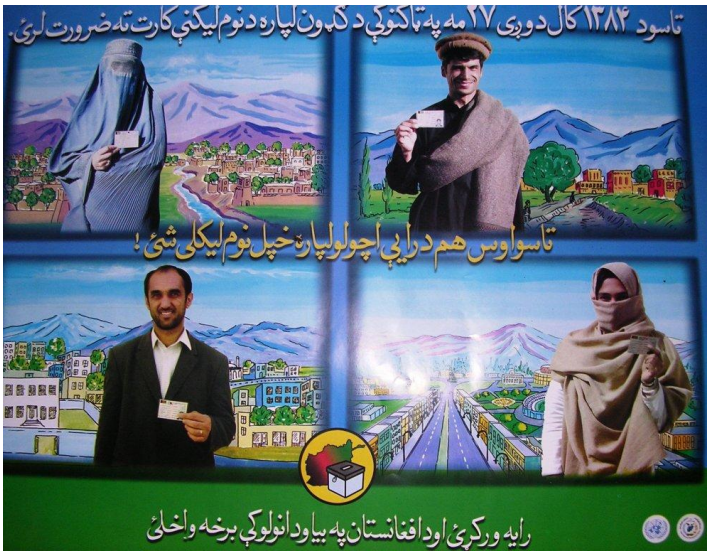
The Impact of *Sada* on Civil Society Knowledge, Attitudes, and Voting Behavior in Ghazni and Takhar Provinces of Afghanistan

An Evaluation Report



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Contents

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Executive Summary

On September 18, 2005, Afghanistan held its first parliamentary election. Voice for Humanity, a U.S.-based, non-profit humanitarian organization, introduced a hand-held, battery-powered audio device, *Sada*, with pre-programmed entertainment-education messages, to educate the Afghan population about civil society, and the importance of civic engagement during the parliamentary election.

This study used an experimental design, with one experimental district and one control district in both Ghazni and Takhar provinces (1) to determine the impact of *Sada* on civil society knowledge and attitudes, and on voting behavior, and (2) to assess the efficacy of the *Sada* as an educational technology. Survey data were collected at two points in time: (1) a pre-election baseline, and (2) a post-election follow-up (panel N=778). We examined the changes in knowledge and attitudes about civil society governance, and in voting behavior, between the experimental group (i.e., those that received *Sada*) and control group (i.e., those that did not receive *Sada*).

The *Sada* was associated with changes in knowledge about the Afghan government's national security program and its accompanying slogan, suggesting that those messages were new and of interest to the *Sada* listening population. Changes in other measured knowledge and attitudes, and in voting behavior, were not statistically significant for *Sada* versus non-*Sada* users. The baseline study showed that existing knowledge and attitudes about civil society were very high/positive. These high knowledge and attitude scores suggest an informed and keen voting public in Afghanistan. Such high scores on the baseline leave little room for improvement, making it difficult to demonstrate impact.

In the experimental sites in both provinces, a high percentage of respondents listened to the entire *Sada* content, usually in groups, and spread over multiple listening sessions. Several individuals in both provinces connected the *Sada* to a loudspeaker, broadcasting the programs in the local area. A fairly high percentage of respondents (63 percent in Gelan and 47 percent in Warsaj) reported discussing the *Sada* programs with others. At least 95 percent of our respondents in Gelan and 98 percent in Warsaj continued listening to the *Sada* after the elections were over, suggesting the longevity of use of such a device.

Almost all the respondents (more than 97 percent) in both Gelan and Warsaj believed the *Sada* provided correct information, that the *Sada* information was trustworthy, the *Sada* content was interesting to listen, and what they heard on *Sada* helped them to understand the importance of the parliamentary elections. The majority of participants agreed that the program language was easy to understand, the programs were entertaining, and audio-taped messages from local leaders in the *Sada* made them believe that the *Sada* content was

important. Overall, the *Sada* contents were well-received; the programs were perceived as credible and culturally appropriate.

The *Sada* technology worked very well; only one percent of respondents in our experimental districts experienced a technical problem, for example, a malfunction with the batteries, the navigational buttons, or the solar charger. A majority of respondents (both men and women) in both experimental districts found the color of *Sada* to be attractive (grey for men, pink for women), and perceived the device as being very easy to operate.

Responses to open-ended questions suggested that the majority of respondents in our experimental districts especially liked listening to the entertainment genres (i.e., drama, comedy, and songs). Several *Sada* users liked the battery and its solar-powered charger, noting that using the *Sada* did not have any associated expense.

The findings from this study have important implications for the design of future *Sada* program content, dissemination, and evaluations. Understanding the baseline knowledge, attitudes, and behaviors of the intended audience, prior to launching a *Sada* campaign, can assist Voice for Humanity to better utilize the potential of *Sada* for educational purposes.

The Impact of *Sada* on Civil Society Knowledge, Attitudes, and Voting Behavior in Ghazni and Takhar Provinces of Afghanistan

The present report contains findings from an evaluation study to assess the impact of the small media device known as *Sada*[1] on civil society knowledge attitudes, and on voting behavior, in the 2005 parliamentary election, in two provinces of Afghanistan.[2]

This report comprises six sections. In the first section, we provide a brief background of the Voice for Humanity *Sada* Project. Next, we introduce the goals and objectives for the evaluation study. In the following section, we present the methodology for conducting the evaluation. The findings from the analyses of panel data are presented for each of the posed hypotheses in a separate section. The following section presents findings about *Sada* use and respondents' assessment of the *Sada* technology. In the final section of this report, we discuss the results of the study and future implications for *Sada* use.

1. The VFH *Sada* Project

The *Sada* is a low-cost, battery-powered audio player[3] with a built-in speaker, designed to communicate audio information to oral communicators. Information recorded on a plug-and-play chip can be replayed, discussed, and shared with others in small listening groups. The information on the chip cannot be copied or modified (Appendix A).

In the summer of 2004, Voice for Humanity (VFH), a non-profit humanitarian organization based in Lexington, Kentucky, introduced the *Sada* in Afghanistan. The recorded messages encouraged voter registration prior to Afghanistan's 2004 presidential election. A post-hoc evaluation of that project showed that voter registration and voter turnout on election day were higher in areas where the *Sada*s were distributed than in other areas.

[1] *Sada* means "voice" in Pashto.
[2] The Afghanistan parliamentary election was held on September 18, 2005.
[3] The *Sada* unit comes with a solar-powered battery charger.

In August 2005, VFH distributed an additional 41,000 *Sada* units (20,500 pink units for women, and 20,500 silver units for men) in 23 provinces of Afghanistan.[4] The *Sada* plug-and-play chip contained information about the parliamentary elections and civic engagement, including civil society governance, principles of democracy, the purpose for a constitution, the responsibilities of a parliament, the purpose for an election, basic human rights, women's rights, and the importance of voter participation. The *Sada* information encouraged Afghans to (1) participate more fully in civil society processes, and (2) vote in the September 2005 parliamentary election. These messages were delivered using (1) entertainment-education programs, that is, dramas, songs, and comedy skits with embedded civic education messages, (2) readings from the Koran, and (3) messages from Afghan opinion leaders about the importance of civic engagement. This content was provided in the two main languages of Afghanistan, Dari and Pashto.

2. Study Overview

The present study used an experimental design. Specifically, we implemented a pre- and post-program intervention design with a predetermined control group in two provinces of Afghanistan, Ghazni and Takhar. The program intervention consisted of distributing *Sada* listening devices to individuals in the two experimental districts. The scores for the intervention group (i.e., those who received a *Sada*) were compared to those of the control group (i.e., those who did not received a *Sada)* to determine differences in civil society knowledge, attitudes, and voting behavior, in each province.

The researchers developed a survey questionnaire to assess baseline knowledge, attitudes, and voting behavior prior to the parliamentary elections. A similar questionnaire was used when conducting the post-election follow-up survey with the same individuals that were interviewed for the baseline survey.

Evaluation Research Goal

The *primary* goal for the present evaluation study was to assess the overall impact of *Sada* audio information and small-group listening on civil society knowledge and attitudes, and on voting behavior, among citizens in two provinces of Afghanistan.

