups can reduce prejudice, with the effects dependent on having common goals, equal status in a particular situation, intergroup cooperation, and the support of authorities, law, or custom. While Allport et al. (1954)'s study led to a huge empirical literature in social psychology, we still lack a deep understanding of what types of contact are useful and under which conditions contact lowers prejudice (Paluck et al., 2019). Paluck et al. (2019) review 418 experiments on the contact hypothesis and find that only 27 studies randomized contact, most used self-reported surveys, and most explored only ethnic or racial prejudice, usually in the USA.

We contribute to this literature in several ways. First, we are the first to systematically test for separate and combined effects of contact and leadership, showing the importance of both in conjunction and the potential backlash effects in the absence of one element. Previous research, including Boisjoly et al. (2006), Enos (2014), Dahl et al. (2021), Scacco and Warren (2018), Corno et al. (2022), Schindler and Westcott (2021), and Rao (2019), often tests one type of contact. For example, regarding contact, Scacco and Warren (2018) randomize educational training of Christians and Muslims and find no changes in prejudice, though mixed-class subjects discriminate significantly less against out-group members than subjects in homogeneous-class groups. Mousa (2020) complements that work by showing evidence for the positive effects of collaboration between Muslims and Christians in soccer leagues in a post conflict setting: Iraq . An exception is Lowe (2021), who explores inter-

caste contact in India by randomizing cricket-team composition and shows that cooperative, not adversarial, contact leads to a reduction in prejudice against out-group members.

Second, we explore intersectarian differences, which until now have received little attention in the literature. These differences are a source of communal division not only because of their economic and political importance but because multiple-sect groups retain a common source of belief, which can be a driver of cohesion. Hence, we contribute to the literature on understanding how culture and religion shape beliefs and behavior. This literature has shown that identity, culture, and religion are major determinants of economic outcomes and behaviors (Akerlof and Kranton, 2000; Fernández, 2011; Gorodnichenko and Roland, 2011; Alesina et al., 2013); in particular, it explores the role religious authorities play (Clingingsmith et al., 2009; Bassi and Rasul, 2017; Bhalotra et al., 2021).

The rest of the paper proceeds as follows. Section 2 presents the context of the Shia-Sunni divide. Section 3 presents the details of the experimental design and the data. Section 4 describes our econometric specification and presents our main regressions and heterogeneity analysis. Section 5 concludes.

2 Shias and Sunnis in Pakistan

The Shia-Sunni division began just a few decades after the advent of Islam, with their theological differences growing over time. In modern times, the relationship between Shias and Sunnis has worsened substantially because of proxy wars fought between Saudi Arabia and Iran, which led both countries to support extremist elements abroad through charitable funding and propaganda, which eventually led to a wave of terrorism in countries such as

Pakistan. The propaganda created two groups with very exclusionary beliefs and preferences, sometimes not even seeing the other group as being Muslim, and more extreme beliefs that support killing each other. The extreme beliefs are incorrect and include the idea that the other sect does not follow Islamic religious rituals and thus comprises either bad Muslims, who should be looked down upon, or non-Muslims. The offering of daily prayers is one of the most important Islamic rituals (for both sects), and incorrect beliefs exist here too (Davis 2007). Importantly, while both sects' daily prayers are read in silence (though they have the same content), the precise physical movements differ, allowing one to easily infer the sect of the worshiper. Our experiment exploits the existence of incorrect beliefs about the religiosity of the other group, the importance of prayer to both sects, and the observable difference in prayer movements to create contact between the two groups and provide information about the religiosity of the other sect. Importantly, Shias and Sunnis do not differ in any other important and relevant characteristic such as ethnicity.

3 Experimental Design

Here we explain our sample and treatments as well as the data collection between May 2022 and January 2023.

3.1 Sample

We conducted the experiment in Haripur District—in the third-largest province of Pakistan, Kyber Pakhtunkhawa—which has a population of 1,001,515. Kyber Pakhtunkhawa is in northwest Pakistan along the Afghan border. Because of its proximity to Afghanistan, it

EXPERIMENTAL TIMELINE

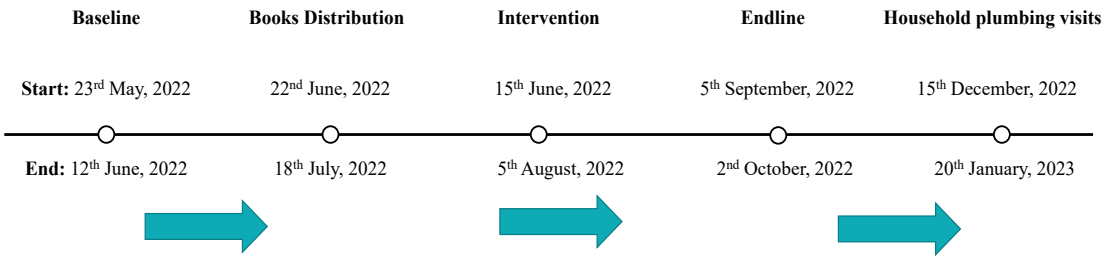

Figure 1: Experimental Timeline

was the most affected province in the war on terror that started in 2002, with Shias being a particular target of terrorist organizations. This unfortunate violent history makes Kyber Pakhtunkhawa particularly relevant to our study. Between 2003 and 2021, 5,279 civilians were killed in the province in terrorist attacks by Sunni militant groups.

We selected twenty-four mosques from ten towns and villages in Haripur.(HOW WERE THESE MOSQUES SELECTED) All mosques belong to the Sunni sect. We surveyed 302 regular worshipers at baseline and endline. We implemented three treatment arms based on stratified random sampling. We create the strata in the following way. We divide all mosques into two groups: low and high attendance based on median attendance. Then, we create two groups with two randomized arms together in each group. Finally, we combine them, with a strata being one of the two groups in each of the low and high attendance set of mosques. This ensures that every treatment arm is implemented in places with high and low number of worshipers based on the median. The balance table below confirms that we correctly randomized our sample and that our respondents have similar characteristics across all treatment groups.

Table 1: **Balance Table**

	Age	Marital Status	Income,	Employment	Wife, Same Sect	Listen Sermons	Business, Opp Sect
Announcement Only (A)	27.719	0.993	0.558	4.720	0.945	1.043	2.880
	(2.124)	(0.089)	(0.162)	(0.250)	(0.036)	(0.054)	(0.119)
Prayer Volunteers Only (B)	30.180	1.114	0.550	5.036	0.960	0.998	2.908
	(2.192)	(0.095)	(0.157)	(0.207)	(0.071)	(0.062)	(0.154)
Announcement and Volunteers Both (C)	30.581	1.110	0.863	5.173	0.935	0.937	2.963
	(2.181)	(0.106)	(0.162)	(0.246)	(0.040)	(0.058)	(0.171)
Control (D)	29.000	1.000	1.000	5.000	0.964	1.000	3.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.024)	(0.000)	(0.000)
Hypothesis tests p-values							
Joint orthogonality p-value(A=B=C=D)	0.76	0.64	0.00	0.57	0.76	0.45	0.71
A-D=0	0.55	0.93	0.01	0.26	0.63	0.42	0.31
B-D=0	0.59	0.23	0.00	0.86	0.95	0.97	0.55
C-D=0	0.47	0.30	0.40	0.48	0.35	0.28	0.83
Number of Regular Worshipers	301	302	299	301	228	302	302

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. This table shows balance for the full sample of 302 worshipers. The variable age is measured in years. The variable marital status is 1 for single, 2 married, 3 for divorced/separated and 4 for widowed. The variable family education is the highest level of education in the family: 1 for never attended school, 2 for secondary school, 3 for a 10th grade exam, 4 for high school diploma, 5 for undergraduate degree, 6 for a graduate degree, and 7 for any even higher degree. The variable income is 1 for income between 15,000-25,000, 2 for 25,001-35,000, 3 for 35,001-50,000 and 4 for higher than 50,000. The employment variable is 1 for a full-time job, 2 for a part-time job, 3 for temp/contract work, 4 for self-employed, 5 for no idea and 6 for retired. The variable wife opposite sect is a binary variable which is 1 if the wife of the respondent is of the same sect. The variable listen sermons is about whether the respondent attends communal Friday prayers (one weekly communal prayer in Islam) and listening to the sermon (which requires time). It is a binary variable which is 1 for the respondent attends the sermon, 0 otherwise. The variable family prayers is about how many people from the respondent's family pray at the mosque: 1 for none, 2 for 1 person, 2 for 2 people and 3 for more. The variable business opposite sect is about willingness to do business with members of the opposite sect in a 1-5 range with 1 meaning very bad and 5 meaning very good. The variable trust in the opposite sect is a general trust question with a 1-5 range with 1 meaning very bad and 5 meaning very good. We use robust standard errors and block fixed effects.

