

Together We Will: Evidence from a Field Experiment on Female Voter Turnout in Pakistan

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Abstract

In many emerging democracies women are less likely to vote than men and, when they do vote, are more likely to follow the wishes of household males. We assess the impact of a voter awareness campaign on female turnout and candidate choice. Geographic clusters within villages were randomly assigned to treatment or control, and within treated clusters, some households were left untreated. Compared with women in control clusters, both treated and untreated women in treated clusters are 12 percentage points more likely to vote, and are also more likely to exercise independence in candidate choice, indicating large spillovers. The impact on turnout is highest in the most competitive polling stations. Finally, turnout data from polling stations suggests that treating 10 women increased turnout by about 6 votes, resulting in a cost per vote between US\$7.5 and US\$3.3.

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Introduction

A basic premise of representative democracy is that those who are subject to policy should have a voice in its making. Although women account for half of the world's population, they have historically lagged behind men in legal and political rights. In recognition of this, suffrage was extended to women in most western democracies in the early 20th century and the new democracies that emerged after WWII followed suit and granted women *de jure* rights to political participation in all democratic institutions.¹

At present, however, women are still far less likely to stand for public office than men, even in developed countries with older democracies. But not only are women greatly underrepresented in public office, they are also less likely to participate in the electoral process as voters or to exercise independence in candidate choice when they do vote. Instead, women report voting in accordance with the preferences of the caste, clan or household head in contrast to men of all ages (CLRAE, 2002).²

While women's relative absence from elected public office has received considerable policy attention in recent years³, there have been few attempts to reduce barriers to women's participation as voters, and even less attention has been paid to the use of women as passive vote banks, when they do participate. If preferences over the allocation of public resources vary by gender, this neglect could have implications for public policy, in addition to equity related concerns.⁴

¹ These rights were also brought into international law by several important agreements to which most countries are signatories. These include the Universal Declaration of Human Rights (1948), the Convention on the Political Rights of Women (1952); the International Covenant on Civil and Political Rights (1966); and the Convention on the Elimination of All Forms of Discrimination against Women (1979).

² See also Zia and Bari (1999) and Bari (2005) for Pakistan.

³ A number of countries have passed legislation requiring fixed quotas for women. In South Asia, for example, India, Pakistan and Bangladesh have all instituted quotas for women in both local and national assemblies.

⁴ Chattopadhyay and Duflo (2004) for example exploit the quota introduced for women in the Indian Gram Panchayats and find that elected women leaders are more likely to provide public goods preferred by women. Lott and Kenny (1999) find that women's suffrage in the US increased overall government revenues and expenditures and has led to more liberal voting patterns. Edlund and Pande (2002) find that the decline in marriage has contributed to the shift by women voters in the US towards the Democratic Party. Several studies of intra-household resource allocation (e.g. Thomas (1990), Lundberg and Pollack (1997) and Hoddinott and Haddad (1995)) have also shown that women tend to make different choices over the allocation of household budgets, such as higher investments in health and the education of children. Croson and Greezy (2009) review the experimental literature on gender differences in preferences related to risk, social attitudes and competition.

Women in emerging democracies may face two distinct barriers to exercising their right to vote for a candidate of their choice. First, costs of participation may be too high. Traditions or cultural stereotypes may discourage the exercise of own preferences, mobility constraints may limit participation and, if there are expectations of voter intimidation or violence, personal security concerns may also loom larger among females. Second, women may have fewer or poorer sources of information about the significance of political participation or the balloting process, perhaps due in part to illiteracy and limited mobility. Lack of information may also reinforce stereotypes that further disengage women from public life.

In this paper we conduct a field experiment to assess the impact of information and social interactions on female turnout and independence of candidate choice. The experiment took place just before the 2008 Pakistani national elections. Study villages were divided into geographical clusters that were then randomly assigned to treatment or control. Within treated clusters, a subset of sample households was randomly assigned to receive a door-to-door awareness campaign. This allows us to assess the magnitude of spillovers within treated clusters without confronting the usual set of identification problems (Manski, 1993; 1995).

Rural Pakistan provides a setting where women still face significant barriers to effective political participation, despite legislative reforms aimed at enhancing women's participation in public life. (Zia and Bari, 1999).⁵ Thus, the argument for an awareness campaign in this context is clear. While attitudes and social mores change slowly⁶, information provision can occur relatively quickly. If lack of awareness limits participation, as studies suggest, then access to information could enhance both equity and allocative efficiency as women select candidates that best reflect their preferences. At the same time, the mere act of participation may serve to weaken pejorative perceptions about female efficacy that limit women's engagement in public life (Beaman et al., 2007).

⁵ Zia and Bari report that women's registration as voters is often considered neither necessary nor appropriate by either household males or political parties. They also note that, in addition to cultural restrictions on mobility and low levels of literacy, women's lack of knowledge about the electoral system and about voting procedures constitutes an important barrier to the registration of women and female turnout in elections (pg. 89).

⁶ A number of recent studies have looked at the role of geography, shifts in technology and the development of institutions in the formation of cultural attitudes and beliefs about gender roles. See for e.g. Alesina et al (2010), Alesina and Giuliano (2010), Fernandez (2007), Fernandez and Fogli (2009) and Fortin(2005)

The campaign was developed as a set of simple visual aids with two different messages: the importance of voting which focused on the relationship between the electoral process and policy, and the significance of secret balloting which focused on the actual balloting process. Treated women received either the first message or the first and the second, allowing us to test whether the knowledge that ballots are cast in an environment of secrecy enhances female participation, as well as independence in candidate choice.

We find that turnout increases by about 12 percent for women in treated households compared to women in control clusters, with somewhat larger effects for women exposed to both messages. More importantly, we find comparable turnout rates for treated women and their untreated close neighbors, indicating large geographical spillovers. We then assess whether spillovers among close friends are larger than those among neighbors and find similar results, which may not be surprising since, due to mobility constraints, most close friends reside in the same geographical cluster as the study women. Alternatively, we use the GPS location of households to estimate spillovers beyond the (arbitrary) boundaries of the treatment clusters and find somewhat larger effects.

We also use administrative data from all polling stations that served the study villages and find that for every 10 treated women, (roughly 4 households), female turnout increases by about 6 additional votes. Using the individual and polling station level estimates, we provide a simple methodology to infer that each treated woman influences at least 3 to 4 untreated women. Once we take this externality into account, the cost of the intervention drops from US\$37.5 to at most US\$7.5 per additional vote.

We then assess secrecy of candidate choice by using follow up survey data which asked the male head and each woman in the household about whether other women in the household had cast a vote and for whom they had voted. Using these cross-reports, we find that male heads in treated households are significantly less informed about the candidate choice of women in their households.

Finally, we study whether the impact of the campaign varied by the degree of contestation at the polling station level. While electoral competition may increase voter turnout given the higher value of the marginal vote and the increased effort by candidates to mobilize voters (Franklin,

2004), it may also decrease it if there are fears of voter intimidation and violence.⁷ For the two constituencies in our study, it is plausible that security concerns, rather than the value of an extra vote may have influenced the decision to vote. While the elections took place in a politically volatile environment, both constituencies were won by a large margin. Indeed, female turnout is significantly lower in more contested polling stations but only for women in control clusters. In contrast, women in treated clusters had similar turnout rates across all polling stations. Again, control women in treated clusters behaved as if directly treated, confirming once more the relevance of social interactions. Interestingly, we find evidence of cognitive dissonance (e.g., Mullainathan and Washington, 2009). Women in control clusters, compared to those in treated clusters, were less likely to believe that the election was free and fair and more likely to report witnessing or hearing instances of violence in the village, especially in contested polling stations where turnout was lower.

While there is an extensive literature on the impact of Get-out the Vote or GOTV campaigns in developed countries, and in the US, in particular (see Gerber and Green, 2000a and 2000b), much less is known about the impact of such campaigns in developing countries where voters tend to have poorer access to information and institutionalized party structures are also much less developed (Aker et al. 2010, Banerjee et al. 2010).

This paper contributes, therefore to two literatures. First, it adds to this nascent literature on pre-election voter information campaigns in developing countries. Second, it is the only paper which, to our knowledge, assesses the impact of information externalities on voter turnout and candidate choice, which is critical to measure correctly the cost-effectiveness of an information campaign.^{8,9} In this regard, our paper is closest to Duflo and Saez (2003) and contributes also to

⁷ Collier and Vicente (2007) and Bratton (2008) study elections in volatile environments and find that turnout is significantly lower when there is more competition.

⁸ In an experiment in the US where voters received postcards with information about their voting record, Gerber et al. (2008) find that turnout increased by about 8 percent in households that were shown their voting records as well as that of their neighbors. This increase in turnout is comparable to the impact of direct canvassing. Perhaps more related to our study, Nickerson (2008) conducted a door-to-door canvassing experiment to assess information spillovers within the household. He targets households with two registered voters and finds that the member that did not answer the door is nearly 60% as likely to vote as the treated member.

⁹ In developing countries there is a small experimental literature that has focused on electoral violence, clientelism and vote buying in the context of developing countries. Collier and Vicente (2007), for example, study the effect of an information campaign against electoral violence in Nigeria. Wantchekon (2003) has examined the effectiveness of clientelist messages in Benin and Vicente (2007) analyzes an information campaign against vote buying in Sao Tome and Principe, Vicente and Wantchekon (2009) provides a review.

the burgeoning literature on social networks and peer effects (e.g. Sacerdote, 2000 and Kling, Liebman and Katz, 2007).

It is important to distinguish between most GOTV campaigns, whose objective is to increase turnout by persuading subjects to vote, and the awareness campaign studied here, designed to inform women about their rights in the electoral process and how to exercise them. Nonetheless, since the awareness campaign made voting salient, one could argue that the observed increase in turnout could be due to the salience of the campaign (e.g. Zwane et al. forthcoming), rather than its information content. However, study households appear to be subject to multiple stimuli to vote. Over 75 percent of them reported receiving a visit prior to the election from party volunteers asking for their vote. Alternatively, the mere visit could have motivated treated women to vote (if they felt special for having been chosen and voted out of reciprocity) regardless of the information imparted. There are two arguments against this interpretation. First, untreated women in control households (not chosen to receive the visit) show comparable turnout rates to directly treated women. Second, male heads of households in treated clusters appear less informed about the candidates chosen by women in their household, indicating that the information conveyed during the visit was relevant.

The remainder of the paper is organized as follows. Section 2 describes the context, the 2008 election, the design of our experiment and the data. Section 3 discusses the impact of the information campaign on turnout and assesses the size and significance of information spillovers. Section 4 discusses the evidence on independence of candidate choice. Section 5 examines the interaction between electoral competition and information provision. Section 6 provides a cost-benefit analysis of the intervention and discusses some broader impacts from a follow-up survey. Section 7 concludes.

2. Context and Experiment Design

The experiment was carried out in collaboration with the Pakistan Poverty Alleviation Fund (PPAF), the Marvi Rural Development Organization (MRDO), Research Consultants (RCons), ECI and the World Bank. PPAF is a second-tier funding and capacity-building apex, created in 2000 with World Bank funding. MRDO, a non-partisan NGO funded in large part by PPAF, mobilizes women using a community based approach. RCons, a survey firm, helped MRDO

implement the awareness campaign and collected the baseline and follow-up data. ECI, a local training firm, collaborated in the design of the campaign. ECI had prior experience with the development of visual aids and pamphlets related to electoral participation and the balloting process. It was also actively engaged in the training of local election officers nationwide prior to the elections.

2.1 Context

The campaign was carried out in the districts of Sukkur and Khairpur in the southern province of Sindh. The districts were selected because of sharp electoral competition between the two main political parties, the Pakistan People's Party Parliamentarians (PPPP), which has a secular-left leaning platform and the Pakistan Muslim League Functional (PMLF), which was allied with the military regime. PMLF candidates in the study area are not just large landowners, they also lay claim to being the spiritual leaders or "pirs" of their constituents.