A *secondary* goal for the proposed evaluation was to assess the appropriateness of the *Sada* device for disseminating information about civic engagement in Afghanistan.

[4] The *Sada* project was funded by the United States Agency for International Development (USAID).

Evaluation Research Objectives

1. To determine changes in knowledge about civil society (e.g., governance, principles of democracy, parliament, constitution, election, human rights, women's rights, security, and rural development) among Afghans following exposure to the *Sada* content.
2. To determine changes in attitudes about civil society (e.g., governance, principles of democracy, parliament, constitution, election, human rights, women's rights, security, and rural development) among Afghans following exposure to the *Sada* content.
3. To determine changes in voting behavior (i.e., participation in the 2005 parliamentary election) among Afghans following exposure to the *Sada* content.

3. Methodology

Study Design Overview

For the purposes of the present research study, two provinces were selected as research sites, Ghazni and Takhar. In Ghazni province, Gelan district was randomly selected as the experimental site (i.e., the site where the *Sada* device was distributed), and Andar was randomly designated the control site (i.e., the area where the *Sada* device was not distributed). In Takhar province, Warsaj was the selected experimental site, and Farkhar was the control area (Figure 1).

The two provinces were strategically selected: (1) each province was situated geographically in an area that was not exposed to *Sada* in 2004, when *Sada* units were distributed by VFH prior to the Presidential election,[5] (2) each province was in an area that was beyond the radio broadcasting footprint of Afghan media, and thus less likely to be impacted by radio messages about the parliamentary election, (3) each province was in a relatively secure region of the country, and (4) each province was physically accessible to the research field teams.

The two districts within each province were selected using UNHCR profiles.[6] The selection criteria for the experimental and control districts in each province were (1) that the districts within each province were similar in population size and ethnic composition, and (2) that the districts within each province were secure from Taliban threat so that field staff would be safe when conducting interviews.

Respondents in the experimental and control groups were interviewed at two points in time: (1) before the *Sada*s were distributed to the experimental districts,

[5] *Sada* units were not distributed in either Ghazni or Takhar in 2004, or in the provinces immediately surrounding Ghazni and Takhar.

[6] UNHCR is the United Nations High Commissioner for Refugees. This agency publishes Field Office District Profiles for each of the provinces in Afghanistan.

and prior to the September 2005 parliamentary election, and (2) after the *Sada*s were distributed, and following the parliamentary election. The follow-up survey was conducted with the same individuals that participated in the baseline survey, representing a panel design.

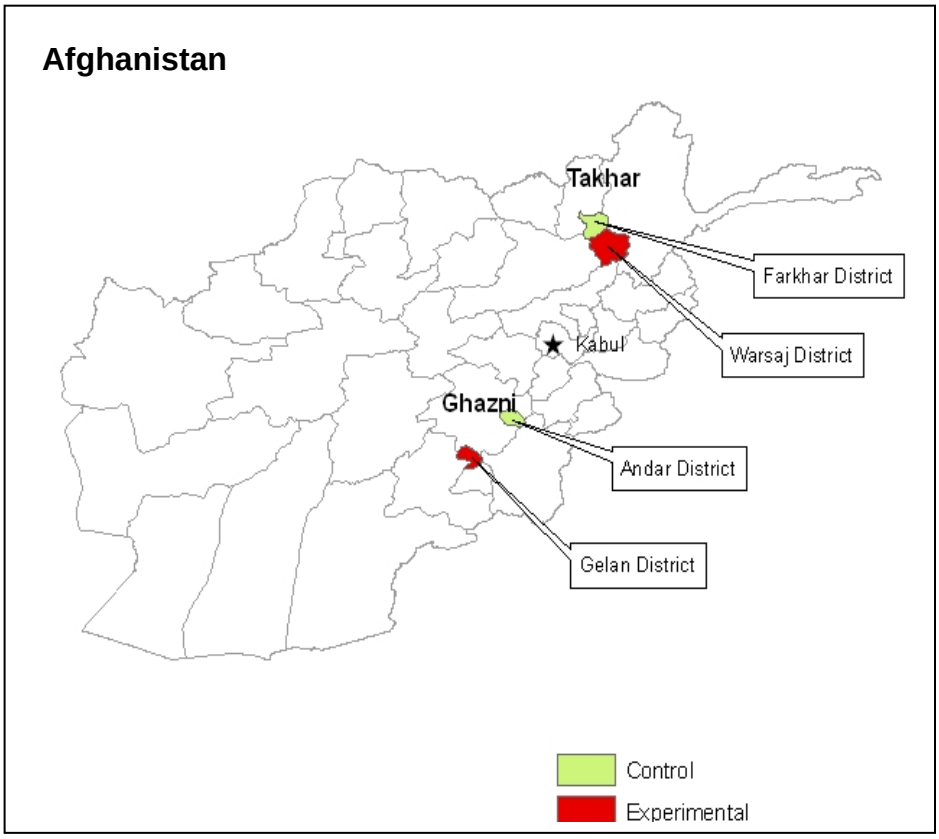

Figure 1. The Two Provinces and Four Study Districts of the *Sada* Evaluation Study.
Source: Esther Long, Voice for Humanity, Lexington, Kentucky.

Study Areas

The data were gathered in Gelan and Andar districts in Ghazni Province, and in Farkhar and Warsaj districts in Takhar Province (Figure 1 above). Gelan is located in the southwest of Ghazni province, approximately 2.5 hours from the province center. The district consists of mostly desert and drought affected land. An estimated 78,000 individuals live in Gelan. The population is 100 percent ethnically Pashtun, and speak Pashto. This district was a stronghold of the

Taliban before their regime was toppled. Military groups, including *Taliban* remnants are said to be currently active in this district.[7]

Andar is located to the northeast of Glean district. Andar has a population of approximately 99,700 individuals. The area is made up of 100 percent Pashtuns. This district was also an area where guerillas loyal to the former *Taliban* regime operated. Both Gelan and Andar continue to experience *Taliban* related security issues that made it difficult for the fieldworkers to conduct household surveys in those areas.[8]

Warsaj is located in the southernmost region of Takhar province. It is ethnically *Tajik* (100%). The population consists of approximately 40,000 individuals. The language spoken in Warsaj is *Dari* (Persian). The district is mountainous with limited land for agriculture. Many villages are inaccessible by road. This district did not experience heavy fighting during the *Taliban* time, and has not been affected by drought.

Farkhar is the adjacent district to the north of Warsaj.[9] The majority of its population is *Tajik* (94%). The remaining population is Hazara (5%), or "Other" (1%). The total population is approximately 50,000. This area was a frontline during the reign of the *Taliban*, and many villages were destroyed. Today, Farkhar is relatively secure and the majority of villages are accessible by road.

Individuals in these four study districts live in large compounds made of mud bricks. These compounds contain a few houses with large yards surrounded by high walls. It is usual for several related families to live together in one compound. Each family has an average of six members. Women are mostly confined to their compounds and immediate surrounding areas. Their movement is limited to their own village. Women that travel outside their compound, do so with a male escort, and cannot show themselves to men who are not members of their family without a male family member being present. It was necessary for female interviewers to conduct interviews with female study participants. Electricity is limited in all four districts.

[7] Information about each of the study districts is drawn from UNHCR (1) Field Office Ghazni District Profiles, and (2) Field Office Takhar District Profiles, available at the UNHCR website.
[8] All fieldworkers were Afghan. The male fieldworkers wore *Taliban*-like turbans and clothing in order to blend in to the field environment. Female fieldworkers wore large (conservative) *chaddars* (traditional shawls worn over the head and covering the nose and mouth).

[9] The evaluators had initially selected a district that was not adjacent to Farkhar, but prior to the launch of the study, security issues in the area forced us to change the control district. The only district that matched Warsaj in both ethnic and population makeup was Farkhar.

Study Sample

A total of 1,000 individuals were interviewed prior to the election. Some 778 individuals were re-interviewed following the election.[10] Table 1 summarizes the sample sizes for the experimental and control groups for the pre-election and post-election surveys. In an effort to minimize attrition, the fieldwork team maintained contact with sample members in the experimental group between the baseline and follow-up survey. One point of contact following the baseline survey occurred when the fieldwork team gave a *Sada* unit to each individual on the list.