We conducted a baseline survey to understand status quo intersectarian beliefs . The average age of our respondents is forty years, with the youngest being twenty-one years old and the oldest being seventy-two years old. A potential concern is that our sample is too old, which matters because age can mediate between conservativeness and discriminatory behavior. However, this is not the case.

Around 10 percent of our sample have no more than secondary school education. Around the same proportions have an International General Certificate of Secondary Education, high school diploma, or undergraduate degree. Only around 7 percent earn more than the median wage, and around 39 percent earn around the minimum wage. Most of our sample are internet savvy and use the internet daily.

All but 5 percent are married to Sunni spouses. However, more than 85 percent of the sample know Shias. The people who are known are mostly friends, though 29 percent of

respondents do not have a Shia friend. These friendships mostly occur at the workplace (45 percent).

Nearly everyone is aware that physical gestures in prayer are different for Shias (81 percent). Most Sunnis (78 percent) are wrong about the number of Shia prayers. Only 11 percent of Sunni respondents strongly trust Shias, and 35 percent are indifferent. Sunni respondents hold strong negative beliefs about Shias' arrogance (38 percent think members of the opposite sect are arrogant), fanaticism (44 percent), patriotism (12 percent disagree , 21 percent neither agree nor disagree, and 6 percent do not answer), religiosity (14 percent disagree, 30 percent neither agree nor disagree, and 7 percent do not answer). In sum, negative intersectarian beliefs are common. All these variables are measured using a 1–5 Likert scale.

3.2 Experiment Design

We have three treatment arms and one control arm. In our first treatment arm, we send volunteer Shia worshipers to Sunni mosques to pray alongside the host congregants in prayers. The volunteers are instructed not to initiate any conversation or engage in any activity other than worshiping. They pray in the mosque, following their own sect's customs, and leave. This exposes the host worshipers to the other sect simply through the latter's presence. We send two to three volunteers every day over a twelve-day period during the second-to-last prayer of the day to every mosque. This is the most frequently practiced of the five daily prayers, as it is right after work (around sunset). The volunteers' Shia identity is visible in our sampled mosques because (i) there are few worshipers in mosques (an average of 13.7 in

our sample), except during the weekly congregational prayers on Fridays, and (ii) there are clear, widely known, visible differences in how the sects pray.

In our second treatment, we expose the worshipers to a message in support of unity given by an authority figure: the imam. We have the imam deliver the message of harmony shortly before the commencement of prayers. The message is a simple, famous verse from the Quran: "Hold fast together to the cable of Allah and be not divided" (Surah Al-Imran Ayat, 3:103 Quran). This verse stresses unity and firmness of belief in God among Muslims. However, it does not specifically call for unity of Shias and Sunnis. Muslims are divided into many subsects as well as ethnicities and languages.

The congregants' interaction inside the mosque is natural, as there is no legal, moral, or religious reason for the sects not to pray in the same mosque; accordingly, nobody stopped our volunteers from praying. We do not force any interaction between the sects. What can be inferred from seeing a member of the opposite sect pray is subtle, as it comes from experience rather than a message. Finally, mosques do not fundamentally differ between the two sects and thus provide a safe space for both sects, particularly when the imam is welcoming.

Of the two stand-alone treatments, the first is more intense, as the host worshipers see members of the opposite sect pray alongside them. However, while the number of volunteer worshipers is very small, their presence might provoke negative sentiments because the host worshipers might see it as an intrusion. In practice, at times our field team did infer that worshipers were wondering what was happening, but no problems resulted.

In our third treatment group, we combine our first and second treatments, which makes it our strongest and most direct treatment. The imam delivers the message of unity each

of the twelve days. This treatment not only exposes worshipers to worshipers of the other sect but uses religious leadership to let worshipers see this exposure as benevolent, which makes the exposure a positive experience. By themselves, being exposed to members of the out-group could lead to more discrimination (Enos, 2014) and the message of unity could be seen as too generic. Together, they form a more potent, clear call for unity.

Our final arm is a control group.

3.3 Data Collection and Variables

We collect data at baseline and endline on the demographics, religiosity as well as the worshipers' beliefs and preferences about their own sect and the opposite sect. We conduct two lab-in-the-field experiments. We have enumerators glean and record information about religiosity from clothes and accessories worn by the worshipers. We conduct the endline data collection one month after the intervention.

3.3.1 Outcome Variables

We conduct two incentivized experiments to measure the respondents' beliefs and preferences about the opposite sect and their economic interaction with them.

First, at baseline and endline, we offer every respondent a discount voucher to buy one of four books. We provide discounts of 80 percent on the purchase of a book about the opposite sect and 20 percent for a book on one's own sect. Below, we present an English version of the vouchers while the original (Urdu) version in the appendix . The top row of the voucher shows Sunni books and the discount percentage (retail prices are PKR 80 and PKR 180 respectively). The bottom row shows Shia books and the discount percentage (retail prices

are PKR 120 and PKR 135 respectively). The voucher is worth PKR 100. We carefully selected these four books in consultation with a religious scholar who is an authority on sectarian issues. We selected two books on each sect—one about daily ritual prayers and one about early Islamic history. We stamp these books with a not-for-sale sign to discourage sales.

At endline, we also offer every respondent a voucher worth PKR 1,000 for services of two plumbers who are named on the voucher. The names are clearly Shia or Sunni names, and the respondents have to choose one of the two plumbers.[4] Eventually, in the presence of the respondents, one hundred respondents are randomly chosen to be provided the plumbing services. We arrange for the plumber to carry out repairs in the respondents' house.

The plumbing job can be whatever the chosen respondent requires, and we do not believe plumbing work or plumbing as a profession to hold negative connotations . The use of plumbing services from a member of the opposite sect is an important signal of openness for two reasons. First, in many developing countries, kin networks matter greatly (Dhillon and Afridi, 2022; Beaman, 2016). It is highly unusual to hire workers from outside one's own caste, religion, or linguistic group (whichever identity is most salient). Second, hiring someone to provide plumbing services at home is not like engaging in brief, impersonal purchases at a small kiosk or grocery store, as it entails an invitation to enter one's home, which is not common in South Asian cultures.

Beyond the lab-in-the-field experiments, we use some survey-based measures as outcomes. One outcome focuses on conducting business and is the answer to the question "What do

[4]There are certain personalities in Islamic history that have become very partisan——for example, a caliph who fought against and killed the person that Shias today revere. As a result, this caliph's name, while still mentioned by Sunnis, is never mentioned by Shias.

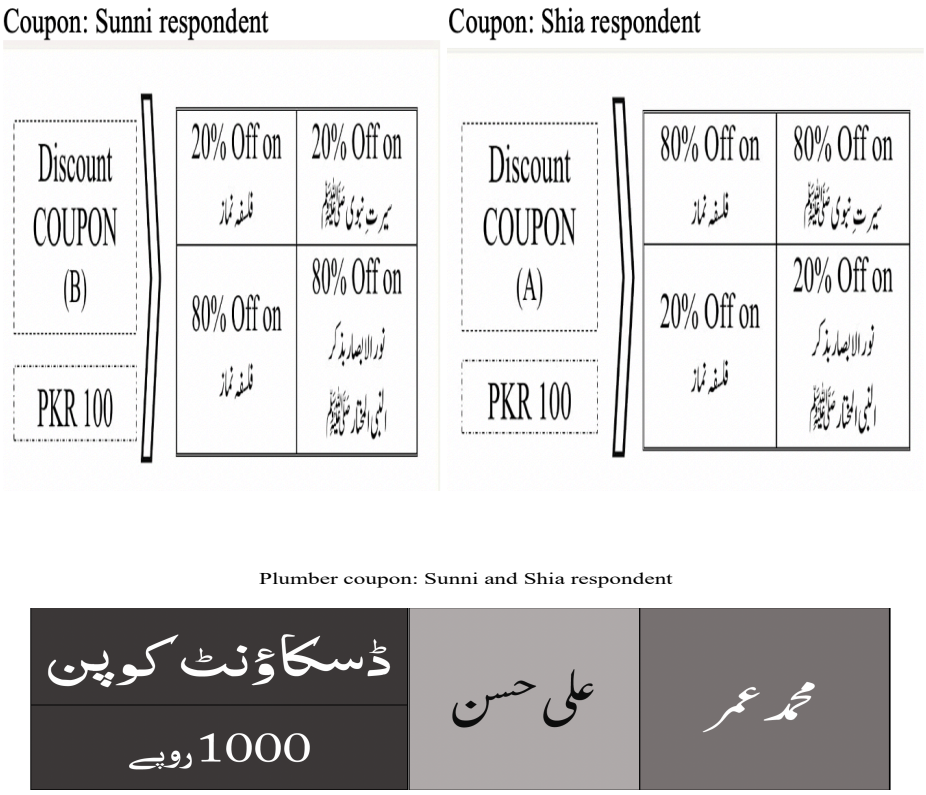

Figure 2: Book Voucher: Four discounted books are offered - two from each sect. Plumber Voucher: One obviously Sunni and Shia name each is visible in this voucher.

you think about being entering into business with Shias?" The second is the answer to a question about openness to hiring Shias: "What do you think about recruiting Shia/Sunni workers?" The answers can range from very bad to very good on a five-point scale.