The initial sample included 12 villages, 6 villages from each district, and 24 polling stations from two constituencies.¹⁰ Villages were chosen to ensure variation in expected political competition at the polling station level, but given the context of the 2008 elections, 3 villages (3 polling stations) had to be dropped because the safety of the canvassing teams could not be guaranteed. The polling stations in these 3 villages were relatively more contested than those in our final sample of 9 villages and 21 polling stations.

Indeed, the 2008 national elections were held in an environment that was politically charged. After seven years of military rule, culminating in widespread opposition, the government declared emergency rule. The sitting judges of the Supreme Court were dismissed and there were fears that the incumbent government would engage in massive rigging. Scheduled initially for January 8th, 2008, the elections were postponed to February 18th, 2008 because Benazir Bhutto, the leader of the PPPP, and a twice elected Prime Minister, was assassinated on December 27th, 2007.

¹⁰ Twelve polling stations were from the National Assembly constituency NA-199 (Sukkur) and the remaining 12 from NA-215 (Khairpur). NA-199 had a total of 242 polling stations while NA-215 had 270 polling stations. The same 12 polling stations belonged to Provincial Assembly constituencies PS-4 (Sukkur) and PS-32 (Khairpur), respectively. PS-4 had 125 polling stations in total and PS-32 had 114 (see <http://www.ecp.gov.pk/> for more information).

In Sindh, traditionally a PPPP stronghold, concerns about electoral rigging and voter intimidation by the incumbent military government increased after Bhutto's assassination, but a PPPP landslide was also being anticipated due to a possible large sympathy vote for Bhutto. The net effect of these two tendencies on turnout, particularly for women, was uncertain.

The campaign was delivered door-to-door, and was only attended by the women in each household. No men were present during the sessions. It was designed as a set of simple visual aids accompanied by a well rehearsed and limited script. The campaign included two nonpartisan messages: the first focused on the importance of voting, the relationship between the electoral process and policy, including village development outcomes, while the second focused on the actual balloting process (the structure of a typical voting station and booth, the fact that male and female booths are separate, the secrecy of the ballot and the basic appearance of the ballot paper). The information campaign never mentioned a political party or candidate by name. As mentioned, this also distinguishes our awareness campaign from a GOTV campaign.¹¹ Appendix A contains the translation of the script and Appendix B the translated visual aids.

The campaign was implemented door-to-door for two main reasons. First, it provides a high degree of control over which households receive the campaign and which do not, which is critical to measuring information spillovers and the cost-effectiveness of the campaign. Second, in the US, door-to-door information campaigns have proven more cost-effective than other strategies like phone calls and direct mailings.¹² In our context, door-to-door visits were also the most feasible choice given the low levels of literacy and cell-phone ownership among women, combined with low female mobility.

¹¹ A GOTV campaign can be partisan or not, though a number of experimental studies have shown that partisan messages are less successful in motivating turnout. Cardy (2005), for example, finds that neither partisan direct mail nor partisan phone calls - used independently or together - managed to garner a significant voter response. In a similar vein, Gerber and Green (2000b) find that non-partisan messages are particularly effective in mobilizing unaffiliated past voters. The authors hypothesize that partisan voters may already receive adequate encouragement from their respective political parties while unaffiliated voters do not. Moreover, they speculate that politically unattached voters may also have been impressed by the non-partisan appeal to civic responsibility. Horiuchi et al. (2007) also find that voters are less likely to abstain when they receive policy information about *both* ruling and opposition parties through their official party websites. The information effects are larger among those voters who were planning to vote, but were undecided about which party to vote for.

¹² Gerber and Green (2000a) reports on a randomized GOTV campaign conducted in New Haven, Connecticut, just prior to the 1998 election. The campaign delivered non-partisan messages through personal canvassing, direct mailings and telephone calls. The study found that personal canvassing had a substantially greater impact on voter turnout as compared with other modes of contact. Green et al., (2003) and Michelson (2003) find similar results.

Table 1 Panel C indicates that female literacy rates are indeed very low in our study area, as they are all over rural Sindh. Less than 20 percent of adult women have any formal schooling. Women also have rather limited mobility even within their own villages. Most women in our sample can travel within the village on their own or accompanied by other females but not outside the village, where the presence of a male is required.

Appendix Table A2 presents gender differences in access to media, knowledge of current events and participation in public life. The sample is confined to comparisons between the male head and his spouse. Women are far less likely to listen to local, national or international news channels (10 percent of women report listening to BBC compared to 48 percent of men, for example) and are far less informed about any political issue, including major events like the imposition of emergency rule in the country, which only 6 percent of women knew about, as compared to 82 percent of men. Women are also less likely to be able to correctly identify political party signs and names. Interestingly, this difference is not due to differential access to TV or radio. Instead it appears that men and women use media very differently.¹³ Women are also far less engaged with any aspect of village public life. They are far less likely, for example, to attend community meetings related to village development, attend demonstrations or contact their local councilor or local party official for any matter. Interestingly, though, when they do engage, women tend to avoid formal authority and reach out to traditional or religious leaders (66 percent among women compared to 49 among men).¹⁴

2.2 Experimental Design and Data

The timeline of the study is shown in Figure 1. The information campaign was carried out two weeks prior to the elections (from February 5th -15th 2008) by 8 teams consisting of one MRDO staff and one female enumerator from RCONs each.¹⁵ Each sample village was covered in

¹³ Table A2 indicates that both radio and TV are widely available and that if anything, women report higher access than men. Approximately, 42 percent of men and 47 percent of women had access to a radio and about 65 percent of men and 67 percent of women had access to a TV.

¹⁴ These statistics are also consistent with Pakistan's rather dismal performance on a range of development indicators. According to the 1998 Human Development Report, for example, Pakistan ranked 138 out of 174 on the Human Development Index (HDI), 131 out of 163 on the Gender Development Index (GDI), and 100 out of 102 on the Gender Empowerment Measure (GEM).

¹⁵ While RCONs team members were new in the villages, MRDO staff had been working in the area. Two of the six villages had one or two MRDO groups. According to Table 1, around 11 percent of the women in the sample were MRDO members.

approximately one day and was divided into contiguous geographical clusters of approximately 40 households. A cluster was typically one or two contiguous streets in the village (see Figure 2). Clusters were based on geography rather than other household characteristics such as caste or occupation of household head because restrictions to female mobility suggested that social interactions would be dictated by physical proximity. Each cluster was then randomly assigned to receive the importance of voting message (T_1), or T_1 plus the secrecy of balloting message (T_2) or nothing. The canvassing team selected one cluster in each village at random and began there. T_1 was delivered in this cluster. Next, a gap cluster was left between two selected clusters. In the second selected cluster a coin toss determined whether T_2 was delivered or all selected households were left as controls. The third selected cluster was then given the opposite treatment of the second cluster. A typical sample village had about 7 clusters used in the study and 11 geographical clusters in all, including gap clusters. There are 67 clusters in total, 30 assigned to T_1 , 27 assigned to T_2 and 10 left as controls.¹⁶ Within each selected cluster, irrespective of the specific treatment, every 4th household was selected and surveyed, starting at either end of the cluster. In T_1 and T_2 clusters, every 5th selected household was also left as a control. This generated 2 to 4 controls in each T_1 and T_2 cluster in addition to the households selected in the control clusters. Thus, similar to Duflo and Saez (2003), the peer group is fixed by location and only a subset of the peer group in a treatment cluster is treated. In total, 2,735 women from 1,018 households were reached.

During the door-to-door visit, basic data on each sample household was collected, including the GPS location of the house to compute distances to other study households, a basic roster of all adult women with their past voting record and the name and address of their closest friend or confidant in the village. The door-to-door visit lasted about 20 to 25 minutes for treated households and 5 to 10 minutes for control households. None of the households refused to participate in the awareness campaign or to be interviewed.

A local woman, usually a school teacher, was also identified in each village during the awareness campaign to assist the canvassing team with the verification of voting, post-election, by checking the ink stain on each woman's hand. This woman was provided the list of sample women whose

¹⁶ We kept one randomly selected control cluster in the survey sample per village. In one larger village, two control clusters were included in the survey.

thumb mark needed to be verified the day before the election. This list included one confidant from each household. The confidant was selected as follows: in every even numbered household, the confidant of a woman who was either a daughter or a daughter in law of the household head was selected, while in every odd numbered household, the confidant of the household head (if the head was a woman) or the head's wife, sister, mother or aunt was selected. Not all households yielded at least one "eligible" woman using this rule, so the final sample includes 727 confidants whose vote was verified.

Voting verification took place between the evening of February 18th, Election Day, and the evening of February 19th. The field teams also visited each village on February 19th to check 10 percent of the verifier's assignment at random and found no significant differences.

During the verification exercise, the verifier was unable to locate 98 women (and 27 households) because of temporary or permanent migration. This leaves us with a sample of 2,637 women and 991 households. We were able to reach all 727 "confidants".

Attrition of women was unrelated to treatment assignment (see Appendix Table A3), although we note that T₂ households are more likely to attrit. Since the overall household attrition rate is very low (2.6 percent), this is not a source of concern. In addition, 158 women claimed to have cast a vote but they did not have the requisite ink mark. To be conservative, we treat these women as not having voted, although the results do not change if we consider them as voters.

Verification was followed by a post-election survey of the same 2,637 women in March 2008. The survey collected information on household demographics, recall of the door-to-door visits, access to and use of various media, and knowledge of the balloting process and political candidates, among other issues. Finally, we collected the official electoral results by gender, candidate and political party for each of our 21 sample polling stations.

Average turnout among women in our sample is 59 percent, while female turnout in the 21 polling stations is 47.3 percent. At the constituency level, total turnout was 39.2 percent in Khairpur and 48.6 percent in Sukkur. The corresponding turnout rate (including both males and females) in the sample polling stations was 41.7 percent and 43 percent, respectively. While there is significant variation in contestation at the polling station level, the share of PPPP at the constituency level was a large 70 percent in Khairpur and 73 percent in Sukkur.

Table 2 reports the difference in means of household and woman characteristics across different samples. See Appendix Table A1 for the definition of the variables used in the paper. Column 1 in Panel A compares treated households to all control households, irrespective of whether they live in treated or control clusters. Columns 2 and 3 compare T_1 and T_2 households, respectively, to all control households. Column 4 compares all households in treated clusters (both treated and control households) to households in control clusters, Column 5 compares treated households to households in control clusters only and finally Column 6 compares control households in treated clusters to households in control clusters. Overall, there is little difference in household characteristics across samples. Treated households have a little more land than control households in some comparisons, but no difference in assets or housing quality. The P-value of an F-test that all variables are jointly insignificant can never be rejected. In Panel B, the same comparisons are reported for women characteristics. Women in treated households are somewhat younger in some comparisons and have more young children as a result. They also appear to have less access to cable TV, perhaps due to their lower mobility. An F-test that all women level variables are jointly insignificant cannot be rejected in 4 out of 6 comparisons. In the analysis we control for all household and woman characteristics that lack balance across treatment and control groups.

Appendix Table A4 suggests that the intervention was successfully implemented: all treated women correctly recall having received a visit and none of the control households do. In addition, most treated women correctly recall the content of the messages delivered. Finally, control women in treated clusters are far more likely to report talking to their neighbors about political issues related to party/candidate positions and the importance of voting in accordance with one's own preferences, providing the first piece of evidence on information spillovers.

Follow-up data also suggest that there were no major incidents during Election Day in the study villages.¹⁷ Virtually all sample women had possession of their NICs before they left for the polling station and ninety percent of the women who voted also found that the instructions in the polling station were appropriately displayed and that no one else was present inside the booth when they cast their vote. While most women (61 percent) travelled on foot, a substantial

¹⁷ In contrast, media reports from the northwest of the country indicate that several female polling stations remained empty because village elders actively prevented women from voting (AP, February 18th, 2008).

number (26 percent) used transportation provided by a political party, which is legal in Pakistan. However, almost all women went to the polling station with others. The majority were accompanied by female household members, (62 percent) or a female friend or relative (25 percent). The rest went with their spouses or another household male.