Table 1. Sample Sizes for the Baseline (Wave 1) and Follow-Up (Wave 2) Surveys in the Four Study Districts in Afghanistan.

Region	Province	District	Pre-Election Survey	Post-Election Survey
Southeast (Pashtun)	Ghazni	Gelan (Experimental)	250	175
		Andar (Control)	250	193
North (Tajik)	Takhar	Warsaj (Experimental)	250	189
		Farkhar (Control)	250	221
	TOTAL		1,000	778

Sampling Procedures

The present study used a list sampling method to identify experimental group survey respondents. A matched sampling method was used to obtain the control group sample. The list sampling method for selecting the experimental group was a cost-effective, time-efficient, and appropriate method in the Afghan context. The study called for interviews with *Sada* users. Approximately 250 *Sadas* were distributed in each of the experimental districts *(Gelan and Warsaj*). In order to interview only those individuals that received a *Sada* it was necessary to be able to locate those individuals. Locating those *Sada* recipients necessitated a list of individuals that receive a *Sada* unit.

In order to obtain a list of *Sada* users, VFH facilitators collaborated with the District Administrator's office in each experimental district. In Ghazni province, two VFH staff members met with the District Administrator (DA) in Gelan district (the experimental site) to introduce the *Sada* program. The DA appointed 20 women and 20 men to act as team leaders. The team leaders worked at the

[10] The attrition rate in the follow-up survey was approximately 22 percent.

village level in their respective districts to generate a list of names of potential *Sada* recipients. These recipients, to the extent possible, represented individuals who were respected in their local community, thus providing an opportunity to access their social networks.

Each team leader collected 10 names, resulting in a list of 200 women's names and 200 men's names in Gelan District. The list of 400 names was given to Altai Consulting, a Kabul-based research agency. Altai Consulting selected a random sample of 125 women and 125 men from the list of names for Gelan district.

The same list-generation and random name-selection processes were followed for Warsaj, the experimental district in Takhar province.

The control groups consisted of individuals from one district in each province that matched the experimental group members in gender, ethnicity and language composition. The control group was selected using matched sampling.[11] The survey instrument for the control group sample included screening questions so that surveys of non-comparable cases could be ended in a timely manner.

Altai Consulting, a premier research agency in Afghanistan, conducted a baseline survey of the four districts in the two study provinces in August 2005, (1) using the list of 250 names (125 women and 125 men) in the experimental districts, Gelan and Warsaj, and (2) using a random sampling method and screening questions to obtain study samples of 125 women and 125 men in Andar district that matched Gelan in ethnicity and language, and 125 women and 125 men in Farkhar district that matched the study sample in Warsaj district.

Once the baseline (pre-election) survey was completed, the 250 individuals who were interviewed in each experimental district (Gelan and Warsaj) received a *Sada* listening device. Distribution of the *Sadas* was coordinated by VFH in Kabul, and carried out (1) by local distributors in Gelan district, and (2) by two VFH coordinators in Warsaj district. A local woman accompanied the VFH men to ensure that they would be able to give the *Sada* to the women on the list.

In each district, the VFH coordinators provided a brief training session on how to use the *Sada* device (how to turn the device on and off, how to recharge the batteries using the solar recharger, and how to scroll through the content), prior to distributing the device to each individual.

Survey Instrument

Two survey instruments were developed: (1) a baseline, pre-election questionnaire (Appendix B), and (2) a follow-up, post-election questionnaire (Appendix C). The survey questionnaires were translated into Afghanistan's two

[11] Matched sampling is a method used to select a reservoir of potential controls to produce a control group that is similar to the experimental group.

main languages, Dari and Pashto, pretested with a representative sample of the study population, and revised as necessary.

Data Collection

Altai Consulting was contracted to conduct the fieldwork and data collection for both the baseline and follow-up surveys. This agency was responsible for (1) training the fieldworkers, (2) pretesting the survey instruments, (3) fielding the survey, (4) conducting quality assurance data monitoring on a daily basis while in the field, (5) compiling the raw data, and (6) cleaning the dataset.

Two teams of Altai Consulting research fieldworkers (each team with its own Team Leader) conducted in-person interviews using the questionnaires with participants in the four study districts.

Data Management

The data from the field surveys were entered into an SPSS data file for storage and processing at Altai Consulting in Afghanistan. Altai Consulting (1) assigned variable labels and value labels for each variable, and (2) cleaned the data.[12] The cleaned data files were sent to the evaluation team in the United States for analyses.

Study Variables

Knowledge, attitudes, and voting behavior were the outcomes used to measure the effects of *Sada.* Following are descriptions of how these outcome measures were created.

Knowledge of Civil Society: The survey questionnaires asked respondents to name the key organizations in a civil society they knew spontaneously and with prompting (Appendix B, Question 302). Each key organization was coded as 1 for "know" and 0 for "do not know". The civil society knowledge scale was created by summing these eight variables. Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 1 to 5 items); 1=medium knowledge (knowledge of 6 to 7 items), and 2=high knowledge (knowledge of all 8 items). [13]

Knowledge of Democracy: Knowledge about the meaning of democracy was measured using three items (Appendix B, Question 304). Each item was coded

[12] Only the Kabul-based research agency and the U.S.-based evaluators had access to the data files prior to delivering the findings report to VFH.

[13] It is important to note that when scales are untested and exploratory, with little evidence of reliability, summated scores should be constructed (Hair et al., 1992). The measures used in this study were exploratory, although some scales had good reliability. Summed measures are generally stronger measures of a concept than a single question measure.

as 1 for “know” and 0 for “do not know”. These items were summed for each respondent. Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 0 to 1 item); 1=medium knowledge (knowledge of 2 items), and 2=high knowledge (knowledge of all 3 items).

Knowledge of Parliament: Knowledge about the responsibilities of a parliament was measured by summing three items (Appendix B, Question 306), each item coded as 1 for “know” and 0 for “do not know”. Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 0 to 1 item); 1=medium knowledge (knowledge of 2 items), and 2=high knowledge (knowledge of all 3 items).

Knowledge of Constitution: Three items were summed to create a scale measure for knowledge of the purpose for a constitution (Appendix B, Question 308). Each item was coded as 1 for “know” and 0 for “do not know”. Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 1 item); 1=medium knowledge (knowledge of 2 items), and 2=high knowledge (knowledge of all 3 items).

Knowledge of Election: Respondents were asked “what happens during an election?” Knowledge of what happens during an election was measured using two items (Appendix B, Question 310). Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 1 item); 1=high knowledge (knowledge of 2 items).

Knowledge of Human Rights: Knowledge of human rights was measured using seven items (Appendix B, Question 312). Each item was coded as 1 for “know” and 0 for “do not know”. These items were summed to create a scale. Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 3 to 5 items); 1=medium knowledge (knowledge of 6 items), and 2=high knowledge (knowledge of all 7 items).

Knowledge of Women’s Rights: Knowledge of women’s rights was measured using six items (Appendix B, Question 314). Each item was coded as 1 for “know” and 0 for “do not know”. These items were summed to create a scale. Based on the distributions of scores, the following categories were created: 0=low knowledge (knowledge of 1 to 4 items); 1=medium knowledge (knowledge of 5 items), and 2=high knowledge (knowledge of all 6 items).

Knowledge of Security Programs: Two survey questions asked whether respondents heard of security-related government programs (Appendix B, Questions 315 and 316. Each item was coded as 1 for “know” and 0 for “do not know”. These items were summed to create a scale. Based on the distributions of scores, the following categories were created: 0=no knowledge (knowledge of neither program), 1=low knowledge (knowledge of one program), and 2=knowledge of both programs.

Knowledge of Rural Development Programs: The survey asked respondents three questions about three different government programs that encouraged rural development (Appendix B, Questions 317, 318, and 319). Each item was coded as 1 for "know" and 0 for "do not know". These items were summed to create a scale. Based on the distributions of scores, the following categories were created: 0=no knowledge (knowledge of zero programs), 1=low knowledge (knowledge of 1 program), 2=medium knowledge (knowledge of 2 programs), and 3=high knowledge (knowledge of all three programs).