3.3.2 Other Variables

In our heterogeneity analysis, we use three measures of conservativeness. For the first measure, we exploit groupings within the Sunni sect: Deobandi, Ahle Hadith, and Barelvi. These three subgroups constitute all Sunnis within Pakistan. Deobandis and Ahle Hadith are much more conservative than Barelvis in the sense that they are much more anti-Shia. This difference is stark and is evident in how members of the subsects interact with Shias. We use this division to create a binary variable equal to 1 if a respondent is from either of the two conservative subgroups and 0 otherwise.

For the second and third measures, we use objective measures recorded by the enumerators about each respondent's clothing choices. First, they take note of whether an individual wears a ring. The last prophet of Islam wore a ring, and very religious Muslims consider rings a religiously mandated adornment. Second, we measure whether an individual wears their trousers above the ankle. Very religious people consider this to be another religiously mandated choice. In many religious narrations from the time of the prophet, wearing clothes below the ankle is seen as a sign of arrogance, partially out of resistance to the elites of that time , who wore long clothes that would get dirtied and ruined as they trailed the wearer. Both of these matters apply to both Shias and Sunnis. We have binary variables equal to 1 if the ring is worn or if trousers are worn above the ankle and 0 otherwise.

4 Results

4.1 Econometric Specification

We estimate the following regression specification to analyze the effect of our treatments on multiple outcomes related to beliefs and behavior of the majority sect:

$$Y_{mi} = \alpha + \beta_1 (Announcement)_{mi} + \beta_2 (Volunteers)_{mi} + \beta_3 (Combined)_{mi} + X_{mi} + \delta_m + \epsilon_{mi}, \quad (1)$$

Here, Y_{mi} is the outcome of interest for individual i and strata m. This is the endline variable. All our analysis is at the individual level. Here, $Treatment_{mi}$ is a binary variable for each of our three treatments. We include strata fixed effects. We run these regressions with and without control variables, X_{mi}, for greater precision. We cluster standard errors at the mosque level. In the appendix, we also calculate standard errors using the bootstrap method and randomization inference.

Further, we estimate a regression specification in which our outcome is defined as the change in the variable from baseline to endline. We use the following specification:

$$\Delta Z_{mi} = \alpha + \beta_1 (Announcement)_{mi} + \beta_2 (Volunteers)_{mi} + \beta_3 (Combined)_{mi} + X_{mi} + \delta_m + \epsilon_{mi}, \quad (2)$$

4.2 Results

We examine the effects of leadership and contact interventions on economic decisions and openness to religious information about the opposite sect and find that impacts vary by the type of outcomes and their connections to religious beliefs. In hiring decisions, the combined intervention increases demand for Shia workers in an incentivized setting, though survey measures of hiring beliefs show no impact suggesting that they may be biased. For purchasing religious books of the opposite sect—an outcome more directly tied to sectarian beliefs—the leadership intervention increases demand, while contact and combined interventions show no effect, suggesting that contact may trigger a backlash, offsetting the leadership intervention's impact.

4.2.1 Economic Outcomes - Hiring Choice

We study the effect of leadership and contact interventions on economic choices by analyzing the decision of Sunni worshipers to hire Shias. In the incentivized experiment, the combination of leadership and contact leads to a large increase in the demand for hiring members of the minority sect, while neither intervention alone changes hiring behavior. In contrast, when we look at survey measures of beliefs about hiring the minority sect, the combined intervention shows no impact. These differences suggest that the survey measures may suffer from response bias, highlighting the importance of distinguishing incentivized outcomes from survey measures when analyzing contentious beliefs and practices.

Table 2 shows our results from separately estimating regression equation 1 for the incentivized hiring experiment and our endline survey measures of hiring beliefs. For each outcome

we run a simple regression with only strata fixed effects and our preferred specification which also includes controls.

Our first results, in columns 1 and 2, are for the incentivized experiment in which we offer discounted services from two plumbers of clearly different sects. The outcome is a binary variable equal to 1 when respondents choose services from a Shia plumber and 0 otherwise. We find economically and statistically significant effects for our combined treatment, which increases demand for Shia plumbers by 17.6 percentage points against a mean control-group demand of 21.7 percent. This represents an 81 percent increase in minority sect hiring. Importantly we find no impact of the leadership or contact interventions on their own. The estimated coefficient for each of these interventions is close to zero.

Our second results, in columns 3 to 6, are for self reported beliefs in the endline survey about conducting business with and hiring members of the minority sect. These survey measures compliment our incentivized experiment to measure economic interactions, however, they may be susceptible to social desirability bias if respondents want to appear just and fair in their beliefs. Beliefs are measured using a 1-5 Likert scale, where 1 means very low willingness to engage in business or hiring while 5 means a very high willingness.

For the survey outcomes the combined intervention does not lead to a higher reported willingness to conduct business with or hire Shias. However, the leadership intervention shows a small statistically significant increase in support of both measures. Willingness to conduct business with and hire Shias increases by 0.16 and 0.17 Likert points, respectively, which represents around a 5 percent increase for each measure. Although the estimates are statistically significant, in terms of magnitude they are very small especially compared to the large impacts we find in the incentivized experimental outcomes. It is also relevant to

note that the control means are already very high (3.3 and 3.4 Likert points, respectively), which indicates that social desirability bias may be a concern for these measures. These results show that incentivized outcomes are a better measure of the impact of interventions in such contentious settings. Survey measures of beliefs, although easier to obtain, are likely biased hence we place greater weight on the incentivized experiment results.

Our results are robust to a number of standard error measurements and small sample tests. In appendix Y we report results using bootstrap standard errors, randomization inference standard errors and a restricted sample which randomly drops ten percent of observations. In each case our results do not change qualitatively and remain both statistically and economically significant showing that they are not driven by outliers and are not sensitive to using different measures on uncertainty.

4.2.2 Religious Openness Outcomes: Book Choices

Next we study the impact of leadership and contact interventions on openness to seek religious information about the opposite sect by analyzing the decision of Sunni worshipers to buy Shia religious books. This outcome is especially relevant as sectarian divisions are fundamentally rooted in differing religious beliefs. We find that the leadership intervention leads to an increase in purchase of Shia religious books, specifically history books. In contrast, the contact and combined interventions show no effect, suggesting that contact may trigger a backlash, offsetting the leadership intervention's impact. Our findings highlight that the impact of leadership and contact interventions varies significantly when outcomes are directly tied to the core religious beliefs that define sectarian divisions.

Table 3 shows the results for incentivized book purchase experiment in which we offer

Table 2: **The Effect of Leadership & Contact on Economic Choices**

	Experiment			Survey			
	Plumber Choice			Conducting Business		Hiring	
	(1)	(2)		(3)	(4)	(5)	(6)
Leadership	-0.044	-0.085	0.130**	0.089**			
	(0.035)	(0.056)	(0.042)	(0.022)			
Contact	0.031	0.042	0.242	0.201			
	(0.033)	(0.041)	(0.163)	(0.152)			
Combined	0.145*	0.176**	0.150	0.209			
	(0.062)	(0.065)	(0.166)	(0.142)			
Strata Fixed Effects	X	X	X	X			
Controls		X		X			
Control Mean	0.217	0.217	3.330	3.330			
Number of Respondents	302	299	302	302			
Number of Mosques	24	24	24	24			

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variable is a binary variable which is 1 when our respondents, Sunnis, choose discounted plumbing services from a member of the opposite, Shia, sect (the names of the plumbers allow for clear sectarian identification) and 0 otherwise. This outcome is based on an incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the contact treatment (where volunteer worshipers are sent to mosques of the opposite sect), the leadership treatment (where the leader of the mosque makes a religious statement about intersectarian harmony), or the combined treatment. We use robust standard errors, strata fixed effects and cluster errors at the strata level.

discounted religious books written from the perspective of each sect. We again estimate regression equation 1 separately for each outcome, with and without controls. The outcome variable is the number of Shia religious books purchased at endline—prayer books in columns 1 and 2, history books in columns 3 and 4 and total books, combining history and prayer books, in columns 5 and 6. Panel A shows the results for the full sample. In Panel B, we leverage a feature of our research design that the book choice experiment was conducted at both baseline and endline, and restrict our analysis to worshipers who did not purchase Shia religious books at baseline.[5] Since the same books were offered each time, this subgroup provides a clearer measure of the intervention's impact, isolating effects on those who had not previously engaged with Shia religious books.