3. Empirical Strategy and Results

3.1 Turnout and Information Spillovers

Because treatment is assigned randomly at the geographical cluster level, its impact on female turnout can be estimated via the following OLS regression equation:

$$Y_{ihcpv} = \beta T_{hcpv} + \gamma X_{ihcpv} + u_v + \varepsilon_{ihcpv} \quad (1)$$

where Y_{ihcpv} indicates whether woman i in household h in cluster c in polling station p in village v is verified as having voted (1=Yes), T_{hcpv} is the treatment indicator (1 if women in household h in cluster c in polling station p in village v received the voting awareness campaign), and X_{ihcpv} is a vector of polling station, household and individual woman characteristics. We follow Bruhn and McKenzie (2009) and include household and woman characteristics from Table 2 that lack balance (total land owned, age, access to cable, number of children under 5 years old) as well as variables which are likely to influence voting behavior such as *zaat* (caste), having a national ID card (NIC), mobility, schooling and whether the women seeks advice from a religious leader or “Pir”.¹⁸

Finally, we include in X_{ihcpv} the total number of women registered to vote in the polling station. Inclusion of X_{ihcpv} corrects for baseline imbalances and increases efficiency by absorbing residual variation in the data.¹⁹ We also include a village fixed effect u_v to remove the influence of village specific unobservable characteristics. The term ε_{ihnpv} is a mean-zero error. Since the unit of randomization is the geographical cluster, standard errors are always clustered at this level (Moulton 1986).

¹⁸ Although the NIC is required to vote, some women in our sample were verified as having voted, though they did not have an NIC.

¹⁹ Some of the variables were collected at baseline, prior to the campaign, while others were collected in the follow up survey. In either case, they are not characteristics that could be affected by the campaign.

A modified version of Equation (1) measures the effects of T_1 and T_2 separately:

$$Y_{ihcpv} = \beta_1 T_{1,hcpv} + \beta_2 T_{2,hcpv} + \gamma X_{ihcpv} + u_v + \varepsilon_{ihcpv} \quad (2)$$

The coefficients β , β_1 and β_2 capture the impact of treatment on turnout and are the main coefficients of interest.

Table 3 reports the results. In order to capture the importance of within cluster spillovers, we run Equation (1) in Panel A and Equation (2) in Panel B using four different subsamples. In column 1, we simply compare treated women to all control women, regardless of their location (comparison T-C). This comparison ignores spillovers altogether by grouping control women in treated clusters together with (control) women in control clusters. In column 2, we compare treated clusters with control clusters (comparison T_N-C_N). Here treated and control women in treated households are grouped together. In column 3, we compare treated women in treated clusters with women in control clusters (comparison T- C_N). We therefore drop from the analysis control women in treated clusters. Finally, in column 4 we compare control women in treated clusters to women in control clusters by dropping treated women from the analysis (comparison $C_{TN}-C_N$). If spillover effects are important, the coefficient of interest in the first (naïve) comparison should be smaller since control women in treated clusters are likely to have been influenced by treated women.

We indeed find that the naïve estimate in column 1, panel A is lower than that of columns 2-4, at 6 percent. Thus, accounting for within geographical cluster spillovers increases the impact of treatment to about 12 percent. More importantly, it appears that control women in treated clusters increase turnout by about the same magnitude as the women directly treated.²⁰

In Panel B, the pattern of lower estimates in column 1 compared to those in columns 2-4 is repeated and, as expected, estimates for the impact of T_2 are larger. They are also more precisely estimated, although we are unable to detect statistically different effects between T_1 and T_2 .

²⁰ A regression that includes both a treatment dummy and a dummy for control households in treated clusters shows that the coefficient on the treatment dummy is 0.117 and the coefficient on the dummy for control households in treated clusters is 0.124, though neither coefficient is statistically significant at conventional levels. The P-value of the t-test that both coefficients are equal is 0.798.

While this strategy allows us to assess spillovers within treatment clusters effectively, it does not account for spillovers beyond the geographical cluster. According to Table 1, the average distance between any two households in a cluster is 194.2 meters (0.12 miles) and the median distance is roughly 100 meters. In contrast, the median distance between any two surveyed households in a village is roughly one kilometer (0.67 miles). It is therefore plausible that women talk to other women outside the geographical cluster, especially women located near the borders of the cluster. The design included gap clusters to ensure that control clusters were isolated from treated clusters, but women in these control clusters might have been affected directly or indirectly by the intervention and, as a result, even the estimates of columns 2-4 in Table 3 would be downward biased.

We use two strategies to assess spillover effects beyond the geographical cluster. First, we use the GPS location of every household in the study to compute the number of other treated and control households within a given distance radius. We use radiuses of 75, 100 and 200 meters, which roughly correspond to the 25th, 50th and 75th percentile of the distance between any two households in a cluster. We then run the following OLS regression equation:

$$Y_{ihcpv} = \beta T_{hcpv} + \theta C_{T_{hdpv}} + \rho N_{dpv} + \gamma X_{ihcpv} + u_v + \varepsilon_{ihcpv} \quad (3)$$

where $C_{T_{hdpv}}$ is an indicator for whether household h is not treated but has at least a treated household within a distance radius of d meters, and N_{dpv} is the total number of surveyed households within distance radius d of household h .²¹ The rest of the terms are as defined in Equation (1), and as before, standard errors are clustered at the geographical cluster level. The coefficients of interest are β and θ . This specification allows for a simple test of the extent to which female turnout among control households near treated households resembles female turnout among directly treated households.

Panel A of Table 4 reports the results from Equation (3). The treatment effects are robustly significant and range between 12 to 15 percent. The estimate of θ is also significant in columns 1 and 2 and comparable to the direct treatment effect, suggesting that geographical spillovers are

²¹ It is clear that the dummies T_{hcpv} and $C_{T_{hdpv}}$ cannot both take value 1, since households are either treated or not. Both dummies take value zero if the household was not treated ($T_{hcpv} = 0$) and was located more than d meters from the closest treated household.

large. Indeed, the t-test of $\beta = \theta$ is never rejected. The coefficient on the number of households within a given radius, which can be interpreted as household density, is significant in columns 2 and 3, suggesting that turnout is higher in more densely populated areas within a village, perhaps because polling stations tend to locate there. Panel B reports the results for the OLS regression equation analogous to Equation (2). We again find that the direct (and indirect) effect of T_2 is somewhat larger than that of T_1 but the difference is, again, not statistically significant, at conventional levels, in our sample. We will return to these estimates at the end of this subsection when we compare them to those from polling station level regressions.

The other strategy we use to study spillover effects beyond the geographical cluster is inspired by Kremer and Miguel (2001). In order to assess how treatment density within a given radius affects turnout, we rely on exogenous variation in the local density of treated women, by virtue of the cluster level randomization.²² Specifically, we construct non-overlapping concentric rings that are 200 meters wide around each sample woman. In each ring (or band) we compute the total number of treated women within the band. Since the median distance between any two households in the village is about one kilometer, the bands start at 0-200 meters and extend up to 1,200 meters. The regression specification in this case is

$$Y_{ihcpv} = \beta T_{hcpv} + \sum_{dD} (\alpha_{dD} NT_{dD} + \tau_{dD} N_{dD}) + \gamma X_{ihcpv} + u_v + \varepsilon_{ihcpv} \quad (4)$$

Where NT_{dD} is the number of treated women between distance d and D from each sample woman, and N_{dD} is the number of women interviewed between distance d and D from each sample woman. The rest of the terms are as defined in Equation (1) and standard errors are clustered at the geographical cluster level.

The estimates for α_{dD} can be used to estimate the average spillover gain for sample women from having treated women residing in close proximity. The coefficients are reported in Column 2 of Table 5. We get significant spillover effects up to 600 meters. Using only the coefficients that are significant, we estimate that the odds of voting increase by about 49 percent for women who live within half a kilometer of other treated women, with the largest gain coming from treated women

²² Kremer and Miguel (2001) assess cross-school externalities using exogenous variation in the local density of treatment school pupils generated by the school-level randomization.

residing within 200 meters.²³ Interestingly, once proximity to other treated women is controlled for, the additional effect of being directly treated is nil ($\beta = 0$).

Table 6 explores whether spillover effects are larger among friends than among neighbors using the specification in Equation (1) on the sample of confidants. We do not have GIS data for the households of friends, but we do know which cluster they live in and whether they were verified as having cast a vote. The impact of information on turnout for friends is in the same range as that for other control women in treated clusters, ranging from 10 to 12 percent. Not surprisingly, the vast majority of confidants reside in the same cluster as the woman who identified them as her friend. Clearly, social interactions among women with mobility constraints are largely dictated by geographic proximity. Communication is easy and can happen over laundry, cooking and childcare which require little movement away from home.

Finally, we assess the size of information spillovers at the polling station level, using official electoral results by gender. The outcome of interest in this case, Y_{pv} , is the number of votes cast by women in polling station p in village v . Correspondingly, the impact of treatment, NT_{pv} , is measured by the number of women treated in polling station p in village v , controlling for the number of registered women, N_{pv} , and a vector of polling station level variables, X_{pv} .²⁴ This yields the following regression specification:

$$Y_{pv} = \delta_0 NT_{pv} + \delta_1 N_{pv} + \gamma X_{pv} + \varepsilon_{pv} \quad (5)$$

Table 7 shows that a marginal increase in the number of treated women increases turnout in the polling station by between .54 and .73 percent, depending on whether village fixed effects and baseline polling station level controls are included. Thus for every 10 women (roughly 4 households) treated, between 5 and 7 additional votes are cast. This suggests again that spillover effects are important and it implies, in particular, that each treated woman, who may in turn be influenced by other treated women, is influencing multiple untreated women.

²³ To see this, note that the average spillover gain is the average number of treated women located within 0-200 meters times the average effect of having an additional treated woman in this range (α_{0-200}) plus the analogous spillover effects due to treated women located between 200-400 and 400-600 meters from a woman. Based on the estimates in Table 5, this implies that the estimated average spillover gain is $[\alpha_{0-200} * 14.68 + \alpha_{200-400} * 7.29 + \alpha_{400-600} * 4.49] = [.017 * 14.68 + .022 * 7.29 + .017 * 4.49] = .49$

²⁴ The proportion of treated women as a fraction of total registered women ranges from 0 to 0.77.

To explore the nature of the spillover effects, we now combine the estimates from Equation (3) and (5) to infer the minimum number of untreated women that have been influenced by a treated woman. Aggregating Equation (3) to the polling station level, and equating the expression to Equation (5) we obtain

$$\beta NT_{pv} + \theta NC_{T_{pv}} = \delta_0 NT_{pv} , \text{ which yields}$$

$$NC_{T_{pv}} = \frac{\delta_0 - \beta}{\theta} NT_{pv}$$

Since $\beta = \theta$ is never rejected (see Table 4), this implies

$$NC_{T_{pv}} = \frac{\delta_0 - \beta}{\beta} NT_{pv}$$

Plugging in the estimates for the various distance radiuses considered, the number of affected untreated women ranges between 2.74 to 3.81.²⁵ Because every 4th household was selected to participate in the study, it is reasonable that treated women in treated clusters would talk to at least 3 or 4 of their neighbors. It is also very likely that different treated women talked to the same untreated woman, so treated women may have talked to more than 3 or 4 women.

If we further assume that women, whether treated or untreated, can only be influenced by women who were directly treated, we can estimate turnout rates to place bounds on the effect of treated women on other women, whether directly treated or controls. More formally, let Δ^T be the increase in the probability of voting for an average treated woman who interacts with NT treated women. We can then write

$$\Delta^T = \pi_0 + \pi_1^T NT$$

Where π_0 is the direct effect of being treated, while π_1^T is the effect of interactions with other treated women on turnout. Analogously, the increase in probability for untreated women in treated clusters influenced by treated women can be written as

$$\Delta^C = \pi_1^C NT$$

²⁵ The estimate of δ_0 comes from column (4) in Table 7. If we do not impose the equality but use the estimates of θ instead, then the number of influenced untreated women ranges from 3.15 to 6.30.