Attitudes: Respondents were read a series of 12 statements related to their attitudes about civil society (Appendix B, Question 401). For each statement, the respondent could answer "Strongly agree," "Agree," "Neither agree, nor disagree," "Disagree," or "Strongly disagree". The statements were factor analyzed to determine the validity, dimensionality, and structure of these questionnaire items. The factor loadings suggested two factors: (1) Attitudes toward civil society governance, and (2) attitudes toward women's rights.

1. *Attitudes Toward Civil Society Governance*: Three items from the survey questionnaire attitude question were used to create a summative scale: (1) Afghan citizens should play an active role in electing their leaders; (2) Afghan citizens should be able to freely express their thoughts at all times; and (3) It is important for all Afghans to earn an education. Responses were coded as "0"=Not very positive, 1=Somewhat positive, 2=Positive, 3=Very positive, and 4=Extremely positive.
2. *Attitudes Toward Women's Rights*: Five attitude items were summed to create the variable for attitudes toward women's rights: (1) Afghan women should have the right to decide the number and spacing of their children, (2) Afghan women should receive equal pay (with men) for equal work, (3) Afghan women should be able to vote in an election, (4) Afghan women should be able to work outside of their homes, and (5) Afghan women should have a say in selecting their husbands. Responses were coded as 0=Not very positive, 1 =Somewhat positive, 2=Positive, 3=Very positive, and 4=Extremely positive.

Voting Behavior: Voting behavior was measured using the question "Did you vote in the September 2005 parliamentary election?" Response categories include 0=no, 1=yes, 2=don't know.

Exposure to *Sada*: Exposure to *Sada* was measured using the questions "Did you receive a *Sada*?" The answer was coded as "0" for no, and "1" for yes (Appendix C, Filter Question).

Difference scores for each outcome variable were created by subtracting the baseline (Wave 1) from the follow-up (Wave 2) scores.

Data Analyses

Analysis of the survey data was conducted in two phases. The first phase consisted of univariate examination of the variables; the data were screened to ensure that the assumptions for statistical analyses were fulfilled. The second phase consisted of bivariate and multivariate statistical analyses to examine the associations between the dependent and independent variables for each of the research hypotheses. Erroneous data were identified and addressed. The analyses were conducted using a merged data set of respondents that participated in both the baseline and follow-up surveys (N=778). All analyses were conducted using SPSS version 13.0 (SPSS, 2004).

4. Findings: Knowledge, Attitudes, and Behavior

This section presents the results of the data analyses. First, we provide the response rates for each of the study districts. Next, we present a profile of the survey respondents. Then we present the findings for each of the research hypotheses. Finally, we show results for *Sada* use and technology assessment.

Response Rate

The overall response rate in the follow-up survey was 77.8 percent. The response rates for the follow-up survey in each of the study districts were as follows: Gelan, 70.0%; Andar, 77.2%; Warsaj, 75.6%; and Farkhar, 88.4%. The field researchers made several attempts to re-interview the respondents who were interviewed for the baseline survey.

The response rate for Gelan District was the lowest among the four districts. Security issues in Gelan prevented the researchers from contacting some individuals for the follow-up survey. The field Team Leaders reported that several women said that they did not receive a *Sada* following their baseline interview. According to the distribution lists, those women did receive the listening device. The Team Leaders suggested that the women who said they did not receive a *Sada* were afraid to acknowledge receipt because of possible repercussions from *Taliban* who were patrolling the area by motorcycle. In one village, the *Taliban* seized an individual's *Sada* (Personal interview, October 16, 2005). Similar problems occurred in Warsaj district.

Profile of Respondents

Table 2 presents the percentage distributions for selected characteristics of the experimental and control participants by survey wave[14] and area of residence in Ghazni and Takhar provinces. Fewer females were interviewed in Wave 2 than in Wave 1 of the survey, in Gelan, Andar, and Warsaj districts. In Farkhar, slightly more females were interviewed (53.8 percent). Slightly fewer Pashtuns were interviewed in Gelan in Wave 2 of the survey. The percentages of Pashtuns were similar in Andar for both survey waves. Both Warsaj and Farkhar had similar percentages of Tajiks in the two survey waves. There were slightly more Pashto-speakers in Andar (98.8 percent in Wave 1, and 100 percent in Wave 2), compared with Gelan (92.8 percent in Wave 1 and 90.3 percent in Wave 2).

The mean age of respondents for Wave 1 and Wave 2 in Gelan was approximately 32 years old.[15] The respondents in Andar were, on average three years older (about 35 years in Waves 1 and 2) than those in Gelan (about 32 years in Waves 1 and 2). The sample of respondents in Farkhar was older (37years) than individuals in the other districts. Respondents in Warsaj were younger (30 years) than respondents in the three other districts.

The majority of respondents in all districts were married. Warsaj had the lowest percentage of married persons (about 69 percent in Waves 1 and 2), and Farkhar had the highest percentage of married individuals (about 86 percent in Waves 1 and 2). Farkhar had the highest percentage of respondents that had never attended school (85.6 percent in Wave 1 and 88.7 percent in wave 2), and the lowest percentage of literate individuals (14.8 percent in Wave 1 and 14.0 percent in Wave 2). Warsaj had the highest percentage of literate respondents in the study sample (57.2 percent in Wave 1 and 61.4 percent in Wave 2). Gelan had the lowest percentage of respondents who were employed outside the home (34.4 percent in Wave 1 and 37.7 percent in Wave 2).

Analyses of the differences between Wave 1 and Wave 2 respondents in each district showed significant differences with regard to gender, marital status, literacy, and working outside the home. Differences in these control variables were expected, given that more males than females were interviewed in Wave 2.

[14] In this report we refer to the baseline (pre-election) survey as Wave 1, and to the follow-up (post-election) survey as Wave 2. We use these terms interchangeably.

[15] All ages are approximate. Birth certificates do not exist for many individuals due to the political strife in Afghanistan during the last three decades. It is likely that those individuals that reported ages between 14 and 17 years, were, in fact at least 18 years old.

Table 2. Percentage Distribution for Selected Characteristics of Experimental and Control Participants by Survey Wave and Area of Residence in Ghazni and Takhar Provinces, Afghanistan.

	Ghazni Province				Takhar Province			
	Gelan (Experimental)*		Andar (Control)*		Warsaj (Experimental)		Farkhar (Control)	
Characteristic	Wave 1** N (%) N=250	Wave 2** N (%) N=175	Wave 1 N (%) N=250	Wave 2 N (%) N=193	Wave 1 N (%) N=250	Wave 2 N (%) N=189	Wave 1 N (%) N=250	Wave 2 N (%) N=221
Gender‡								
Female	100 (40.0)	64 (36.6)	119 (47.6)	81 (42.0)	123 (49.2)	84 (44.4)	124 (49.6)	119 (53.8)
Male	150 (60.0)	111 (63.4)	131 (52.4)	112 (58.0)	127 (50.8)	105 (55.6)	126 (50.4)	102 (46.2)
Ethnicity								
Pashtun	249 (99.6)	165 (94.3)	248(99.2)	193 (100.0)	0 (0.0)	1 (0.5)	1 (0.04)	1 (0.5)
Tajik	1 (0.04)	10 (5.7)	2 (0.08)	0 (0.0)	250 (100.0)	187 (98.9)	224 (89.6)	191 (86.4)
Uzbek	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.5)	14 (5.6)	10 (4.5)
Other (Arab)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	11 (4.4)	19 (8.6)
Language								
Dari	18 (7.2)	17 (9.7)	2 (0.08)	0 (0.0)	249 (99.6)	188 (99.5)	239 (95.6)	210 (95.5)
Pashto	232 (92.8)	158 (90.3)	247 (98.8)	193 (100.0)	1 (0.04)	1 (0.5)	0 (0.0)	2 (0.9)
Uzbek	0 (0.0)	0 (0.0)	1 (0.04)	0 (0.0)	0 (0.0)	0 (0.0)	11 (4.4)	9 (4.1)
						0 (0.0)		
Mean age of respondents in years (SD)* **	32.1 (12.8)	32.3 (12.3)	35.0 (11.8)	35.3 (12.0)	30.3 (11.5)	30.5 (11.4)	36.9 (14.3)	36.9 (14.3)
Marital Status‡								
Single	52 (20.8)	35 (20.0)	61 (24.4)	41 (21.2)	74 (29.6)	55 (29.1)	26 (10.4)	22 (10.0)
Married	189 (75.6)	135 (77.1)	185 (74.0)	149 (77.2)	171 (68.4)	130 (68.8)	214 (85.6)	190 (86.0)
Widowed	9 (3.6)	5 (2.9)	4 (1.6)	3 (1.6)	5 (2.0)	4 (2.1)	10 (4.0)	9 (4.1)
Ever attended school								
Yes	79 (31.6)	67 (38.3)	122 (48.8)	92 (47.7)	144 (57.6)	106 (56.1)	36 (14.4)	25 (11.3)
No	171 (68.4)	108 (61.7)	128 (51.2)	101 (52.3)	106 (42.4)	83 (43.9)	214 (85.6)	196 (88.7)
Mean education in years (SD)	8.3 (3.6)	8.3 (3.7)	7.1 (3.0)	6.9 (2.8)	8.6 (3.2)	8.6 (2.9)	6.3 (3.0)	5.8 (3.0)
Literacy‡								
Can read/write letter	112 (44.8)	92 (52.6)	131 (52.4)	105 (54.4)	143 (57.2)	116 (61.4)	37 (14.8)	31 (14.0)
Cannot read/write letter	138 (55.2)	83 (47.4)	119 (47.6)	88 (45.6)	107 (42.8)	73 (38.6)	213 (85.2)	190 (86.0)
Paid work outside the home‡ Yes								
No	86 (34.4)	66 (37.7)	123 (49.2)	100 (51.8)	146 (58.4)	94 (49.7)	145 (58.0)	102 (46.2)
	164 (65.6)	109 (62.3)	127 (50.8)	93 (51.8)	104 (41.6)	95 (50.3)	105 (42.0)	119 (53.8)