We find a sizable and statistically significant effect of the leadership treatment, which increases the purchase for Shia history books by 0.086 from a baseline mean of 0.23—a 38 percent increase. This effect persists when examining total Shia books purchased, which also increase by 0.086, however this estimate is only statistically significant at the 10 percent level. The results show that religious leadership, in this case the imam of the local mosque, can foster greater openness to engaging with information about other sects.

Importantly we find no impact of the contact treatment, and in contrast to the economic outcomes we also do not find an impact for the combined treatment. Contact with Shia worshipers during prayers visibly highlights the sectarian differences in practicing religious rituals. As a result when it comes to outcomes directly tied to religious beliefs, contact in religious settings may heighten differences and create a backlash. This may also explain

[5] An alternate specification to measure the impact of the interventions on Shia book choice is to analyze the *change* in the purchase of Shia religious books between baseline and endline. We find similar results from this specification as shown in appendix X.

why we do not see an impact of the combined treatment, as the backlash from the contact intervention diminishes any impact of the leadership intervention.

Table 3: **The Effect of Contact on Endline Shia Book Choice**

	Shia Prayer Books		Shia History Books		Shia Total Books	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Full Sample						
Leadership	0.008	0.006	0.085	0.086**	0.092*	0.086*
	(0.052)	(0.058)	(0.044)	(0.025)	(0.039)	(0.039)
Contact	-0.022	-0.044	0.019	-0.036	-0.002	-0.085
	(0.099)	(0.068)	(0.064)	(0.062)	(0.160)	(0.109)
Combined	0.102	0.120	-0.037	0.010	0.065	0.133
	(0.056)	(0.074)	(0.064)	(0.068)	(0.091)	(0.091)
Strata Fixed Effects	X	X	X	X	X	X
Controls		X		X		X
Control Mean	0.189	0.189	0.226	0.226	0.415	0.415
Number of Respondents	302	299	302	299	302	299
Number of Mosques	24	24	24	24	24	24
Panel B: No Shia Book at Baseline						
Leadership	0.027	0.011	0.171	0.163*	0.198***	0.174***
	(0.105)	(0.077)	(0.116)	(0.065)	(0.030)	(0.022)
Contact	-0.021	-0.025	-0.138	-0.240**	-0.159	-0.265
	(0.107)	(0.115)	(0.076)	(0.081)	(0.145)	(0.156)
Combined	0.078	0.094	-0.052	0.053	0.026	0.147
	(0.121)	(0.095)	(0.098)	(0.080)	(0.091)	(0.123)
Strata Fixed Effects	X	X	X	X	X	X
Controls		X		X		X
Control Mean	0.152	0.152	0.242	0.242	0.394	0.394
Number of Respondents	177	176	177	176	177	176
Number of Mosques	24	24	24	24	24	24

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variable is the number of books about Shias (their rituals or their narration of early Islamic history) chosen by respondents at the endline. All these outcomes are based on incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about intersectarian harmony), or the combined treatment. We use robust standard errors, strata fixed effects and cluster errors at the strata level.

These impacts are further amplified in Panel B when we restrict the sample of Sunni worshipers who did not buy Shia books at baseline. The leadership intervention increases the total purchase for Shia books by 0.174— a 45 percent increase from the baseline mean of 0.39. We also find a statistically significant backlash effect of the contact intervention on the purchase of Shia history books which reduces by 0.24 to almost zero.

Our results highlight that the impact of leadership and contact interventions depends on how closely an outcome is tied to the core religious beliefs that define sectarian divisions. For outcomes where religious identity is irrelevant to the decision—such as hiring a plumber—leadership and contact interventions may work similarly, reinforcing each other by fostering trust and reducing social barriers. In contrast, when the outcome is directly linked to religious beliefs—such as purchasing religious books—contact can heighten awareness of doctrinal differences, potentially triggering resistance or backlash. This difference shows that while contact interventions can promote social cohesion in some domains, their effects on outcomes tied to deeply held religious beliefs may be more complex.

4.3 Channels

In this section, we explore whether beliefs or preferences changed and led to the reduction in prejudice. The standard model of discrimination in economics postulates that it is done for statistical or preference-based reasons. Based on this model, in this section we test whether our treatment changed beliefs about or preferences regarding the minority sect. Do contact and leadership provide missing information to the Sunni worshipers, or do they change their preferences?

In Table 4, we explore the effect of contact and leadership on perceptions (first panel) and beliefs (second panel). The panel for perceptions has three outcome variables in columns 1-3 respectively: unreasonableness, dependability, and peacefulness. These survey-based variables are on an ordinal Likert scale and range from 1 to 5——1 for strongly disagree and 5 for strongly agree. The panel for beliefs has two outcome variable in columns 4-5

respectively: knowledge about founders of the sects and number of prayers. The knowledge about founders question asks about their knowledge of the founders of each sect: two famous scholars who are very well-known as the preeminent leaders and founders of their sect. The number of prayers question is about the number of prayers a sect performs in a day, which differs between the two sects. In columns 1-3, we show that our combined treatment leads to a change in Sunni respondents' perceptions about Shias for both unreasonableness and peacefulness in a positive direction. In columns 4 and 5, we consistently estimate null effects, thus showing that there is no increase in knowledge about Shias among Sunni worshipers except for the contact treatment, which leads to a lower estimate of the number of prayers prayed by Shias. This may be due to the fact that contact creates some backlash effect on its own. It is important to note that the control group answer is three, which is incorrect but an understandable misconception. While Shias pray five prayers just like Sunnis, they perform them at three points during the day unlike Sunnis who do this at five different points.

Table 4: **The Effect of Contact on Perceptions**

	Perceptions			Beliefs	
	Unreasonable	Dependable	Peaceful	Know Scholar	Correct # of Prayers
	(1)	(2)	(3)	(4)	(5)
Leadership	0.344*	-0.153	-0.175***	0.005	0.111
	(0.155)	(0.081)	(0.035)	(0.020)	(0.133)
Contact	-0.222	0.533**	-0.229	-0.017	-0.149
	(0.314)	(0.158)	(0.160)	(0.027)	(0.125)
Combined	-0.486*	0.185	0.599***	0.032	0.166
	(0.192)	(0.157)	(0.124)	(0.031)	(0.219)
Strata Fixed Effects	X	X	X	X	X
Controls	X	X	X	X	X
Control Mean	4.066	3.047	4.000	0.934	0.330
Number of Respondents	298	298	298	299	299
Number of Mosques	24	24	24	24	24

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The first three dependent variables are whether a respondent believes members of the opposite sect to be reasonable, dependable and peaceful at the endline compared to baseline for Shias and Sunnis respectively with a 1-5 range with 1 meaning very bad and 5 meaning very good. The variables are ordinal from 1-5: 1 for strongly agree, 5 for strongly disagree, and 6 and 7 for do not know and do not want to answer. The last two variables are binary variables for knowledge of the leading Shia founder and for knowledge of the correct number of prayers prayed by Shias. These are survey-based measures. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about intersectarian harmony), or the combined treatment. We use robust standard errors, strata fixed effects and cluster errors at the strata level.

Further, in the same table, we examine whether participants' beliefs about Shias change. Do Sunnis know Shias better? We measure this knowledge in two ways: whether respondents are aware of a prominent Shia scholar and the number of prayers Shias pray daily. We can see that at endline, our treated respondents are no more knowledgeable than at baseline. Hence, the respondents' information set about Shias has not been affected but their preferences have changed. All these results are robust the set of tests we explain above: different standard errors, inclusion of control variables, and random sample drops.

Finally, it is important to note that the provision of books, which happened at baseline as well, could have itself changed Sunni beliefs about Shias. Unlike contact or leadership, books provide a different type of non-personal information, which can lead to belief updating. However, as we explain above, our respondents' beliefs do not change even though many Sunnis bought Shia books at baseline. We see this as evidence of the difficulty of changing beliefs, in comparison to preferences for such a sensitive matter and in such a short period of time.

5 Conclusion

We conducted a field experiment to analyze the effect of contact and leadership to reduce prejudice between Shia and Sunni sects in Pakistan. The Shia-Sunni division has resulted in a wave of terrorism in countries such as Pakistan and led the two groups to hold very exclusionary beliefs and preferences, to the extent that each group's members sometimes do not even see the other group as being Muslim, and hold extreme beliefs that support killing each other. This conflict has substantial negative effects on economic outcomes.

We explored whether these deep divisions can be healed through contact and leadership. In our field experiment, we found that when we sent Shia volunteer worshipers to Sunni mosques to pray and had the leader of the mosque deliver a message of unity, Sunni respondents chose the services of a Shia plumber much more than the control-group respondents. We also document that our combined treatment leads to a reduction in demand for books about Sunnis, thus showing treatment respondents' openness to learn about Shias. We find that our results are driven by a change in preferences rather than beliefs. In response to our combined treatment, Sunnis are more likely to trust Shias and have more favorable perceptions about personality traits, however, no change occurs in their knowledge.