Since by virtue of randomization, treated and untreated women in treated clusters should talk to the same number of treated women.

In addition, Tables 3 and 4 suggest that treated and untreated women in treated clusters have comparable turnout rates, so we can equate $\Delta^T = \Delta^C$, yielding

$$\pi_0 = (\pi_1^C - \pi_1^T)NT.$$

Therefore, either there is no additional impact from being directly treated ($\pi_0 = 0$) and $\pi_1^C = \pi_1^T$ or if there is an additional impact, i.e., $\pi_0 > 0$, then $\pi_1^C > \pi_1^T$, that is, treated women exert more influence on untreated women than on other treated women. Table 5 suggests that there is no additional impact of being directly treated ($\pi_0 = 0$), so the influence that treated women exert on other women, regardless of whether they are treated, appears to be the same.

3.2 Candidate Choice

We now turn to the impact of the awareness campaign on knowledge regarding candidate choice in the household. In the follow-up survey, the male head was asked about whether or not each woman in the household had voted and, if she had, whom she had voted for. The same information was solicited from each woman about all the other women in the household. Using this data, we can check the extent to which these cross-reports, i.e., the reporter's choice of candidates for a woman, are in agreement with the candidate choice reported by the woman herself. The indicator of agreement takes the value 1 if two reports match, and is zero otherwise. Candidate choice information is available for all women who self-report that they voted, but we restrict the sample to women who were verified as having voted. The final sample includes 3,713 cross reports and 1,220 women, with the number of observations per woman varying by household size.²⁶

²⁶ Among the 2,637 women in the sample, 1,543 were verified as having voted. The discrepancy in sample sizes of voters come from 21 percent of women that were verified as having voted but self-reported as not having done so. Interestingly, we also find evidence of conformity bias (Silver et al., 1986; Harbaugh, 1996) since treated women that had not voted are significantly more likely to self-report as having done so compared to women in control clusters (40.6 percent vs. 34.8 percent, *p-val* 0.001). This is especially true in more contested polling stations (45.3 percent vs. 35.8 percent, *p-val* 0.000).

If the campaign successfully conveyed information on the secrecy of the ballot then household members, and particularly the male head, should have less information on the candidate choice of women in the household. We test this with the following regression

$$M_{ijhcv} = \beta_0 T_{hcv} + \beta_1 H_{ihcv} + \beta_2 (T_{hcv} * H_{ihcv}) + \gamma X_{ihcv} + u_v + \varepsilon_{ijhcv} \quad (6)$$

where M_{ijhcv} is an indicator that takes the value 1 if the report of individual i on individual j 's choice of candidate is correct (according to j 's self-report); H_{ihcv} is an indicator for whether reporter i is the male head; and X_{ihcv} is reporter i 's vector of polling station, household and individual characteristics. The error term is likely to be correlated across all observations with the same reporter i and reportee j , but we still cluster standard errors at the geographical cluster level, which is more conservative than using QAP (Krackhardt, 1988) or the correction in Fafchamps and Gubert (2006).

The results are presented in table 8. The coefficient of interest is β_2 which captures the differential effect of treatment on the quality of male reports about the candidate choice of women in the household. The results indicate that treatment reduces male knowledge about women's chosen candidates by about 8 percentage points. As before, effects are larger and measured more precisely for T_2 . Interestingly, the reduction in male knowledge is larger and significant for controls in treated clusters (column 3). These results are consistent with reported conversations on political matters with neighbors in Panel B of Table A4. Controls in treated clusters are far more likely to discuss political issues with their neighbors as compared to women in control clusters and equally likely to do so when compared to directly treated women. This confirms the relevance of the information provided in the campaign because even the more nuanced message about the secrecy of the ballot was conveyed to women not directly treated.

Table A5 complements these results by comparing the percentage of treated women to women in control clusters who voted for a same or a different candidate from the male head or did not vote.²⁷ Columns 1 and 2 suggest that treated women are more likely to vote and to do so precisely for a party (candidate) other than that of the male head (from 2.8 to 10.1 percent). We then check whether this increase in turnout is concentrated among women that had not voted in

²⁷ The results are very similar when comparing treated clusters vs control clusters or controls in treated clusters vs control clusters and hence are omitted.

the past but find that this is not the case (columns 4-9). This suggests that the intervention increased independent choice among women that had voted in the past, but was less effective among women without prior voting history, perhaps because these women are also less likely to possess an NIC or be registered to vote. The barriers they face to voting may also be harder to overcome.

3.3 Electoral Competition and Information

We now assess whether the impact of the campaign varied by the degree of contestation at the polling station level. We use official data for each candidate to construct two measures of electoral competition. The first is one minus the Herfindahl index of vote shares (Contestation-I), a measure of concentration, and ranges from 0.02 to 0.72. The second is simply the percentage of votes obtained by PMLF (Contestation-II), ranging from 0 to 0.52. While these measures of electoral competition are arguably uncorrelated with our treatment because gender preferences did not align with a particular candidate or party, Table A6 checks that this is indeed the case.²⁸ Regardless of whether village fixed effects or polling station level characteristics are included, the number of treated women has no effect on electoral competition.

Electoral competition may increase voter turnout because voters perceive a higher marginal value to voting. Candidates may also devote more resources to mobilizing voters. If there are fears of voter intimidation and violence, however, turnout may actually be lower, especially among women. The polling stations in the study are divided into two constituencies each won by PPPP by a large margin. As a result, security concerns may have been a more relevant barrier to electoral participation. Indeed, official data show an average female turnout of 62 percent among polling stations below the median contestation level and only 55 percent for polling stations above the median. Using sample data, average turnout in control clusters drops from 61 percent in low contestation polling stations to 40 percent in high contestation polling stations. Among women in treated clusters, turnout is actually higher in high contestation polling stations (64 percent versus 57 percent in low contestation polling stations). This fact already suggests that the campaign may have alleviated fears of voter intimidation.

²⁸ Alternatively, we can compare the share of PPPP votes in polling stations which had more/less than the median number of treated women. These are 0.41 and 0.46 respectively. We cannot reject the equality of these shares (p -value = 0.491).

The regression specification we use is

$$Y_{ihcpv} = \beta_0 T_{hcpv} + \beta_1 C_{pv} + \beta_2 (T_{hcpv} * C_{pv}) + \gamma X_{ihcpv} + u_v + \varepsilon_{ihnpv} \quad (7)$$

where C_{pv} is either one minus the Herfindhal index of vote shares or the percentage of votes obtained by PMLF in polling station p . X_{ihcpv} is the set of polling station level variables that were significant in Table A6, in addition to the usual set of household and woman variables. The coefficient β_2 reveals the extent to which the impact of the campaign on turnout varies by the underlying level of contestation.

Table 9 reports the results. In Panel A (Contestation-I), residing in a contested polling station has a large negative impact on turnout. In Panel B, the effect of Contestation II is negative but not significant. In both panels, however, treated as well as control women in treated clusters are more likely to vote than their counterparts in less contested areas and, as before, there is no difference in the size or significance of these effects between directly treated women and control women in treated clusters. The intervention is therefore more effective in contested areas, where fears of voter intimidation and violence were more prevalent.

3.4 Knowledge and Perceptions

In Table 10, we assess whether the campaign had any effect on knowledge, perceptions and behavior other than voting. Each cell in the table reports the coefficient on the treatment dummy from a regression analogous to Equation (1). The dependent variables are the average of two knowledge questions on current events, an index of pro democratic views, for example disagreement with "Only educated should vote" and disapproval of various forms of government such as "Only one party is allowed to stand for election and hold office" or "The army comes in to govern the country". (Appendix Table A1 describes all variables in detail). A higher index is associated with more pro-democratic views. We consider three additional questions: whether the woman checked her name in the voter list after the intervention and before Election Day; whether the woman believes that elections were free and fair and finally whether the woman had witnessed or heard about instances of violence in the village.

The results suggest that treated women were more likely to check if their name was in the voter list but were not more knowledgeable about current events nor did they have more pro-

democratic views. Interestingly, columns 5-6 provide strong evidence of cognitive dissonance in voting, since women in control clusters were less likely to report that elections were free and fair and were more likely to report instances of violence. Given that control clusters were randomly located in the village, it is hard to believe that violence was concentrated precisely in these clusters. Rather, women in control clusters seem to justify their (non-)voting behavior ex-post by delegitimizing the election process and by reporting more security concerns.

4. Cost-Benefit Analysis

The estimates from tables 3 and 7 can be used to evaluate the cost effectiveness of the information campaign. The initial development of the information campaign cost \$3,600. The training of the canvassing team cost \$753 and the delivering of the information campaign cost \$5,671. This last amount includes the costs of collecting basic information about treatment and control households that would not be incurred in practice if research was not being conducted. Since roughly two-thirds of sample households were treated, we impute the costs to only include 2/3rd of this amount in the intervention cost. This gives us a total intervention cost of roughly \$8096 if we include the costs of developing the information campaign as well as the costs of training enumerators. This cost is an overestimate since the development of the information campaign and the training of teams for the canvassing represents a fixed cost that can be sizeable if the scale is small. In our case, it constitutes over 50 percent of the overall cost. If the campaign were scaled up, this cost would be distributed over a much larger population base. We therefore present the costs in two ways: one is inclusive of the development of the campaign and training costs, the other includes only the labor and transport costs of delivering the campaign.

Since we have about 673 treated households, we get a cost of about \$12 per household (\$5.5 per household if we include only canvassing costs). Since a household has 2.7 women on average, we treat about 10 women for every 3.7 households visited. The cost of treating 3.7 households is about \$45 (\$20 if we use only canvassing costs) so the cost per vote, given 6 additional votes for

every 10 treated women, is \$7.5 (\$3.3 if we use only canvassing costs).²⁹ If we ignore spillover effects and use woman level estimates, we would obtain a cost per vote of \$37.5 (\$16.7).³⁰

5. Conclusions

This paper examines the role of pre-election voter information campaigns in inducing broader participation in new democracies. We focus in particular on two questions: does a lack of information on electoral processes and voting procedures constitute an important barrier to political participation by women, and to what extent can social interactions among women be instrumental in boosting participation beyond those directly targeted by an information campaign.

While voter awareness campaigns are a staple feature of developed democracies they are relatively rare in younger and emerging democracies and we are not aware of any other studies that systematically examine the prospects of such interventions for increasing women's engagement in public life in a developing country context. Arguably, though, the value of information is likely to be far greater in a context where voters have less knowledge about the policy positions taken by candidates or parties and are engaged in various clientelist relationships that influence voting decisions. Access to reliable information is likely to be an even greater barrier for women, who are generally more constrained by lack of education, lower levels of mobility and less exposure to public spaces in which political ideas can be developed.

On average, the information campaign appears to have increased turnout among treated women by about 12 percent which amounts to little more than an additional female vote for every 10 women or about 4 households treated. We find evidence of large spillover effects, however, which are dictated by geographic proximity. Control women in treated clusters respond to cluster treatment assignment about as much as do directly treated women. Moving beyond clusters we examine spatial spillovers more generally and find still larger peer effects.

²⁹ This is about Rs. 453 (or Rs.201 if only canvassing costs are used), using the exchange rate in February 2008.

³⁰ Green and Gerber (2004) provide a nice summary of the price-per-vote in the US using various methods. They estimate the cost of a vote in door-to-door campaigns, which are perhaps closest to what we do, to be around \$19 per vote, using contract labor and excluding overheads.

At the polling station level, this implies that for every 10 women treated, there are about 6 additional votes. Further, the information campaign had an effect not just on turnout but also on independence in candidate choice. Specifically, in treated households men are significantly less likely to correctly assess the candidate choices made by women in their households. We also find that information on electoral rights may be more valuable where differences in preferences over candidates are larger. The information campaign increased turnout in more contested polling stations, despite the fact that contestation tended to substantially depress turnout. Finally, a simple cost benefit analysis suggests that an additional vote costs between about US\$7.5 and US\$3.3. This makes the information campaign a relatively cost effective way of reaching poor rural women.