***** Study participants in the experimental districts received a *Sada* unit; study participants in the control districts did not receive a *Sada* unit and were not exposed to *Sada* messages.
****** Wave 1 refers to the pre-election survey completed in August, 2005; Wave 2 refers to the post-election survey completed in October, 2005.
*** SD=Standard deviation
Source: Data for Table 1 are from personal interview surveys conducted by Altai Consulting in Kabul, Afghanistan in the provinces of Ghazni and Takhar.
‡ p<.001.

Changes in Knowledge, Attitudes, and Behavior

Our main interest was (1) to determine whether there were statistically significant[16] differences in civil society governance knowledge and attitudes, and in voting behavior, during the parliamentary elections, between the control and experimental districts in each of the study provinces, and (2) to evaluate whether the mean differences in knowledge, attitudes, and behavior, were due to the treatment effect (i.e., receiving a *Sada*), between the two study districts in each province. The findings are presented for each study hypothesis.

H1: Afghan individuals that were exposed to *Sada* audio information are more likely to know about civil society governance (e.g., democracy, the constitution, elections, parliament) than Afghans who were not exposed to *Sada* content.

Changes in Knowledge About Civil Society

Figures 2 and 3 show that in Gelan (the experimental district) and Andar (the control district) in Ghazni province, there were increases in knowledge about the key organizations in a civil society between the Wave 1 and Wave 2 surveys.

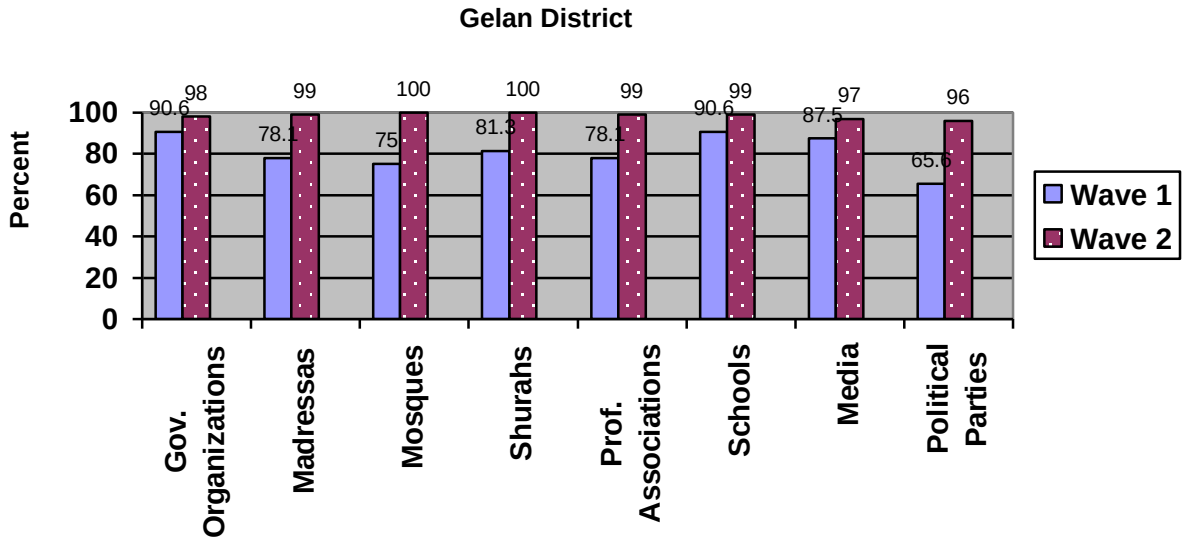

Figure 2. Percentage of Respondents That Knew the Key Organizations in a Civil Society by Survey Wave in Gelan District, Ghazni Province, Afghanistan (Wave 1, N=32; Wave 2, N=99).

[16] Statistical significance refers to a mathematical measure of difference between groups. The difference is said to be statistically significant if it is greater than what might be expected to happen by chance alone. Significance is defined by an appropriately small p value, almost always set at $p<0.05$.

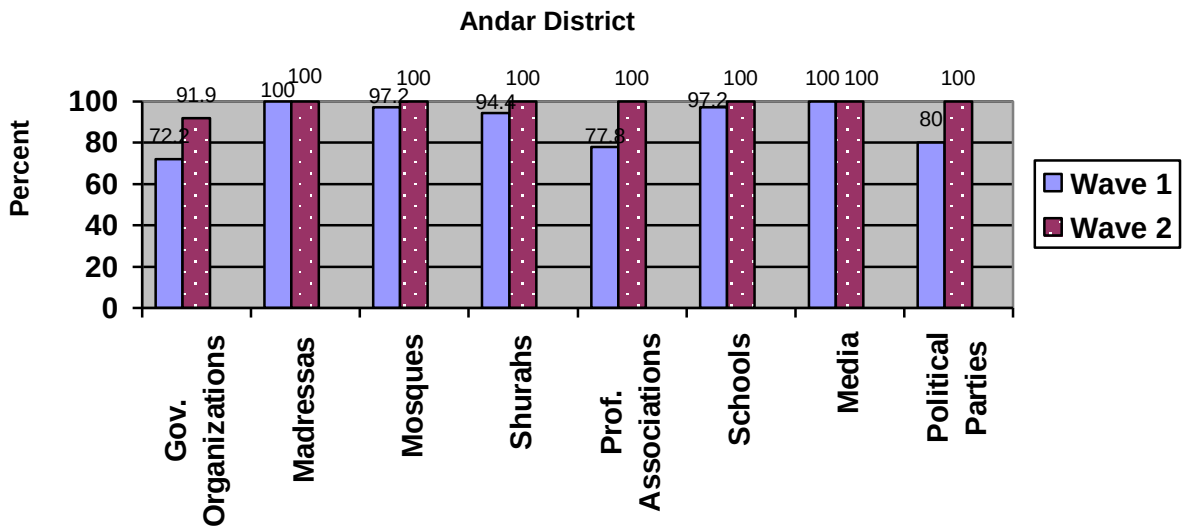

Figure 3. Percentage of Respondents That Knew the Key Organizations in a Civil Society by Survey Wave in Andar District, Ghazni Province, Afghanistan (Wave 1, N=36; Wave 2, N=37).

In Gelan, increases in knowledge between the baseline and follow-up surveys ranged between 7.4 and 30.0 percentage points. In Andar the range was between 0.0 and 22.2 percentage points.