This work was limited to a particular context. While we find this context to be particularly relevant, in places with even greater intersectarian strife, such interventions would not be feasible. The violence is neither low nor high in our context. A final important question is one of scalability. This could practically be approached in two ways. The state could either train volunteers and send them to mosques in the same way we the research team. This requires a large, concentrated effort. A second approach could be to encourage worshipers to go to each others' mosques through role models or other nudges. The latter would provide contact in the same way as the research team, but be more easily scalable.

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6 Appendix

6.1 Other Results

Table 5: **Plumber Business Activity: Heterogeneity by Baseline Books Choices**

	Sunni Plumber	Shia Plumber	Switcher	Change Books	More Books
Annoucement	0.005	0.007	0.014	0.168	0.226**
	(0.121)	(0.094)	(0.095)	(0.103)	(0.105)
Volunteers	-0.024	0.012	0.006	0.056	-0.022
	(0.057)	(0.036)	(0.039)	(0.109)	(0.087)
Announcement x Volunteers	-0.174	0.040	0.049	-0.031	-0.084
	(0.156)	(0.115)	(0.115)	(0.170)	(0.148)
Announcement x Conservative	0.275**	-0.166	-0.181	-0.104	-0.283*
	(0.122)	(0.116)	(0.118)	(0.150)	(0.149)
Volunteers x Conservative	0.043	-0.016	0.019	-0.028	-0.014
	(0.078)	(0.063)	(0.070)	(0.128)	(0.149)
Announcement x Volunteers x Conservative	-0.450**	0.313*	0.275	0.117	0.042
	(0.183)	(0.175)	(0.178)	(0.248)	(0.191)
Number of Mosques	423	423	423	423	423
Block Fixed Effects	X	X	X	X	X

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variables are whether a respondent choose a Sunni or a Shia plumber when given the opportunity to select a discounted plumbing service, whether someone changed (switched) their choice, the change in the number of books bought by Sunnis or Shias of their own sect from baseline to endline and a binary variable which is one if the change is not zero. The independent variables are assignment of mosques to the prayer volunteer visits treatment, the mosque leader announcement treatment or the combined treatment. We use block fixed effects, and robust and bootstrapped standard errors (top and bottom respectively).

Table 6: **Mosque Contact and Predictors of Switching**

	Sunni Plumber	Shia Plumber	Switcher
Own House	-0.179	0.237	0.175
	(0.209)	(0.171)	(0.175)
Family Size	-0.176	0.251	0.233
	(0.214)	(0.194)	(0.199)
Cost	-0.508	-0.440	-0.427
	(0.457)	(0.361)	(0.365)
Control Mean	0.435	0.492	0.153
Number of Mosques	92	92	92
Block Fixed Effects	X	X	X

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variables are whether a respondent choose a Sunni or a Shia plumber when given the opportunity to select a discounted plumbing service and whether someone changed (switched) their choice. The independent variables are assignment of mosques to the prayer volunteer visits treatment, the mosque leader announcement treatment or the combined treatment. We use block fixed effects, and robust and bootstrapped standard errors (top and bottom respectively).

Table 7: **Mosque Contact and Predictions of Switcher**

	Own House	No. of Families	Estimated Cost
Switcher	0.014	0.051	-0.047
	(0.093)	(0.086)	(0.032)
Control Mean	0.386	0.511	6.760
Number of Mosques	98	92	97
Block Fixed Effects	X	X	X

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variables are whether a respondent choose a Sunni or a Shia plumber when given the opportunity to select a discounted plumbing service and whether someone changed (switched) their choice. The independent variables are assignment of mosques to the prayer volunteer visits treatment, the mosque leader announcement treatment or the combined treatment. We use block fixed effects, and robust and bootstrapped standard errors (top and bottom respectively).

Table 8: **The Effect of Contact on Charitable Donations**

	Donations Shias (1)	Higher Donations Shias (2)
Information	0.051	-0.086**
	(0.058)	(0.024)
Contact	-0.359	-0.086
	(0.233)	(0.059)
Announcement and Volunteers Both	0.557**	0.289***
	(0.172)	(0.059)
Control Mean	1.392	0.186
Number of Respondents	419	423
Strata Fixed Effects	X	X

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variables are (i) the amount of charitable donation in total at the endline to Shia mosques, (ii) a binary variable which is 1 when the change in charitable donations to Shia mosques at endline compared to baseline is strictly positive, i.e. whether there was an increase in charitable donations at endline. These are survey-based measures. The charity variable is an ordinal variable from 1-5: 1 for a PKR 100-500, 2 for a PKR 500-1000, 3 for a PKR 1000-2500, 4 for a PKR 2500-5000 and 5 for a PKR 5000+ donation. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about inter-sectarian harmony), or the combined treatment. We use block fixed effects and cluster errors at the strata level.

6.2 Robustness Tests

6.2.1 Different Standard Errors

In the tables below, we show our main result with bootstrapped standard errors and randomization inference.

Table 9: **The Effect of Contact on Plumber Choices**

	Plumber, Opp Sect	
Leadership	-0.044	-0.085
	[0.073]	[0.071]
Contact	0.031	0.042
	[0.046]	[0.043]
Combined	0.145*	0.176**
	[0.093]	[0.095]
Control Mean	0.153	0.153
Number of Respondents	302	299
Number of Mosques	32	32
Strata Fixed Effects	X	X
Controls		X

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. The dependent variable is a binary variable which is 1 when our respondents, Sunnis, choose discounted plumbing services from a member of the opposite, Shia, sect (the names of the plumbers allow for clear sectarian identification) and 0 otherwise. This outcome is based on an incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the contact treatment (where volunteer worshipers are sent to mosques of the opposite sect), the leadership treatment (where the leader of the mosque makes a religious statement about intersectarian harmony), or the combined treatment. We use block fixed effects, bootstrapped standard errors and cluster errors at the strata level.

Table 10: **The Effect of Contact on Plumber Choices**

	Plumber, Opp Sect	
Leadership	-0.044	-0.085
	[0.380]	[0.151]
Contact	0.031*	0.042***
	[0.059]	[0.000]
Combined	0.145**	0.176***
	[0.020]	[0.000]
Control Mean	0.217	0.689
Number of Respondents	302	299
Number of Mosques	24	24
Strata Fixed Effects	X	X
Controls		X

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. The dependent variable is a binary variable which is 1 when our respondents, Sunnis, choose discounted plumbing services from a member of the opposite, Shia, sect (the names of the plumbers allow for clear sectarian identification) and 0 otherwise. This outcome is based on an incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the contact treatment (where volunteer worshipers are sent to mosques of the opposite sect), the leadership treatment (where the leader of the mosque makes a religious statement about intersectarian harmony), or the combined treatment. We use block fixed effects, randomization inference and cluster errors at the strata level.

Table 11: **The Effect of Contact on Book Choice (RI)**

	Books, Change (Sunnis) (1)	Book (History), Change (Sunnis) (2)
Information	0.092	0.049
	[0.964]	[0.706]
Contact	0.243**	0.333***
	[0.020]	[0.000]
Announcement and Volunteers Both	-0.258	-0.280
	[0.708]	[0.602]
Control Mean	-0.141	-0.169
Number of Respondents	423	423
Number of Mosques	32	32
Strata Fixed Effects	X	X

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variables are (i) the change in the number of either of the two books about Sunnis (their rituals or their narration of early Islamic history) chosen by respondents of any sect at the endline compared to baseline and (ii) a binary variable which is 1 if the book chose is about history. All these outcomes are based on incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about inter-sectarian harmony), or the combined treatment. We use block fixed effects, and robust and bootstrapped standard errors (top and bottom respectively). We use block fixed effects and cluster errors at the strata level. In his regression specification, we drop 5 percent of the sample randomly equally from every treatment arm.

Table 12: **The Effect of Contact on Economic Interactions (RI)**

	Business, Shias (1)	Hiring Change (2)
Information	0.057***	0.012*
	[0.002]	[0.088]
Contact	-0.009	-0.021
	[0.150]	[0.456]
Announcement and Volunteers Both	0.344***	0.240**
	[0.000]	[0.022]
Control Mean	3.531	-0.107
Number of Respondents	428	421
Number of Mosques	32	32
Strata Fixed Effects	X	X

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. The dependent variables are (i) beliefs of respondents about entering into business with Shias and (ii) the change in openness to hiring a member of the opposite sect at the endline compared to baseline. These are survey-based measures. The first outcome is an answer to the following survey question: "What do you think about being entering into business with Shias?," while the second outcome is an answer to the following survey question: "What do you think about recruiting Shia/Sunni workers?" The answers can range from very bad to very good in a five-point scale. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about inter-sectarian harmony), or the combined treatment. We use block fixed effects, and robust standard errors. We use block fixed effects and cluster errors at the strata level.