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Appendix A: Visit Script

Importance of Voting (T1)

Picture 1: Ask “In your opinion, who do you consider responsible for the situation shown in this picture?” If women respond that politician, feudal lords, bureaucrats and influential personalities, etc. then clarify that in fact you may be responsible for this state. Also, responsible are all those who do not cast a vote or choose a wrong candidate. You are the ones who empower them. Hence you need to understand how you can individually affect the decision of who finds solutions to your problems/issues. Do realize your power and importance of your vote?

Picture 2: Ask “Could your one vote bring a change in your life?” Explain that your vote is of great importance. Through this vote a representative is elected. It is this elected representative who then sits in the provincial or national Assembly and makes decisions with regard to what facilities are provided in your area with regard to education, health, security, roads, income earning options, etc.

Picture 3: Many women think that casting a vote makes no difference. Ask women what they think. If they respond that they are women or are underprivileged and therefore it will make no difference, stress that every Pakistani vote is of equal importance, regardless of whether the voter is rich or poor, male or female. If they as women do not cast their vote then individuals who have no interest in women related issues may get elected. Tell the women that there is a lot of power in their vote. People consider that women are weak. Should all Pakistani women begin to vote, their vote has the power to alter a Government!

Picture 4: Ask the women whether they are aware that when they cast a vote in the General Elections, they actually select two members: one for the large assembly, which is known as the “National Assembly” on the green ballot paper; and the second for the small assembly which is “Provincial Assembly” on the white ballot paper. Both the assemblies work separately, with different domains and duties assigned.

Picture 5: Explain that the major responsibility of the members of the national assembly is legislation. Like setting-up laws for the protection of women rights; establishing law for peace and stability in the country; relations with foreign countries and construction of major roads. Reiterate that the color of ballot for the member of national assembly is green.

Picture 6: Ask women whether they know about the responsibilities of the members of the provincial assembly. Explain that provincial assembly member has a more direct link to the area they live in. It is this member’s responsibility to ensure the provision of facilities such as girls and boys’ schools, health centers, irrigation and small and home based industries. Remind women that the color of ballot for the member of provincial assembly is white.

Remind women that in the pictures previously shown they must have noted that the members of National and Provincial Assemblies are tasked with a lot of work for local and national progress. Ask women whether they think “good” candidates should have specific qualities in order to be effective at their job. Encourage active participation. Then, show **Picture 7** and list the characteristics of an effective candidate: educated, well reputed, respected for their good character and benevolent to poor; interested to promote projects that will reduce poverty; ability to understand problems; not misused national resources in the past; and have a positive attitude.

Ask women whether they have information about all the candidates that are contesting elections from their constituency. Show **Picture 8** and ask women about their impression. Explain that there may be many women who do not know about the candidates that are contesting in their constituency. How then can they compare the qualities of the candidates in order to decide who is the best candidate?

Ask women if they would cast their vote. If “Yes” then ask how they would decide whom to vote for. “Do they have enough information about all the members?” and “Do they really know who the best candidate is?” If “Not” then ask where they would obtain information about the candidates. Show **Picture 9** and tell them where information about the candidates could be obtained, e.g. male members within the family (since they are more aware and exposed), neighbors, teachers/respected members of the community and party workers.

Picture 10: Ask women what they see. The picture is self explanatory, showing a before and after behavior of a candidate – before the election the candidate is humble and attentive. After the election they just whisk off without even acknowledging your presence! Ask the women if this has happened to them. Highlight that this happens when one does not get correct information about the member and thus one chooses the wrong candidate. Ask women if they ever wonder “why cast a vote when nobody has done anything for us so far? Everyone is the same and all exploit resources.” Tell women that they may have had bad experiences, but it is still important to keep the electoral process alive. Show **Picture 11** and explain that one can select the best amongst the lot – and only then will better candidates come forward. This would make clear to the member that you cast your vote sensibly. If this practice continues then soon

sincere people would also contest elections and we would vote for them because of their genuine attributes. (Just as shown in **Picture 7**).

Secrecy of Balloting (T2)

Tell women that we have so far established that voting is important. But does everyone have to vote for the same person? Tell women that even when two sisters go to the market to buy a dress, they generally come away with two different designs, colors, and fabric. Why does this happen? Because people may have different preferences.

Explain that secrecy is a legal right and responsibility of every citizen. When you vote, you have the right to keep your vote confidential. No one may see you cast your vote, not even the election commission staff, polling agent, or another voter. It is only if a voter has a disability such as weak eyesight or a physical problem that can prevent you from stamping the ballot paper that you may seek assistance. Otherwise, any other presence would be considered illegal. Lack of ability to read or write does not justify any kind of assistance (since one does not need to read or write to understand the ballot paper). Show **Picture 12** and explain the basic process of balloting as follows: (i) Voter enters the polling station; (ii) Polling officer inspects National ID Card; marks thumb with indelible ink and after calling the name and serial number of the voter, marks off her name from electoral list; (iii) The First Presiding Officer issues a ballot paper for the national assembly. She stamps and signs it on the reverse side and marks the counterfoil; (iv) The Second Presiding Officer issues ballot paper for provincial assembly. She stamps and signs it on the reverse side, and marks the counterfoil; (v) Voter goes to the polling booth and stamps on both the ballot papers; (vi) Voter puts her ballot in the specified ballot boxes; (vii) Voter leaves the polling station.

Tell the women that to keep voting confidential, all polling stations will be equipped with a Voter Screen. This screen will ensure that no one sees you while stamping the ballot paper. Show **Picture 13** and highlight that the Election Commission has undertaken special arrangements to make voting easy for women – e.g. separate polling stations for women, female polling staff, and ensuring that polling stations and polling booths are located in easy to reach places, e.g. nearby schools.

Show **Picture 14** and explain the right procedure of balloting. Show how the ballot should be stamped and more importantly folded, and then put in the appropriate ballot box i.e. green ballot paper into green ballot box and white ballot paper into the white ballot box.

Ask the women, how many of them have voted before? Ask them how they have felt after casting the vote? Some may say nervous or afraid while others may say satisfied. Show **Picture 15** and explain that as shown in the picture, once a voter comes out everyone is interested in knowing whom she has voted for. Tell the women that this should not make them anxious or nervous. If they want, they can make everyone happy!

Appendix B: Visual Aids



Who is responsible for the situation shown in the picture?



Elected representatives make decisions about developmental activities.



Every Pakistanis vote is of equal importance; regardless whether the voter is rich or poor, male or female

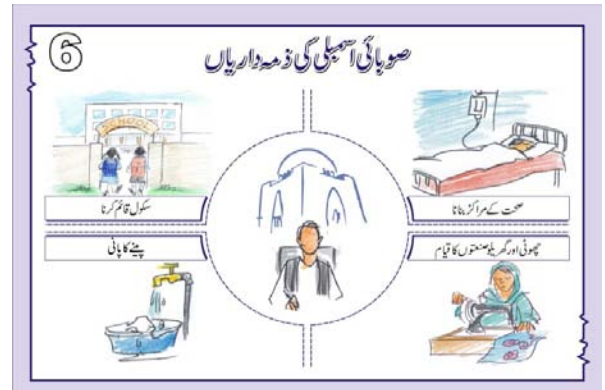


One vote casted results in selection of two members; one from National Assembly and other from Provincial Assembly. a. National assembly; b. Provincial assembly



Major responsibilities of members of the National Assembly are:

- Setting-up laws for the protection of women rights;
- Establishing law for peace and stability in the country;
- Relations with foreign countries &
- Construction of major roads



Responsibilities of the members of provincial assembly are to ensure:

- Provision of facilities such as girls & boys schools,
- Health centers,
- Irrigation and
- Small and home based industries in their own areas

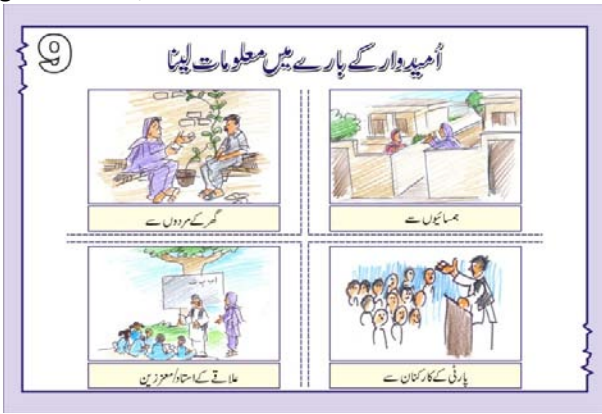


Characteristics of effective member are:

- Interested to promote projects that will reduce poverty;
- Well reputed,
- Not misused national resources in the past;
- Respected for their good character and benevolent to poor;
- Has a positive attitude towards poor
- Ability to understand problems;
- Educated,



Who are the candidates contesting elections from their constituency?



9. Getting information about the candidate from:

- Neighbors,
- Male members within the family (since they are more aware and exposed),
- Party workers
- Teachers/respected members of the community