Figures 4 and 5 present changes in knowledge about key civil society organizations in Warsaj (the experimental district) and Farkhar (the control district). Respondents in Warsaj showed increases in knowledge about four key organizations (government organizations, madressas (religious schools), mosques, and shurahs (Islamic councils)), and decreases in knowledge about professional associations, schools (secular), mass media (television, radio, and newspapers), and political parties. Although the increases in Farkhar appear to be large, it is important to note that these percentages are drawn from small sample sizes (Wave 1, N=0; Wave 2, N=4).

Analyses were conducted to determine whether the differences in knowledge about key civil society organizations for respondents that were exposed to *Sada* and those that were not exposed to *Sada* were significant (i.e., not due to chance). These differences were not significant ($F(1, 70)=.425$, $p=.516$).

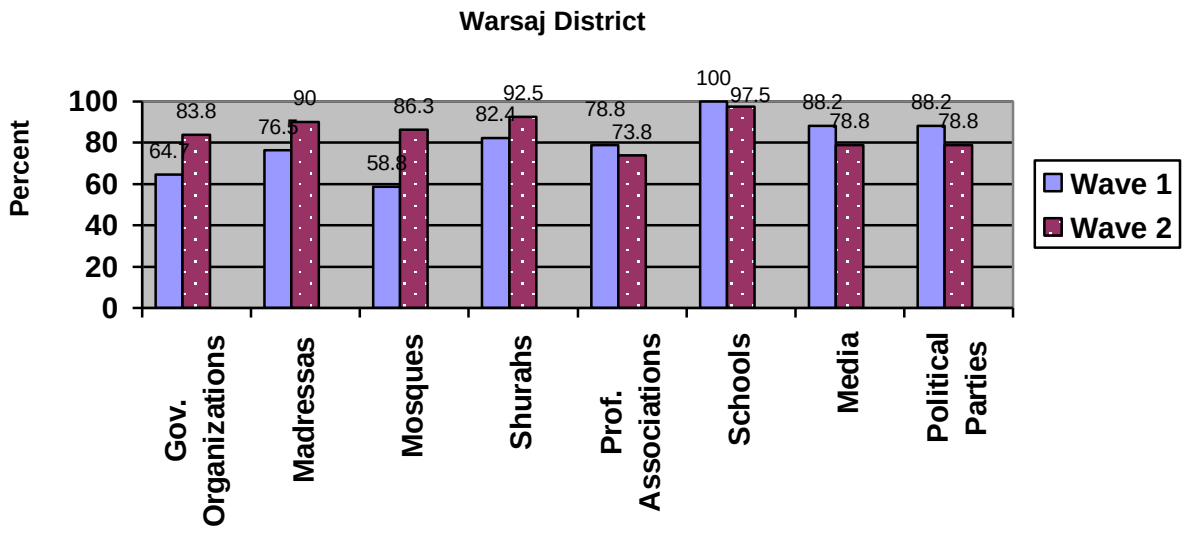

Figure 4. Percentage of Respondents That Knew the Key Organizations in a Civil Society by Survey Wave in Warsaj District, Takhar Province, Afghanistan (Wave 1, N=17; Wave 2, N=80).

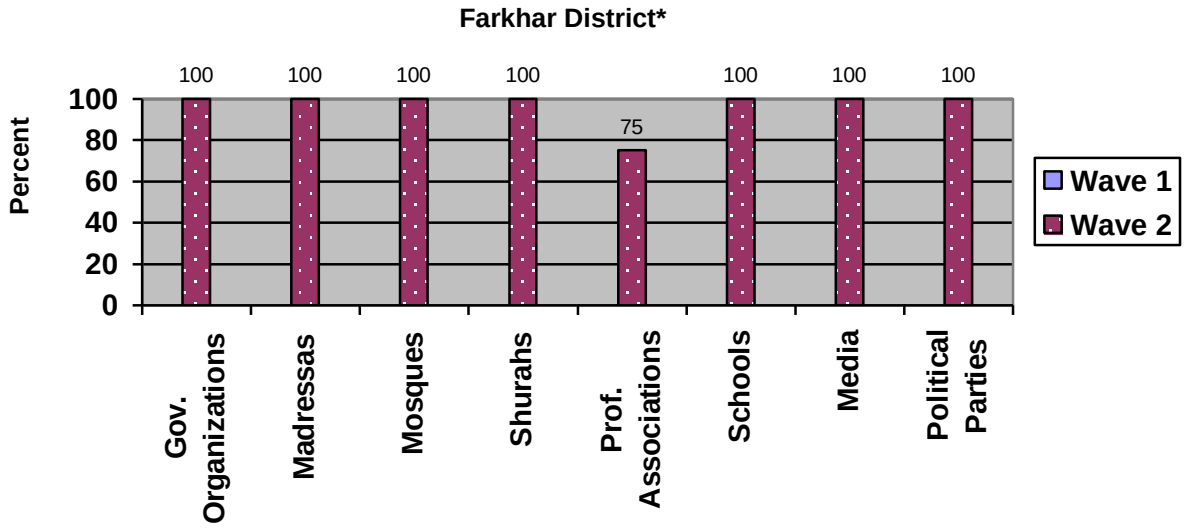

Figure 5. Percentage of Respondents That Knew the Key Organizations in a Civil Society by Survey Wave in Farkhar District, Takhar Province, Afghanistan (Wave 1, N=0; Wave 2, N=4).

*****Note that in Farkhar district, there were zero participants that could identify any of the key organizations in a civil society in the pre-election survey.

Changes in Knowledge About Democracy

Overall, respondents in Gelan and Andar districts showed increases in knowledge about the meaning of "democracy" in the Wave 2 survey (Figure 6). In Gelan, the increases were 3.3, 4.4, and 7.0 percentage points for each of the

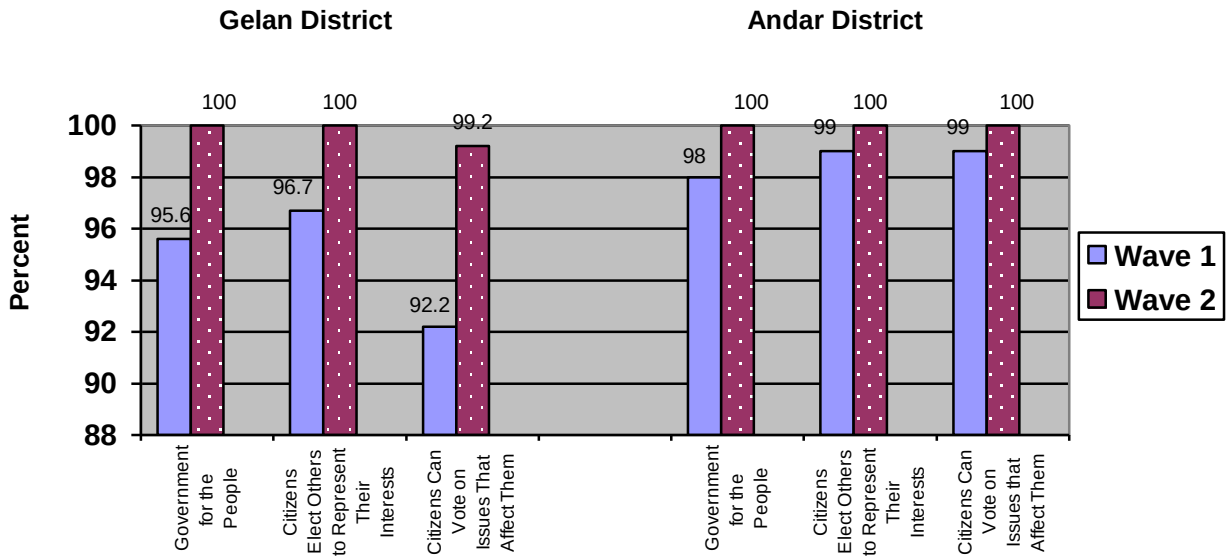

Figure 6. Percentage of Respondents That Knew the Meaning of "Democracy" by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: Wave 1, N=90; Wave 2, N=129; Andar: Wave 1, N=101; Wave 2, N=114).

three response categories, respectively. In Andar the increases were more modest (2.0, 1.0, and 1.0 percentage points for each of the response categories, respectively).