6.2.2 Sample Drop

Table 13: **The Effect of Contact on Economic Interactions (RI)**

	Business, Shias (1)	Hiring Change (2)
Information	0.057***	0.012*
	[0.002]	[0.088]
Contact	-0.009	-0.021
	[0.150]	[0.456]
Announcement and Volunteers Both	0.344***	0.240**
	[0.000]	[0.022]
Control Mean	3.531	-0.107
Number of Respondents	428	421
Number of Mosques	32	32
Strata Fixed Effects	X	X

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. The dependent variables are (i) a binary variable which is 1 when any respondent, either from the Sunni (majoritarian) sect or the Shia (minority) sect, chooses discounted plumbing services from a member of the opposite sect (the names of the plumbers allow for clear sectarian identification) and 0 otherwise and (ii) a binary variable which is 1 if a Sunni plumber's discounted services are chosen by respondents of any sect and 0 otherwise. Both outcomes are based on incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about inter-sectarian harmony), or the combined treatment. We use block fixed effects and cluster errors at the strata level. In his regression specification, we drop 5 percent of the sample randomly equally from every treatment arm.

Table 14: **The Effect of Contact on Plumber Choices**

	Plumber, Opp Sect
Leadership	-0.056
	(0.053)
Contact	0.029
	(0.057)
Combined	0.166*
	(0.066)
Control Mean	0.208
Number of Respondents	284
Number of Mosques	24
Strata Fixed Effects	X
Controls	X

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. The dependent variable is a binary variable which is 1 when our respondents, Sunnis, choose discounted plumbing services from a member of the opposite, Shia, sect (the names of the plumbers allow for clear sectarian identification) and 0 otherwise. This outcome is based on an incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the contact treatment (where volunteer worshipers are sent to mosques of the opposite sect), the leadership treatment (where the leader of the mosque makes a religious statement about intersectarian harmony), or the combined treatment. We use block fixed effects, bootstrapped standard errors and cluster errors at the strata level. In his regression specification, we drop 5 percent of the sample randomly equally from every treatment arm.

Table 15: **The Effect of Contact on Book Choice (Sample Drop)**

	Books, Change (Sunnis) (1)	Book (History), Change (Sunnis) (2)
Information	0.123*	0.095
	(0.051)	(0.067)
Contact	0.245**	0.355***
	(0.088)	(0.089)
Announcement and Volunteers Both	-0.287**	-0.358**
	(0.093)	(0.097)
Control Mean	-0.143	-0.185
Number of Respondents	401	401
Number of Mosques	32	32
Strata Fixed Effects	X	X

Notes: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variables are (i) the change in the number of either of the two books about Sunnis (their rituals or their narration of early Islamic history) chosen by respondents of any sect at the endline compared to baseline and (ii) a binary variable which is 1 if the book chose is about history. All these outcomes are based on incentivized lab-in-the-field experiments. The independent variables are the assignment of mosques to the prayer volunteer visits treatment (where volunteer worshipers are sent to mosques of the opposite sect), the mosque leader announcement treatment (where the leader of the mosque makes a religious statement about inter-sectarian harmony), or the combined treatment. We use block fixed effects, and robust and bootstrapped standard errors (top and bottom respectively). We use block fixed effects and cluster errors at the strata level. In his regression specification, we drop 5 percent of the sample randomly equally from every treatment arm.

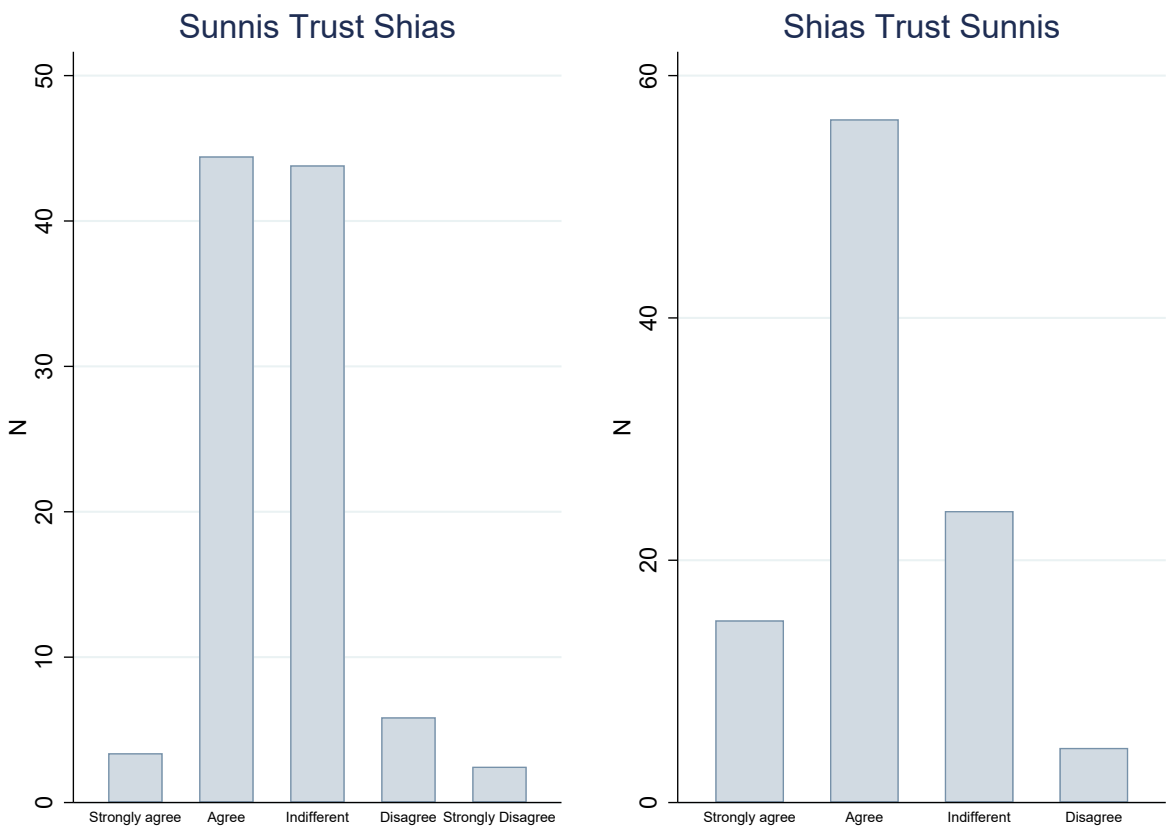

Figure 3: Distribution of the trust in the opposite sect variable at baseline

6.3 Baseline Demographics, Beliefs and Behavior

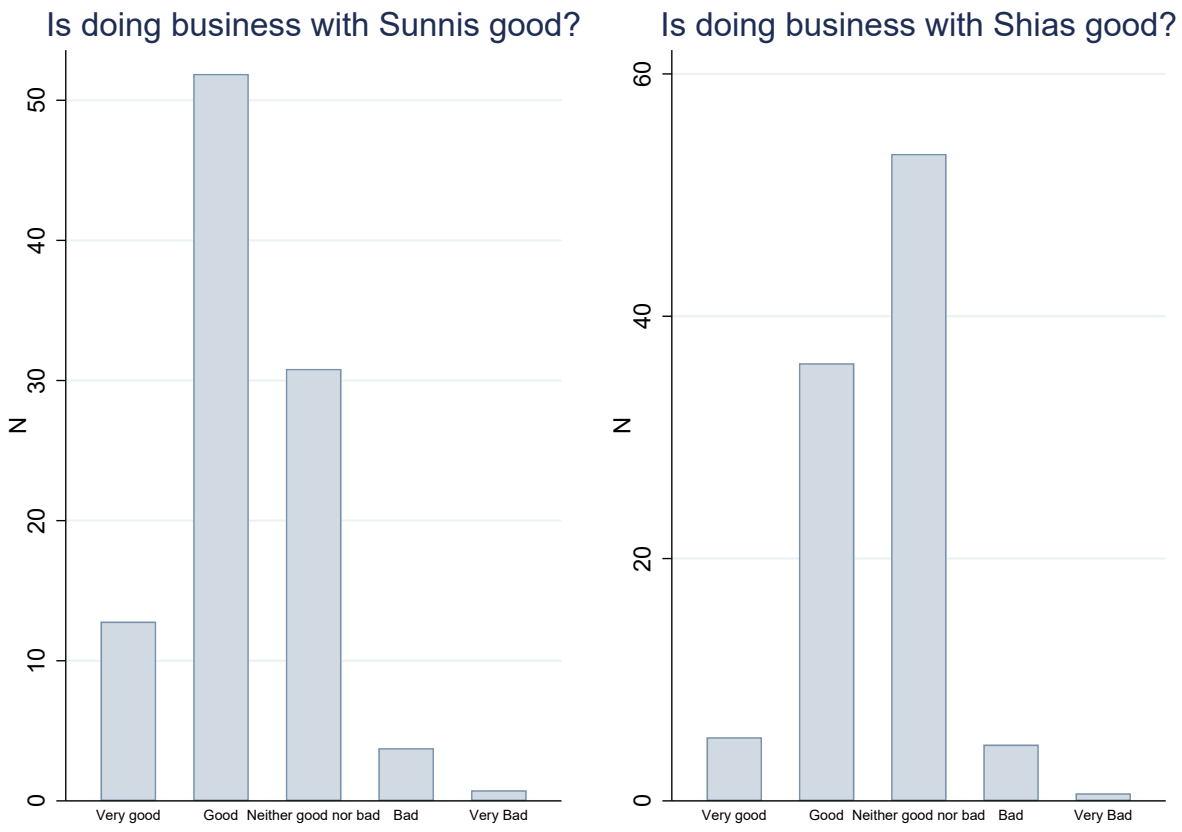

Figure 4: Distribution of the open to doing business with the opposite sect variable at baseline