10. Pre-election, Post-election



11. One has to choose the best from the lot available.

Figure 1: Timeline

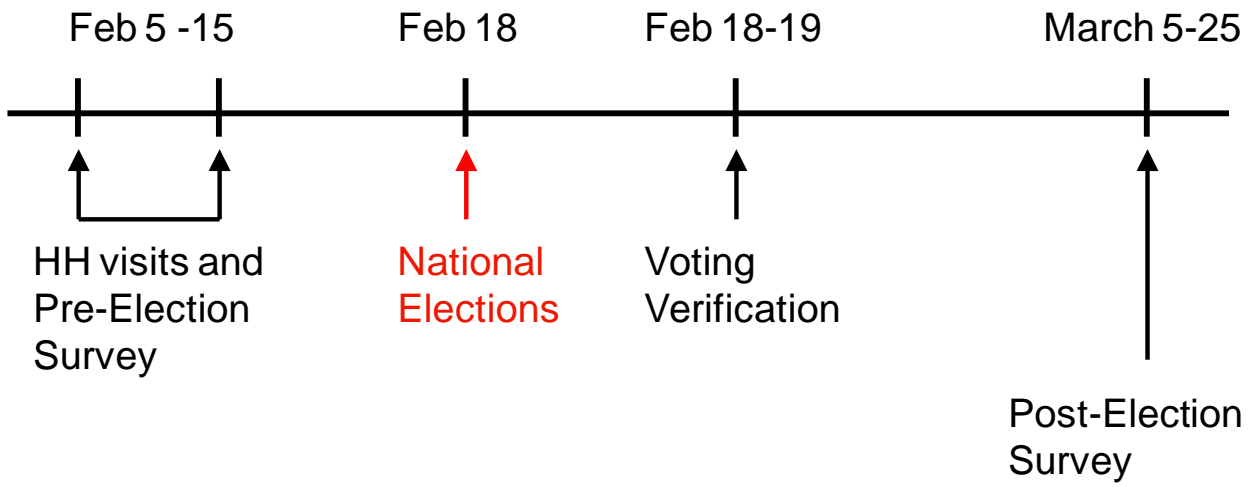


Figure 2: Village with geographical clusters



Table 1: Summary Statistics

	N. Obs	Mean	St. Dev	Pct 10	Pct. 50	Pct. 90
Panel A: Polling Station Characteristics						
Number of women registered in each polling station	21	434.0	196.7	195.0	464.0	656.0
Number of treated women in each polling station	21	89.0	54.2	34.0	82.0	150.0
Percentage of women with access to cable in the polling station	21	0.34	0.26	0.06	0.23	0.75
Herfindahl of share of votes by all parties (Contestation I)	21	0.37	0.18	0.18	0.43	0.43
Percentage of women voting for PMLF party (Contestation II)	21	0.15	0.18	0	0.05	0.48
St. Dev of asset index	21	1.76	0.30	1.46	1.72	2.09
St. Dev of distance index	21	0.79	0.52	0.16	0.69	1.31
Panel B: Household Characteristics						
Household size	963	10.2	5.17	5	9	16
Number of women in the household ¹	991	2.69	1.48	1	2	5
Asset Index	963	0.00	1.85	-2.03	-0.49	2.66
Total owned land (in acres)	963	2.58	7.55	0.01	0.04	7.02
Average monthly expenditure (in Rs. thousands)	963	8.80	4.71	3.00	9.00	12.50
House quality index	963	0.00	1.38	-1.62	-0.32	1.97
Low Zaat Status	963	0.26	0.44	0	0	1
Received visit from political party staff prior to election (1=Yes)	962	0.75	0.43	0	1	1
Attended political rally before intervention (1=Yes)	962	0.24	0.43	0	0	1
Distance to polling station (Km.) ¹	991	0.42	0.94	0	0	2
Distance between households within geographical cluster (meters)	8,263	194.2	283.9	27.9	107.1	456.5
Distance between households within village (meters)	48,430	1,472.9	1,304.9	109.4	1,070.5	2,962.8
Panel C: Woman Characteristics						
Age	2,637	37.76	16.09	20	35	60
Woman has formal schooling (1=Yes)	2,637	0.18	0.39	0	0	1
Attended political rally before intervention (1=Yes)	2,637	0.80	0.40	0	1	1
Number of children under 5 years old	2,637	0.86	1.19	0	0	3
Woman has a National Identity Card (NIC or CNIC) (1=Yes)	2,637	0.70	0.46	0	1	1
Woman voted in last local elections (1=Yes) ¹	2,735	0.70	0.46	0	1	1
Access to radio (1=Yes)	2,637	0.48	0.50	0	0	1
Access to TV (1=Yes)	2,637	0.70	0.46	0	1	1
Access to cable (1=Yes)	2,637	0.30	0.46	0	0	1
Mobility Index (0 to 3)	2,637	2.17	0.42	2	2	3
Woman allowed to join an NGO (1=Yes)	2,637	0.73	0.44	0	1	1
Woman is a member of MRDO (1=Yes) ¹	2,735	0.11	0.31	0	0	1
Woman seeks advice from a religious leader or "Pir" (1=Yes)	2,637	0.64	0.48	0	1	1

Notes: ¹ indicates that the variable is created using only the sample from the pre-election visit. Variables are defined in Appendix Table A1.

Table 2: Differences by treatment status

	Treatment vs control households T-C (1)	Treatment 1 vs control households T ₁ -C (2)	Treatment 2 vs control households T ₂ -C (3)	Treated clusters vs control clusters T _N -C _N (4)	Treated households vs households in control clusters T-C _N (5)	Control households in treated clusters vs households in control clusters C _{TN} -C _N (6)
Panel A: Household Characteristics						
Household size	0.266 (0.334)	0.289 (0.382)	0.227 (0.400)	0.412 (0.433)	0.422 (0.417)	0.371 (0.546)
Number of women in the household ¹	0.096 (0.104)	0.11 (0.123)	0.088 (0.114)	0.054 (0.145)	0.074 (0.139)	-0.044 (0.165)
Asset index	0.017 (0.132)	0.061 (0.146)	-0.036 (0.181)	-0.086 (0.204)	-0.063 (0.202)	-0.188 (0.195)
Total owned land (in acres)	1.018** (0.428)	1.360** (0.528)	0.6 (0.512)	0.754 (0.543)	0.943 (0.572)	-0.16 (0.388)
Average monthly expenditure	473.211 (403.795)	470.616 (441.530)	444.17 (440.550)	267.484 (591.398)	367.439 (608.246)	-297.676 (510.030)
House quality index	-0.054 (0.098)	-0.078 (0.121)	-0.023 (0.117)	-0.211* (0.117)	-0.192 (0.117)	-0.314** (0.138)
Distance to polling station (Km)	-0.013 (0.081)	-0.036 (0.082)	0.011 (0.115)	0.137 (0.137)	0.108 (0.129)	0.277* (0.162)
Low Zaat status	0.026 (0.059)	0.014 (0.070)	0.034 (0.067)	0.063 (0.101)	0.061 (0.099)	0.086 (0.069)
Received visit from political party staff prior to election (1=Yes)	0.000 (0.007)	0.002 (0.010)	-0.002 (0.008)	-0.007 (0.010)	-0.006 (0.010)	-0.015* (0.009)
Attended political rally before intervention (1=Yes)	0.032 (0.034)	0.003 (0.036)	0.070* (0.040)	0.050 (0.044)	0.051 (0.045)	0.043 (0.049)
N. Observations	972	676	588	972	845	292
P-value F test joint significance of hh chars on T	0.340	0.635	0.971	0.799	0.754	0.466
Panel B: Woman Characteristics						
Age	-0.730 (0.167)	-0.872 (0.139)	-0.674 (0.272)	-1.410** (0.028)	-1.382** (0.034)	-1.533** (0.033)
Woman has formal schooling (1=Yes)	0.007 (0.723)	-0.002 (0.915)	0.025 (0.274)	0.015 (0.616)	0.016 (0.587)	0.020 (0.596)
Woman is married (1=Yes)	-0.007 (0.641)	-0.020 (0.229)	0.005 (0.802)	-0.017 (0.243)	-0.016 (0.295)	-0.019 (0.416)
Number of children under 5 years old	0.088* (0.061)	0.114** (0.042)	0.048 (0.415)	0.147*** (0.004)	0.150*** (0.002)	0.137 (0.104)
Woman has a National Identity Card (NIC or CNIC) (1=Yes)	0.027 (0.292)	0.021 (0.505)	0.033 (0.180)	0.042 (0.228)	0.043 (0.216)	0.035 (0.274)
Woman voted in last local elections (1=Yes) ¹	0.022 (0.333)	0.002 (0.942)	0.042* (0.095)	0.036 (0.232)	0.037 (0.223)	0.034 (0.307)
Access to radio (1=Yes)	0.011 (0.728)	0.032 (0.362)	-0.014 (0.722)	-0.014 (0.757)	-0.008 (0.854)	-0.045 (0.324)
Access to TV (1=Yes)	0.022 (0.522)	0.041 (0.247)	0.000 (0.997)	0.026 (0.630)	0.028 (0.598)	0.028 (0.598)
Access to cable (1=yes)	-0.059 (0.175)	-0.064 (0.204)	-0.045 (0.365)	-0.118* (0.079)	-0.116* (0.080)	-0.116** (0.028)
Mobility Index (0 to 3)	0.032 (0.456)	0.055 (0.214)	0.005 (0.920)	0.012 (0.826)	0.020 (0.710)	-0.034 (0.665)
Woman allowed to join an NGO (1=Yes)	-0.003 (0.915)	0.008 (0.762)	-0.020 (0.534)	-0.022 (0.506)	-0.019 (0.573)	-0.033 (0.363)
Woman is a member of MRDO (1=Yes) ¹	-0.004 (0.870)	0.018 (0.531)	-0.029 (0.371)	0.030 (0.410)	0.023 (0.508)	0.072 (0.105)
Woman seeks advice from a religious leader or "Pir" (1=Yes)	-0.051 (0.129)	-0.031 (0.424)	-0.079* (0.066)	-0.057 (0.246)	-0.062 (0.214)	-0.043 (0.414)
N. Observations	2,637	1,827	1,577	2,637	2,303	768
P-value F test of joint significance	0.294	0.057	0.440	0.401	0.305	0.001

Notes: T refers to the sample of treated households, C control households, C_{TN} control households in treated clusters, T_N households in treated clusters (including both treated and control households) and C_N households in control clusters (all are control households). ¹ indicates that the variable is created using only the sample from the pre-election visit. Variables are defined in Appendix Table A1.

Table 3: Effect on Female Turnout

	Treatment vs control households	Treated clusters vs control clusters	Treated household s only vs control clusters	Control households in treated clusters vs households in control clusters
	T-C (1)	T_N-C_N (2)	$T-C_N$ (3)	$C_{TN}-C_N$ (4)
Panel A: Treatment				
Treatment (T)	0.06 (0.045)	0.118 (0.073)	0.120* (0.071)	0.121* (0.062)
R-squared	0.18	0.19	0.19	0.21
Panel B: T_1 vs T_2				
Importance of voting (T_1)	0.034 (0.052)	0.095 (0.077)	0.094 (0.075)	0.109 (0.070)
Importance of voting and secret balloting (T_2)	0.093* (0.048)	0.145* (0.077)	0.152** (0.074)	0.135* (0.079)
R-squared	0.18	0.19	0.2	0.21
N. Observations	2,637	2,637	2,304	767
Mean dependent variable among C_N	0.52	0.52	0.52	0.52
<i>P-value</i> ($T_1 = T_2$)	0.223	0.308	0.229	0.752
<i>P-value</i> (F-test for joint significance of T_1 and T_2)	0.146	0.159	0.106	0.152

Note: The dependent variable takes the value 1 if a woman reports having voted in the February 2008 elections and had a verifiable ink mark on her thumb. The symbols *, **, *** represent significance at the 10, 5 and 1 percent respectively. All specifications include village fixed effects and the following controls: number of registered female voters, whether woman has a NIC or CNIC, level of schooling, age, zaat status, TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from "Pir". Standard errors are reported in parentheses below the coefficient and are clustered at the geographic cluster level.

Table 4: Spillover Effects using distance - I

	75m (1)	100m (2)	200m (3)
Panel A: Treatment			
Treatment (T)	0.122* (0.065)	0.153** (0.074)	0.119* (0.070)
Control with T within radius (C_T)	0.105* (0.060)	0.133* (0.071)	0.072 (0.064)
Number of households within radius	0.006 (0.004)	0.006* (0.003)	0.004** (0.002)
R-squared	0.19	0.19	0.23
<i>P-Value</i> (T= C_T)	0.612	0.549	0.192
Panel B: T_1 vs T_2			
Importance of voting (T_1)	0.092 (0.066)	0.132* (0.070)	0.12 (0.078)
Importance of voting and secret balloting (T_2)	0.146** (0.063)	0.182** (0.069)	0.167** (0.075)
Control with T1 within radius (C_{T1})	0.045 (0.054)	0.066 (0.058)	-0.004 (0.060)
Control with T2 within radius (C_{T2})	0.114* (0.064)	0.149** (0.071)	0.151* (0.086)
Number of households within radius	0.005 (0.004)	0.005* (0.003)	0.003* (0.002)
R-squared	0.191	0.20	0.20
<i>P-value</i> ($T_1 = C_{T1}$)	0.461	0.350	0.148
<i>P-value</i> ($T_2 = C_{T2}$)	0.418	0.472	0.764
<i>P-value</i> ($T_1 = T_2$)	0.245	0.285	0.322
<i>P-value</i> ($C_{T1} = C_{T2}$)	0.425	0.392	0.211
N. Observations	2,637	2,637	2,637
Mean of Dependent Variable among controls	0.58	0.58	0.58

Note: The dependent variable takes the value 1 if a woman reports having voted in the February 2008 elections and had a verifiable ink mark on her thumb. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. All specifications include village fixed effects and the following controls: number of registered female voters, whether woman has a NIC or CNIC, level of schooling, age, zaat status, TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from "Pir". Standard errors are reported in parentheses below the coefficient and are clustered at the geographic cluster level.