Figure 7 shows the changes in knowledge about the meaning of "democracy" for Warsaj and Farkhar districts. In both Warsaj and Farkhar, we see decreases for the response category "Government for the people" (minus 4.5 and minus 1.0 percentage points respectively). Increases in the remaining two response categories ranged from 6.2 to 13.3 percentage points in Warsaj, and from 26.6 to 30.3 in Farkhar.

Analyses to assess the significance of the differences in knowledge about the meaning of "democracy" between individuals exposed to *Sada* and those that were not exposed to *Sada* showed that these differences were not significant ($F(1, 281)=2.91$, $p=.089$).

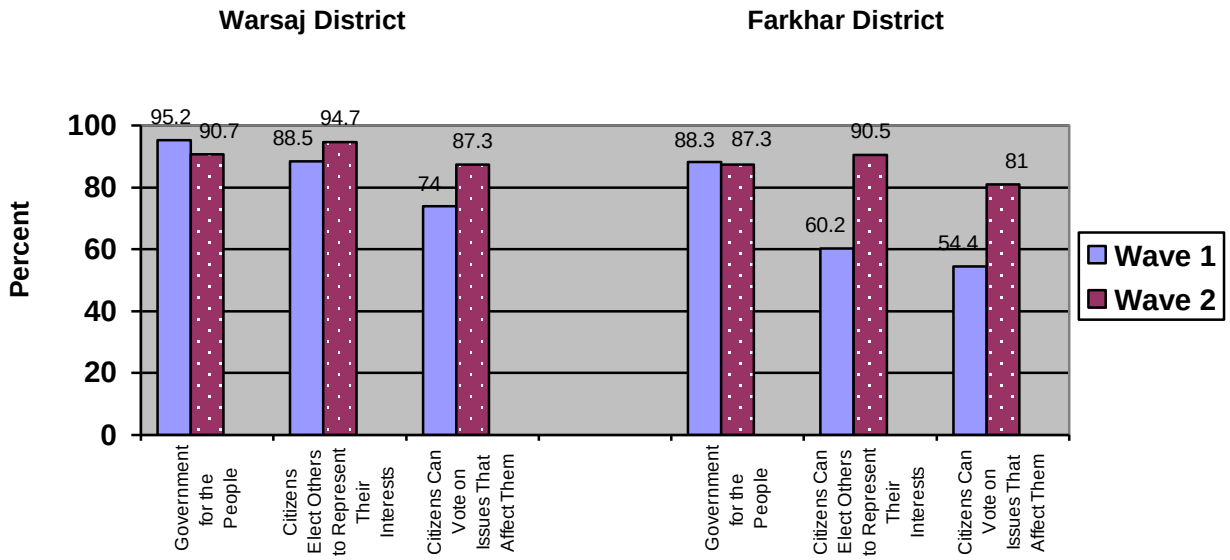

Figure 7. Percentage of Respondents That Knew the Meaning of Democracy by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: Wave 1, N=105; Wave 2, N=150; Farkhar: Wave 1, N=103; Wave 2, N=63).

Changes in Knowledge About Parliament

Overall, both Gelan and Andar showed increases in knowledge about the responsibilities of a parliament in follow-up survey, compared to the baseline survey (Figure 8). In Gelan, the increases ranged between 4.0 and 8.0 percentage points. In Andar, increases occurred for two out of the three items: (1) "Institutes laws/policies," showed an increase of 1.7 percentage points, and (2) "Makes decisions about the welfare of the people," increased by 0.9 of a percentage point.

Figure 9 shows the differences in knowledge about the responsibilities of a parliament for Warsaj and Farkhar districts. There was a decrease in knowledge about "Institutes laws/policies" (minus 6.9 percentage points), and in "Makes decisions about the welfare of the people" (minus 12.3 percentage points) in the experimental district (Warsaj). Farkhar showed increases in knowledge for all three items (2.7, 6.5, and 7.6 percentage points, respectively).

Knowledge about the three key responsibilities of a parliament differed between those who received a *Sada* and those who did not receive a *Sada*. A greater number of individuals with a *Sada* could identify one to two parliamentary scale items (18 percent), compared to individuals without a *Sada* (10 percent). Slightly fewer *Sada* recipients could identify all three responsibilities (82 percent), compared to those who did not have the audio player (90 percent).

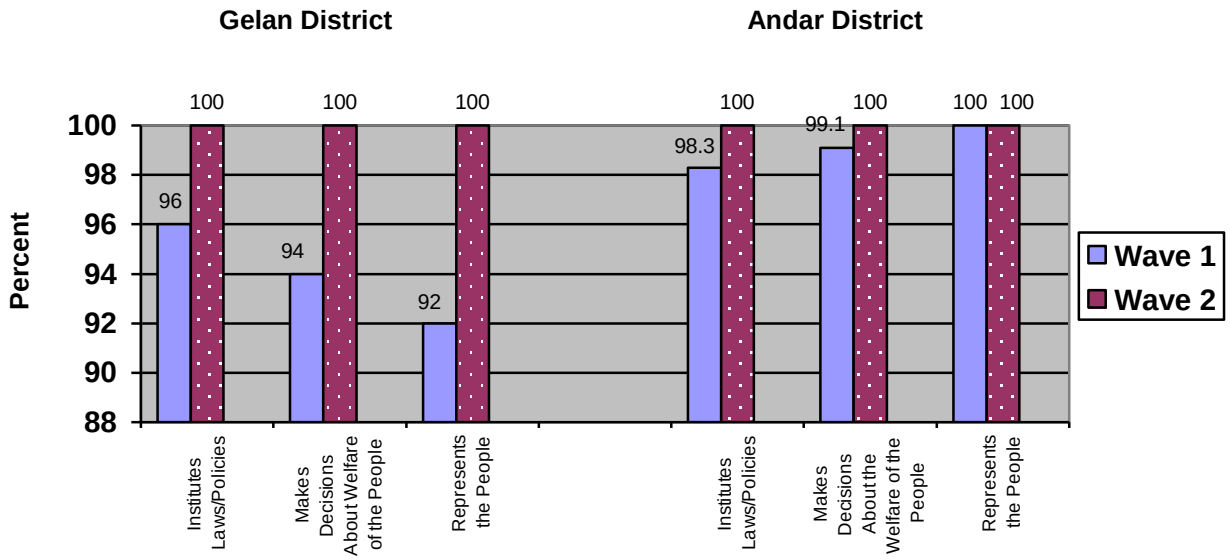

Figure 8. Percentage of Respondents That Knew the Responsibilities of a Parliament by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: Wave 1, N=100; Wave 2, N=161; Andar: Wave 1, N=116; Wave 2, N=164).

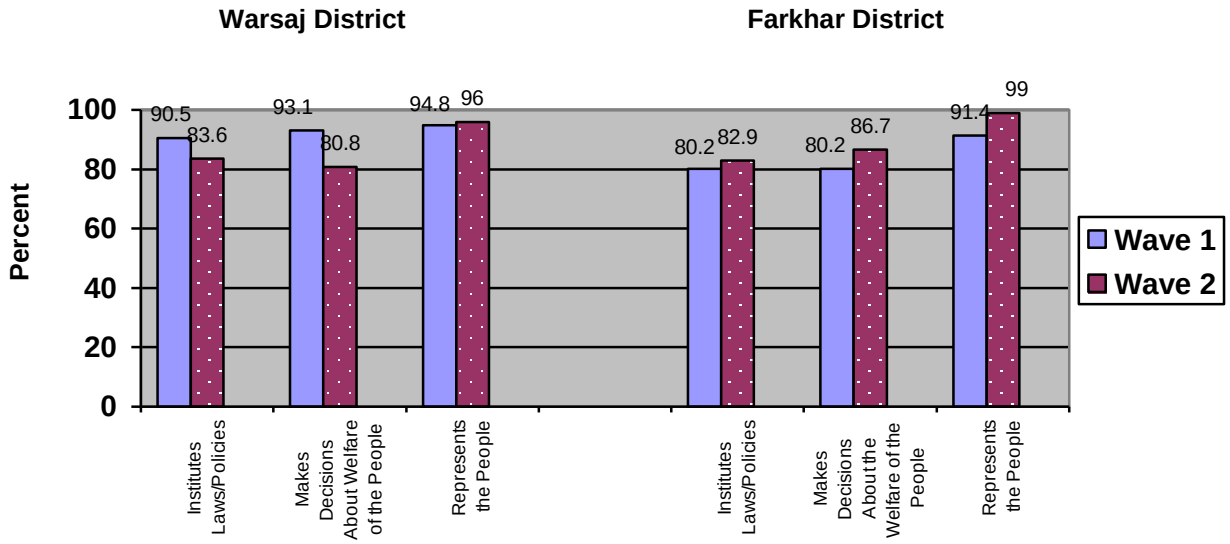

Figure 9. Percentage of Respondents That Knew the Responsibilities of a Parliament by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: Wave 1, N=116; Wave 2, N=177; Farkhar: Wave 1, N=81; Wave 2, N=105).