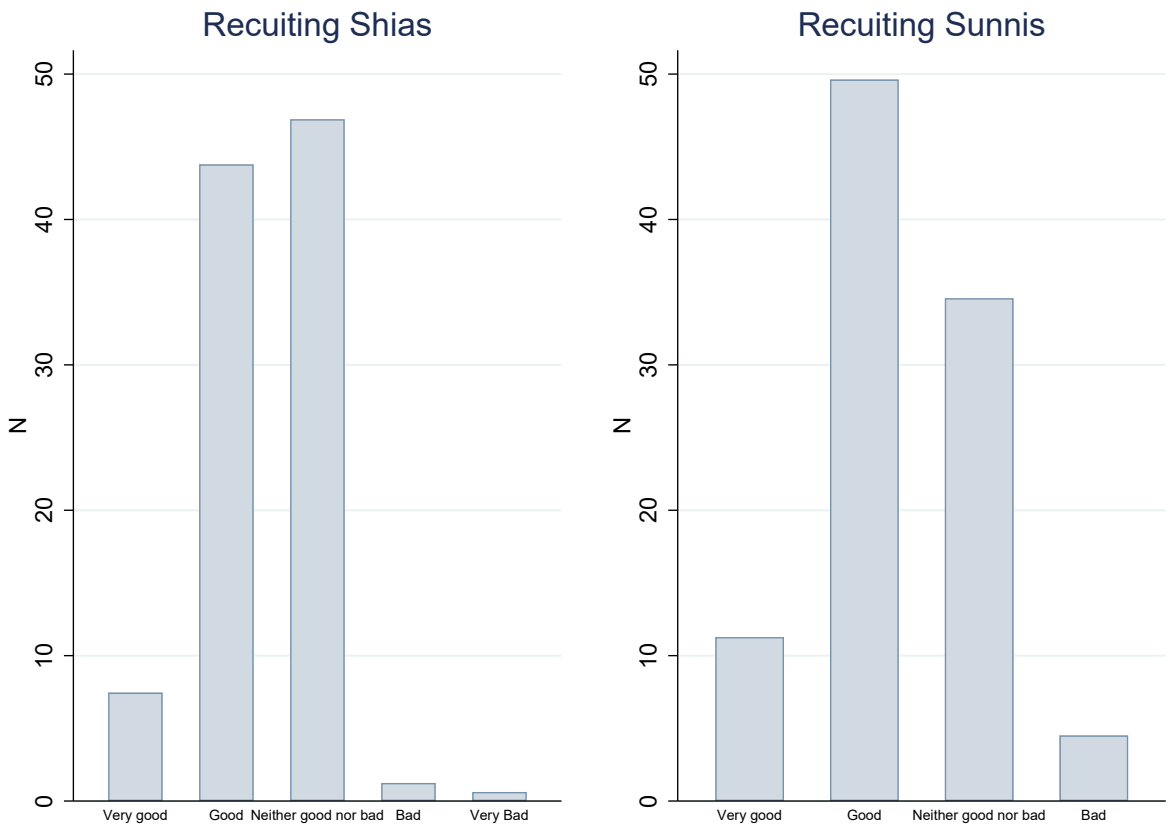

Figure 5: Distribution of the open to hiring the opposite sect variable at baseline