Table 5: Spillover Effects using distance - II

	Mean (1)	Coefficients (2)
Treatment (T)		0.027 (0.031)
Number of treated women within 0-200 radius	14.68	0.017*** (0.004)
Number of treated women within 200-400 radius	7.29	0.022*** (0.004)
Number of treated women within 400-600 radius	4.49	0.017*** (0.005)
Number of treated women within 600-800 radius	5.99	0.008 (0.006)
Number of treated women within 800-1000 radius	4.14	0.008 (0.008)
Number of treated women within 1000-1,200 radius	3.24	0.004 (0.007)
Number of women within 0-200 radius	21.02	-0.008*** (0.003)
Number of women within 200-400 radius	11.21	-0.012*** (0.003)
Number of women within 400-600 radius	6.89	-0.013*** (0.004)
Number of women within 600-800 radius	8.17	-0.004 (0.004)
Number of women within 800-1000 radius	6.21	-0.008 (0.005)
Number of women within 1000-1,200 radius	4.89	0.001
Observations		2,637
R-squared		0.23
Mean of Dependent Variable		0.59

Note: The dependent variable takes the value 1 if a woman reports having voted in the February 2008 elections and had a verifiable ink mark on her thumb. In column 1, the mean of each variable is reported. Column 2 reports the coefficient along with the standard errors in parentheses below the coefficient, clustered at the geographic cluster level. Column 3 reports the average effect evaluating the coefficient relevant for each concentric circle at the mean, and p-values are reported below in brackets. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. All specifications include village fixed effects and the following controls: number of registered female voters, whether woman has a NIC or CNIC, level of schooling, age, zaat status, TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from "Pir".

Table 6. Spillover Effects to Friends

	Friends of Women in Treated Clusters vs. Friends of Women in Control Clusters T-C (1) (2)		Friends of Treated Women in Treated Clusters vs. Friends of Women in Control Clusters T-C _N (3) (4)		Friends of Control Women in Treated Clusters vs. Friends of Women in Control Clusters C _{TN} -C _N (5) (6)	
Panel A: Treatment						
Treatment (T)	0.107 (0.078)	0.12 (0.075)	0.104 (0.075)	0.117 (0.071)	0.124* (0.070)	0.124* (0.068)
R-Squared	0.11	0.16	0.12	0.17	0.18	0.27
Sample Woman Controls	N	Y	N	Y	N	Y
Panel B: T1 vs T2						
Importance of voting (T ₁)	0.142* (0.074)	0.145** (0.072)	0.113 (0.078)	0.117 (0.074)	0.170** (0.074)	0.150** (0.072)
Importance of voting and Secret balloting (T ₂)	0.091 (0.077)	0.116 (0.072)	0.092 (0.085)	0.116 (0.079)	0.056 (0.106)	0.085 (0.103)
R-Squared	0.12	0.17	0.12	0.17	0.19	0.27
Sample Woman Controls	N	Y	N	Y	N	Y
N.Observations	797	793	693	689	245	245
Mean of Dependent Variable among C _N	0.52	0.52	0.52	0.52	0.53	0.53
P-value (T ₁ =T ₂)	0.420	0.604	0.738	0.987	0.300	0.554
P-value (F-Test for joint significance of T ₁ and T ₂)	0.166	0.135	0.356	0.262	0.081	0.121

Note: The dependent variable takes the value 1 if a friend reports having voted in the February 2008 elections and had a verifiable ink mark on her thumb. In each specification, women in control households located within the indicated radius of a treated household are dropped from the sample. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. All specifications include village fixed effects. Regressions with Sample Woman Controls include the following controls: number of registered female voters, whether woman has a NIC, level of schooling, age, whether woman is married, TV access, cable TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from "Pir". Standard errors are reported in parentheses below the coefficient and are clustered at the geographic cluster level.

Table 7: Spillovers at the Polling Station Level

	(1)	(2)	(3)	(4)
Number of Treated Women	0.635*	0.540*	0.726**	0.573*
	(0.322)	[0.317]	(0.290)	[0.337]
Percentage of Women with Access to Cable TV			93.293	81.055
			(57.213)	[117.892]
SD of Asset Index			131.578**	135.352
			(49.900)	[82.025]
SD of Distance to the Polling Station			30.733	38.716
			(28.834)	[43.120]
Number of Women Registered to Vote	0.190**	0.214**	0.17**	0.165
	(0.089)	[0.091]	(0.078)	[0.103]
Constant	86.318*		-200.262*	
	(44.510)		(100.015)	
Village Fixed Effects?	N	Y	N	Y
R-squared	0.39	0.70	0.64	0.80
N. Observations	21	21	21	21
Mean of Dependent Variable	225.2	225.2	225.2	225.2

Note: The dependent variable is the number of valid votes cast by women by polling station. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. Robust standard errors in parentheses.

Table 8: Effect on Candidate Choice Using Cross Reports from Family Members

	Treated clusters vs control clusters $T_N - C_N$ (1)	Treated households only vs control clusters $T - C_N$ (2)	Control households in treated clusters vs control clusters $C_{TN} - C_N$ (3)
Panel A: Treatment			
Treatment (T)	-0.007 (0.023)	-0.015 (0.025)	0.024 (0.025)
Man reporting about woman	-0.012 (0.019)	-0.010 (0.019)	-0.021 (0.020)
Man reporting x T	-0.085*** (0.027)	-0.082*** (0.028)	-0.104* (0.054)
R-Squared	0.065	0.069	0.125
Panel B: T_1 vs T_2			
Importance of voting (T_1)	-0.016 (0.026)	-0.026 (0.028)	0.012 (0.025)
Importance of voting and secret balloting (T_2)	0.002 (0.027)	-0.003 (0.030)	0.024 (0.029)
Man reporting about woman	-0.012 (0.019)	-0.010 (0.019)	-0.021 (0.020)
Man reporting x T_1	-0.064* (0.037)	-0.072* (0.039)	-0.025 (0.040)
Man reporting x T_2	-0.107*** (0.032)	-0.093** (0.035)	-0.189** (0.084)
N. Observations	3,713	3,200	914
Mean of Dependent Variable	0.983	0.983	0.983
<i>P-value</i> ($T_1=T_2$)	0.475	0.431	0.688
<i>P-value</i> (Male Report x T_1 =Male Report x T_2)	0.313	0.659	0.0672

Note: The sample include all cross-reports about women that were verified as having voted. The dependent variable takes the value 1 if the woman's self-report about candidate choice matches the report of the reportee, either another woman in the household or the male head. Each observation is therefore a pair with several observations for each woman. If the reportee believes that woman did not vote, the dependent variable takes value 0 as no candidate was reported. All specifications include village fixed effects and the following controls: number of registered female voters, whether reportee has a NIC or CNIC, level of schooling, age, zaat status, TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from a "Pir". Standard errors are reported in parentheses below the coefficient and are clustered at the geographic cluster level. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively.

Table 9: Contestation and Information

	Treated clusters vs control clusters $T_N - C_N$ (1)	Treated households only vs control clusters $T - C_N$ (2)	Control households in treated clusters vs households in control clusters $C_{TN} - C_N$ (3)
(Contestation I)			
Treatment (T)	-0.117 (0.121)	-0.114 (0.116)	-0.151 (0.125)
Contestation I	-0.615* (0.337)	-0.654** (0.327)	-0.477 (0.313)
Treatment x Contestation I	0.657* (0.357)	0.654* (0.346)	0.732** (0.340)
R-Squared	0.19	0.20	0.23
Panel B: Share of Votes Obtained by PML-F (Contestation II)			
Treatment (T)	-0.065 (0.084)	-0.058 (0.082)	-0.109 (0.075)
Contestation II	-1.449 (1.146)	-1.438 (1.110)	-1.445 (1.135)
Treatment x Contestation II	2.102* (1.125)	2.058* (1.090)	2.285** (0.995)
R-Squared	0.22	0.23	0.25
Mean of Dependent Variable	0.523	0.523	0.523
N. Observations	2,637	2,304	767

Note: The dependent variable takes the value 1 if a woman reports having voted in the February 2008 elections and had a verifiable ink mark on her thumb. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. All specifications include village fixed effects and the following controls: number of registered female voters, whether woman has a NIC or CNIC, level of schooling, age, zaat status, TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from "Pir". Standard errors are reported in parentheses below the coefficient and are clustered at the geographic cluster level.

Table 10: Effect on Knowledge and Perceptions

	N. Obs (1)	Index of knowledge of current events (2)	Index of opinion on democracy (3)	Woman checked voter list after intervention (4)	Woman believes elections were free and fair (5)	Woman witnessed or heard about violence in village (6)
Treated clusters vs control clusters ($T_N - C_N$)	2637	0.005 (0.072)	0.066 [0.041]	0.051* (0.030)	0.070** (0.034)	-0.104** (0.044)
Treated households only vs control clusters ($T - C_N$)	2304	0.012 (0.070)	0.069 [0.042]	0.053* (0.031)	0.075** (0.033)	-0.101** (0.042)
Control households in treated clusters vs households in control clusters ($C_{TN} - C_N$)	767	-0.025 (0.094)	0.046 [0.052]	0.048 (0.035)	0.060 (0.037)	-0.122** (0.049)
Mean dependent variable		0.00	-0.03	0.61	0.88	0.27

Note: The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. All specifications include village fixed effects and the following controls: number of registered female voters, whether woman has a NIC or CNIC, level of schooling, age, zaat status, TV access, number of children between 0-5, total land owned, index of mobility and whether woman seeks advise from "Pir". Standard errors are reported in parentheses below the coefficient and are clustered at the geographic cluster level. Variables are defined in Appendix Table A1.