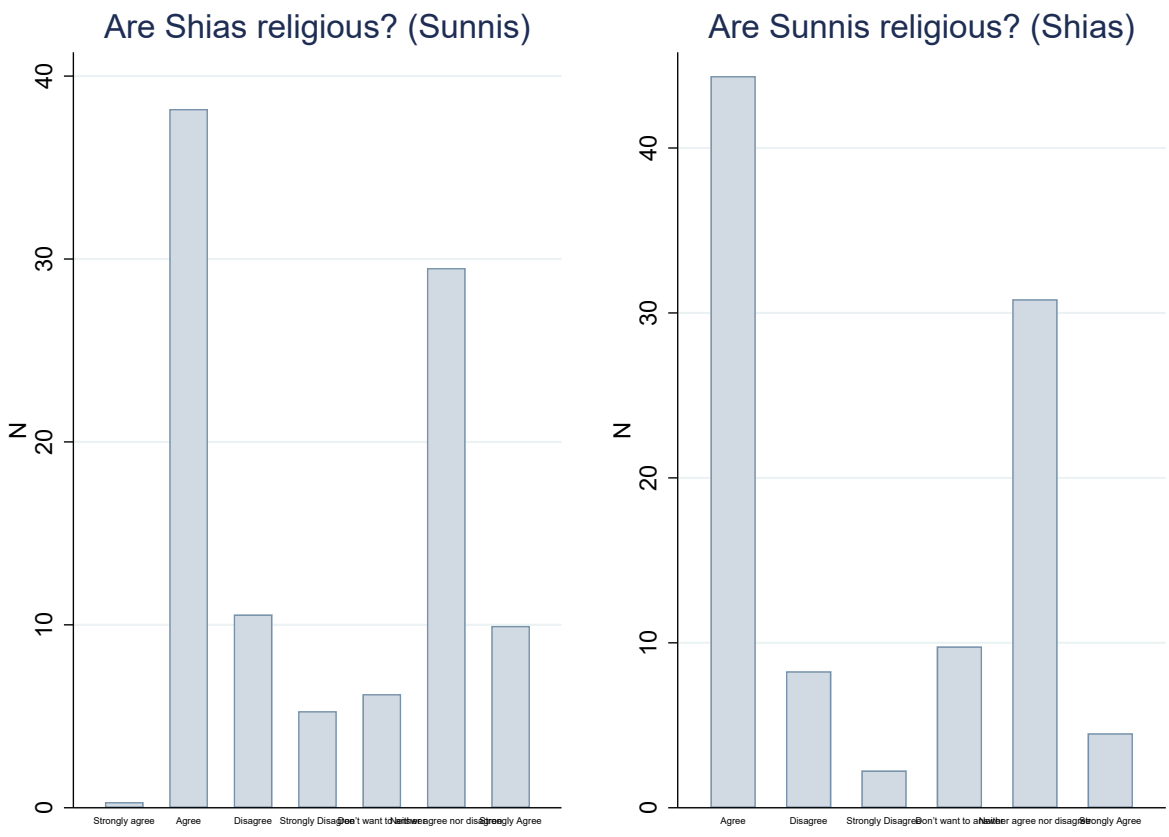

Figure 6: Distribution of the religiosity variable at baseline

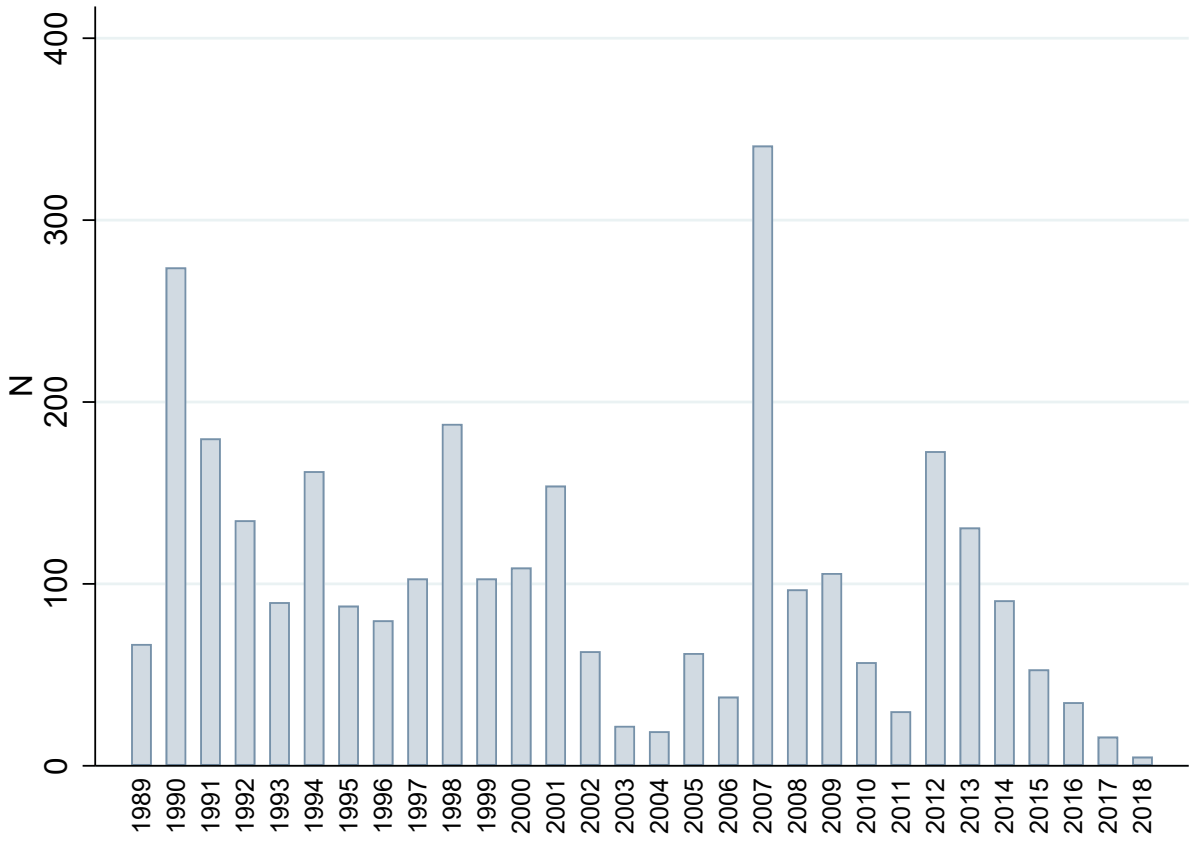

Figure 7: Number of incidents of sectarian violence in Pakistan. Source: South Asia Terrorism Portal

6.4 Shia Sunni Violence in Pakistan

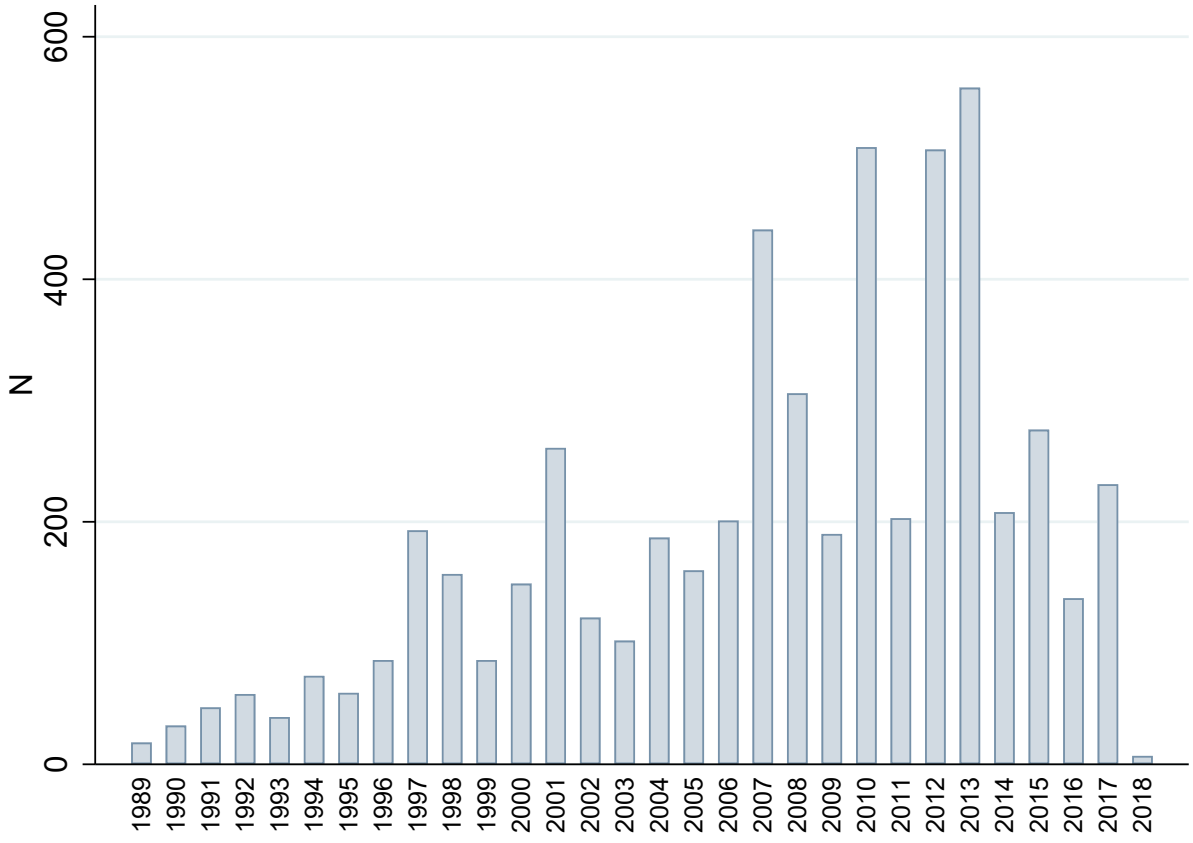

Figure 8: Number of sectarian killings in Pakistan. Source: South Asia Terrorism Portal

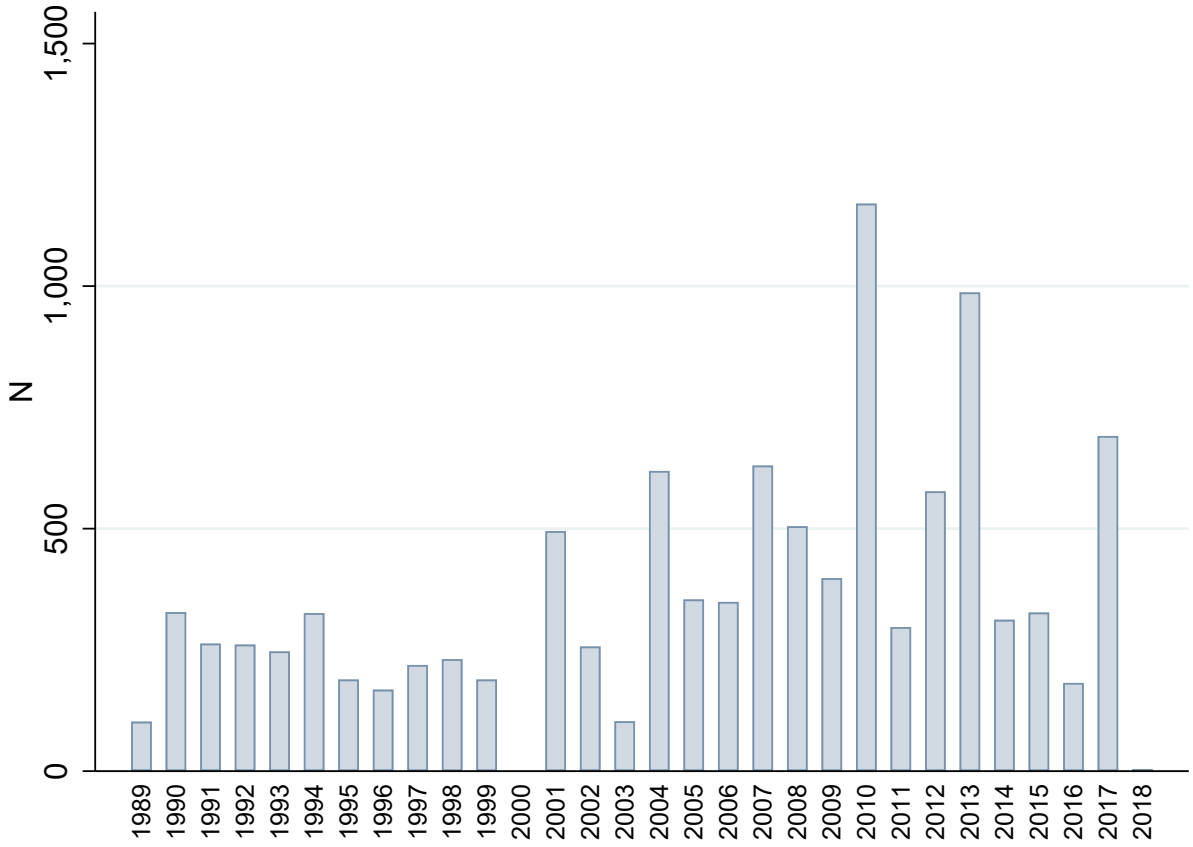

Figure 9: Number of injured people in sectarian violence in Pakistan. Source: South Asia Terrorism Portal

6.5 Vouchers

Plumber coupon: Sunni and Shia respondent