Table A1. Definition of Variables

Variable	Definition
Polling Station Characteristics	
Contestation I	Herfindahl Index of all parties' vote share.
Contestation II	Share of votes obtained by PMLF
St. Dev of asset index	Standard Deviation of household asset Index
St. Dev of distance to polling station	Standard deviation of distance to polling station
Household Characteristics	
Household size	Total number of individuals in the household including children
Asset Index	The first component of a PCA including the number of refrigerators, freezers, fans, geysers, washing machines/dryers, cooking stoves, TVs, VCRs, VCPs/ CD players, Radios/ cassette players, sewing/knitting machines, dish antennas, cable services, bicycles, motorcycles, cows, buffalos and goats, as well as a dummy variable that takes value 1 if household owned any major agricultural assets/ machinery.
Total owned land (in acres)	Total acres of owned land by the household
Average monthly expenditure (in thousands)	Average monthly expenditure computed using the mid point of the following options: less than 2,000, greater than 2,000 but less than 4,000, greater than 4,000 but less than 6,000, greater than 6,000 but less than 8,000, greater than 8,000 but less than 10,000, greater than 10,000 but less than 15,000, greater than 15,000 but less than 25,000, greater than 25,000 but less than 35,000.
House quality index	Index constructed using principal components analysis using number of rooms and dummy variables that take value 1 if house has pacca walls, a roof made of concrete, iron/brick/tile or wood/brick/tile, the toilet is flush connected to public sewerage, flush connected to pit or flush connected to open drain latrine and the main source of drinking water for the household is either piped water or hand pump.
Distance to polling station (Km.)	Total distance in Km. from household to polling station (average of the answer given by different members of the household).
Low Zaat (Caste) Status	Household belongs to service or menial zaat groups
Woman Characteristics	
Woman has formal schooling (1=Yes)	Dummy variable equal to 1 if woman has any formal schooling.
Woman is married (1=Yes)	Dummy variable equal to 1 if woman is married.
Number of children under age 5	Number of children under 5 years old over total number of children that the woman has.
Woman would be allowed to join a NGO (1=Yes)	Dummy variable equal to 1 if woman would be allowed to get involved in an NGO if one were to start working in their village.
Has a NIC (1=Yes)	Dummy variable equal to 1 if the woman has a national identity card
Access to radio (1=Yes)	Dummy variable equal to 1 if woman has access to a radio.
Access to TV (1=Yes)	Dummy variable equal to 1 if woman has access to TV.
Access to cable (1=Yes)	Dummy variable equal to 1 if woman has access to cable.
Hours of Radio in an average week	The product of number of hours of radio listened in an average day times number of days respondent listens to the radio in an average week.
Gets World new from BBC's Urdu Service	Dummy variable equal to 1 if respondent reported turning to BBC radio first for getting world news
Number of hrs of TV watched in avg week	The product of number of hours of TV watched in an average day times number of days respondent watches TV in an average week
Mobility Index	Index based on questions about whether woman would be allowed to go to bazaars , doctors or for social visits outside her village and her settlement. 1= No to all three; 2=accompanied by adult male and 3= Accompanied by adult female, children or alone. The index is the sum of responses divided by 3
MRDO membership (1=Yes)	Dummy variable equal to 1 if woman is a member of a community organization in her village.
Index of community action taken	Index constructed using principal components analysis of 3 questions on methods tried to resolve different situations for both men and women (election officials left name off voter list, police wrongly arrested someone in family, someone wrongly seized family's land). The 3 questions were recoded to 1 if respondent had either lodged a complaint, used connections with influence, offer a tip or participated in a protest to resolve the situation. 0 if they had not.
Index of contact with formal authority	Index constructed by adding 1 (0 otherwise) if the answers is YES to following questions whether during the past year he/she contacted a local government councillor (Nazim, Naib Nazim) and contacted a political party official. The total is divided by 2.
Index of contact with informal authority	Index constructed by adding 1 (0 otherwise) if the answers is YES to following questions whether during the past year he/she contacted a religious leader (Pir, Murshid) and contacted a traditional ruler (Wadera, Maalik, Numberdar). The total is divided by 2.
Knowledge of current events and the political process	
Aware of imposition of Emergency Rule (1=Yes)	Dummy variable equal to 1 if respondent had heard about the imposition of the emergency rule, the removal of Chief Justice of the Supreme Court and the house arrest of various lawyers.
Index of knowledge of current events	Average score of the following knowledge questions: "Aware of imposition of emergency/house arrest of lawyers and removal of Chief Justice" and "Knows name of newly elected Prime Minister".
Share of political party signs correctly identified	Proportion of signs (out of 7) that respondent were able to correctly match to a political party contesting for a National Assembly seat.
Share of political party names correctly identified	Proportion of party's names contesting for National Assembly that the respondent was able to recall perfectly out of 2.
Recalls winning candidate (1=Yes)	Dummy variable equal to 1 if woman perfectly recalled the name of the candidate that won the National Assembly seat in her constituency
Recalls names of main candidates (1=Yes)	Dummy variable equal to 1 if woman perfectly recalled the names of the candidates from the two main parties that contested a National Assembly seat
Knows the gender of main candidates (1=Yes)	Dummy variable equal to 1 if woman perfectly identified the gender of the candidates from the two main parties that contested a National Assembly seat
Voting behavior and perceptions	
Checked voter list after February 5th (1=Yes)	Dummy variable equal to 1 if after February 5th woman or a family member checked to see if she was on the voter list.
Voted last year (1=Yes)	Dummy variable equal to 1 if woman voted in the last local body elections.
Voted in Feb 08 (1=Yes)	Dummy variable equal to 1 if respondent voted in this national elections.
Witnessed or heard of any type of violence in/near village (1=Yes)	Dummy variable equal to 1 if woman personally witnessed or heard of any type of violence in/near her village.
Elections were free and fair (1=Yes)	Dummy variable equal to 1 if woman believes that the national elections held in February 18th 2008 were "Completely free and fair" or "Free and fair, but with minor problems" instead of "Free and fair but with minor problems" and "Not free and fair".
Index of opinion on democracy	Disagreement with the following statement: "Only educated should vote" and average disapproval of the following forms of government: "Only one party is allowed to stand for election and hold office. ", "The army comes in to govern the country", "There are no elections, no MPA or MNA and the president decides everything".
Recall of Intervention	
Visit before elections (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that she was visited before the elections to tell her about the importance of the elections and voting.
Present in visit before elections (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that she was present in the visit before the elections to tell her about the importance of the elections and voting.
Attend presentation in a neighbor's house (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that she was present in the visit that took place in a neighbor's house before the elections to tell them about the importance of the elections and voting.
Neighbors joined during visit (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that some neighbors were present in the visit that took place at her house before the elections to tell them about the importance of the elections and voting.
Issues raised: importance of voting (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that the issue raised during the visit before the elections was about the importance of voting.
Issues raised: importance of secret voting (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that the issue raised during the visit before the elections was about the importance of voting secrecy.
Issues raised: importance of voting and secrecy (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that the issues raised during the visit before the elections were the importance of voting and importance of voting secrecy.
Talked about visit (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that she talked about the visit and the issues raised during the visit with others in her neighborhood.
Neighbor talked about meeting to woman (1=Yes)	Dummy variable equal to 1 if woman confirmed in the follow-up survey that some women from her neighborhood talk to her about the meeting which she had attended in the days preceding the election.

Table A2. Gender Differences

	N. Obs	Means		P-value of t-test of (2)-(3) (4)
		Female (2)	Male (3)	
(1)	(2)	(3)	(4)	
Panel A: Access to Media				
Access to Radio (1=Yes)	1,923	0.47	0.42	0.061
Number of hours of radio listened to in an average week	852	9.7	9.63	0.867
Access to TV (1=Yes)	1,923	0.67	0.629	0.103
Number of hours of TV watched in an average week	1,222	15.3	11.0	0.000
Access to cable TV (1=Yes)	1,923	0.29	0.23	0.008
Listens to BBC's urdu service for world news (1=Yes)	852	0.10	0.48	0.000
Panel B: Knowledge of Political Parties and Elections				
Share of political party signs correctly identified	1,923	0.28	0.42	0.000
Share of political party names correctly identified	1,923	0.86	0.96	0.000
Knows the gender of main candidates (1=Yes)	1,923	0.95	0.98	0.483
Recalls names of main candidates (1=Yes)	1,923	0.82	0.86	0.488
Recalls winning candidate (1=Yes)	1,923	0.90	0.95	0.219
Aware of Emergency Rule (1=Yes)	1,923	0.10	0.51	0.000
Panel C: Participation in Public Life				
Attends community meetings (1=Yes)	1,923	0.18	0.52	0.000
Attends demonstrations (1=Yes)	1,923	0.12	0.23	0.000
Attended political rally before intervention (1=Yes)	1,923	0.05	0.24	0.000
Takes action				
If name missing in voter list (1=Yes)	1,923	0.76	0.92	0.000
If police mistakenly arrest family member (1=Yes)	1,923	0.93	0.98	0.000
If family land is seized (1=Yes)	1,923	0.92	0.98	0.000
Index of community action taken	1,923	-0.29	0.69	0.000
Contacts local councilor (1=Yes)	1,923	0.25	0.37	0.000
Contacts a local political party official (1=Yes)	1,923	0.22	0.38	0.000
Index of formal authority contact	1,923	-0.10	0.34	0.000
Contacts a religious leader (1=Yes)	1,923	0.66	0.49	0.000
Contacts a traditional ruler (1=Yes)	1,923	0.45	0.32	0.000
Index of informal authority contact	1,921	0.12	-0.30	0.000

spouse. P-values were calculated from a regressions of each variable on a gender dummy. The regression included village fixed effects and standard errors were clustered at the geographical cluster level.

Table A3. Attrition

	Women Level		Household Level	
	(1)	(2)	(3)	(4)
Panel A: Treatment				
Treatment (T)	-0.004 (0.010)	-0.003 (0.011)	0.01 (0.009)	0.011 (0.010)
Baseline Contols?	N	Y	N	Y
R-squared	0.02	0.02	0.00	0.00
Panel B: T ₁ vs T ₂				
Importance of voting (T ₁)	-0.022 (0.012)	-0.022 (0.012)	-0.004 (0.011)	-0.004 (0.011)
Importance of voting and secret balloting (T ₂)	0.020 (0.013)	0.021 (0.017)	0.029* (0.014)	0.030** (0.015)
Baseline Contols?	N	Y	N	Y
R-squared	0.03	0.03	0.01	0.01
Mean dependent variable	0.035	0.035	0.026	0.026
Observations	2,734	2,734	1,019	1,019

Note: Regressions (1) and (2) are at the women level and (3) to (4) are at the household level. In the latter the controls take the average value of the women within a household. The dependant variable takes the value 1 if woman attrited. All regressions include village fixed effects and the following control variables collected during pre-election visit are included when noted: Woman has NIC or CNIC, voted in last elections, woman is a member of MRDO and the number of females in the household. Standard errors are reported in parenthesis below the coefficients and are clustered at the geographical cluster level. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively.

Table A4. Information about intervention and about political discussions

	N. Obs	All	T	T ₁	T ₂	C in T	C in T1	C in T2	C in control clusters
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Information about visit									
Received visit before elections (1=Yes)	2,637	0.71	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Neighbors joined during visit (1=Yes)	1,867	0.11	0.11	0.08	0.15	--	--	--	--
Issues raised during visit									
Importance of voting	1,867	0.64	0.64	0.98	0.19	--	--	--	--
Importance of voting in accordance to own preferences	1,867	0.06	0.06	0.02	0.12	--	--	--	--
Both	1,867	0.30	0.30	0.01	0.69	--	--	--	--
Discussed visit with neighbors (1=Yes)	1,867	0.41	0.41	0.35	0.50	--	--	--	--
Panel B: Information about political discussions									
Discuss political issues with women in neighborhood (1=Yes)	2,637	0.44	0.55	0.50	0.62	0.40	0.30	0.51	0.18
Issues raised during conversations									
Party/Candidate Positions	847	0.61	0.62	0.61	0.63	0.59	0.58	0.61	0.59
Importance of voting	847	0.86	0.85	0.85	0.86	0.86	0.89	0.83	0.88
Importance of voting in accordance to own preferences	847	0.52	0.53	0.53	0.53	0.47	0.49	0.45	0.51

Notes: Data come from follow-up survey. Column (1) refers to the number of observations for column (2). Columns (3)-(5) report data for treated women. Columns (6)-(8) report data for control women in treated clusters. Column (9) reports data for control women in control clusters.

Table A5: Impact on Women's Participation and Candidate Choice

	All			Women had not voted in past			Women had voted in past		
	T	C _N	<i>P-value of t-test (1)-(2)</i>	T	C _N	<i>P-value of t-test (4)-(5)</i>	T	C _N	<i>P-value of t-test (7)-(8)</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Percentage of women who									
Voted for the same party as male he	44.6	41.7	0.500	13.5	11.6	0.326	57.25	56.94	0.950
Voted for different party from head	10.1	2.8	0.010	2.2	1.4	0.647	13.15	3.47	0.000
Voted but male head did not	6.1	3.7	0.220	1.7	2.7	0.274	7.89	4.17	0.090
Did not vote	38.6	50.9	0.010	82.0	84.2	0.526	21.04	34.03	0.010
N. Observations	1,870	434		539	146		1,331	288	

Note: P-values are from regressions with village fixed effects, woman characteristics as controls and robust standard errors clustered at the geographic cluster level. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively.

Table A6: Contestation at the Polling Station Level

	Contestation-I				Contestation-II			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Treated Women	0.000 (0.001)	0.000 (0.000)	0.000 (0.001)	0.000 (0.000)	0.000 (0.001)	0.001 (0.001)	0.000 (0.001)	0.000 (0.001)
Percentage of Women with Access to Cable TV			0.211 (0.146)	0.265 (0.174)			-0.114 (0.177)	-0.378 (0.334)
SD of Asset Index			0.268* (0.127)	0.454*** (0.121)			0.176 (0.155)	0.402 (0.233)
SD of Distance to the Polling Station			0.141* (0.073)	0.106 (0.064)			0.009 (0.089)	-0.030 (0.122)
Number of Women Registered to Vote	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Constant	0.327*** (0.111)	0.248* (0.132)	-0.329 (0.255)	-0.719 (0.256)	0.051 (0.109)		-0.217 (0.310)	-0.510 (0.495)
Village Fixed Effects?	N	Y	N	Y	N	Y	N	Y
Observations	21	21	21	21	21	21	21	21
R-squared	0.01	0.616	0.38	0.88	0.04	0.269	0.18	0.58

Note: Contestation I in columns (1) - (4) refer to the Herfindahl index of the share of votes obtained by the two major political parties (PPPP and PMLF); Contestation II is the share of votes obtained by PMLF. The symbols *, **, *** represent significance at the 10, 5 and 1 % respectively. Appendix Table A1 contains the definition of the variables.