Further analyses were conducted to answer the question “Are the differences in knowledge about parliament for those who received a Sada and those who did

not receive a *Sada* significant?" Tests showed that the differences in knowledge about parliament were not significant for the two groups (F(1, 346)=.01, p= .927).

Changes in Knowledge About Constitution

Figure 10 shows increases in the percentage of respondents that knew the purpose for a constitution in both Gelan and Andar districts. In Gelan, the increase for "Provides rules of conduct for individuals" was 10.7 percentage points, the increase for "Provides rules of conduct for government" was 7.1 percentage points, and the increase for "Specifies the rights of individuals" was 3.6 percentage points.

In Andar, the increase in knowledge about the purpose of the constitution was smaller. The increase for "Provides rules of conduct for individuals" was 1.3 percentage points, the increase for "Provides rules of conduct for government" was 2.6 percentage points, and the increase for "Specifies the rights of individuals" was 0.0 percentage points (Figure 10).

Figure 11 presents the differences in knowledge about the purpose for a constitution in Warsaj (the experimental district) and Farkhar (the control district). There was a slight decrease in knowledge about "Provides rules of conduct for government" in Wave 2, in Warsaj (minus 4.3 percentage points). Knowledge about the other two items increased from Wave 1 to Wave 2 in both Warsaj and Farkhar. The increases in Warsaj were 3.6 percentage points for "Provides rules

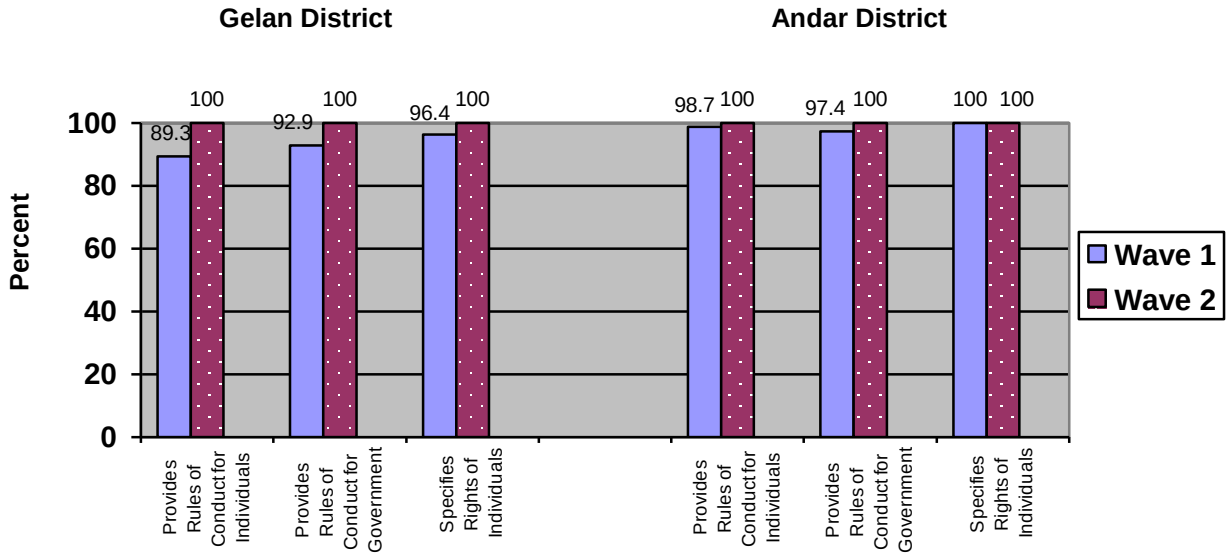

Figure 10. Percentage of Respondents That Knew the Purpose for a Constitution by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: Wave 1, N=84; Wave 2, N=115; Andar: Wave 1, N=76; Wave 2, N=114).

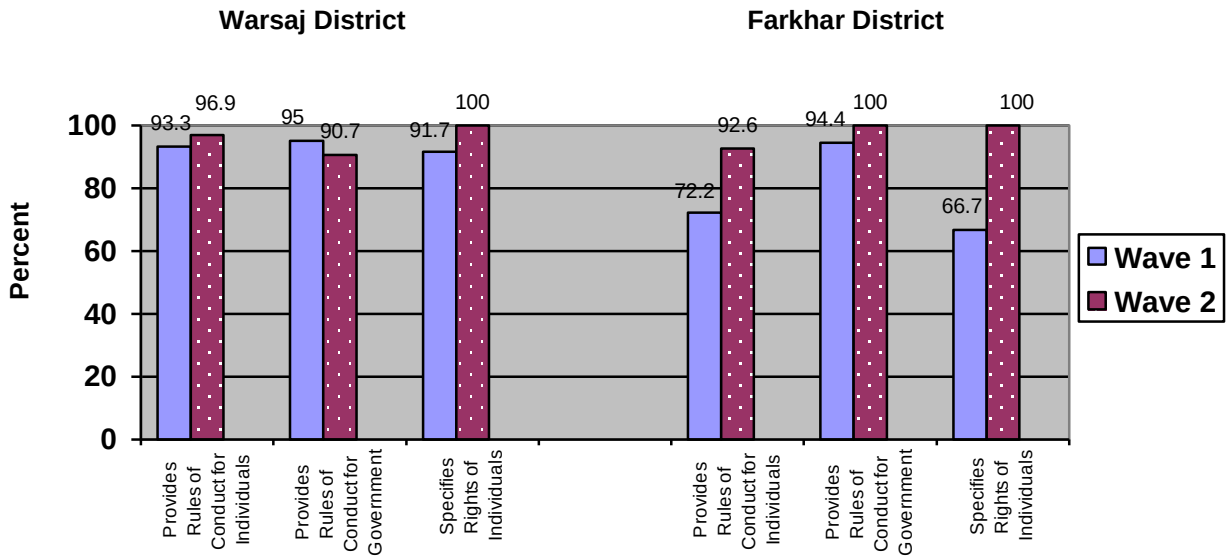

Figure 11. Percentage of Respondents That Knew the Purpose for a Constitution by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: Wave 1, N=60; Wave 2=97; Farkhar: Wave 1, N=18; Wave 2, N=27).

of conduct for individuals," and 8.3 percentage points for "Specifies the rights of individuals". In Farkhar, the increases ranged from 5.6 to 33.3 percentage points.

A test of the whether the differences in knowledge about the purpose for a constitution, between respondents exposed to *Sada* and respondents not exposed to *Sada,* were significant, showed no significant difference ($F(1,163)=2.11$, $p=.149$).

Changes in Knowledge About Election

Figure 12 shows that there was an increase in knowledge of "citizens being able to register to vote" as an election event in Gelan (3.6 percentage points), and no increase in knowledge about "citizens being able to elect a candidate" as an event of an election. In Andar, there was no increase with regard to knowledge about "citizens being able to register to vote", and a modest (0.5 of a percentage point) increase in knowledge about "citizens being able to elect a candidate".

Figure 13 shows decrease in knowledge about "citizens being able to register to vote" as an election event in Warsaj (minus 4.7 percentage points), and a small increase in knowledge about "citizens being able to elect a candidate" (0.1 of a percentage point). In Farkhar, there was a decrease in both election event items (minus 3.2, and minus 0.4 percentage points, respectively).

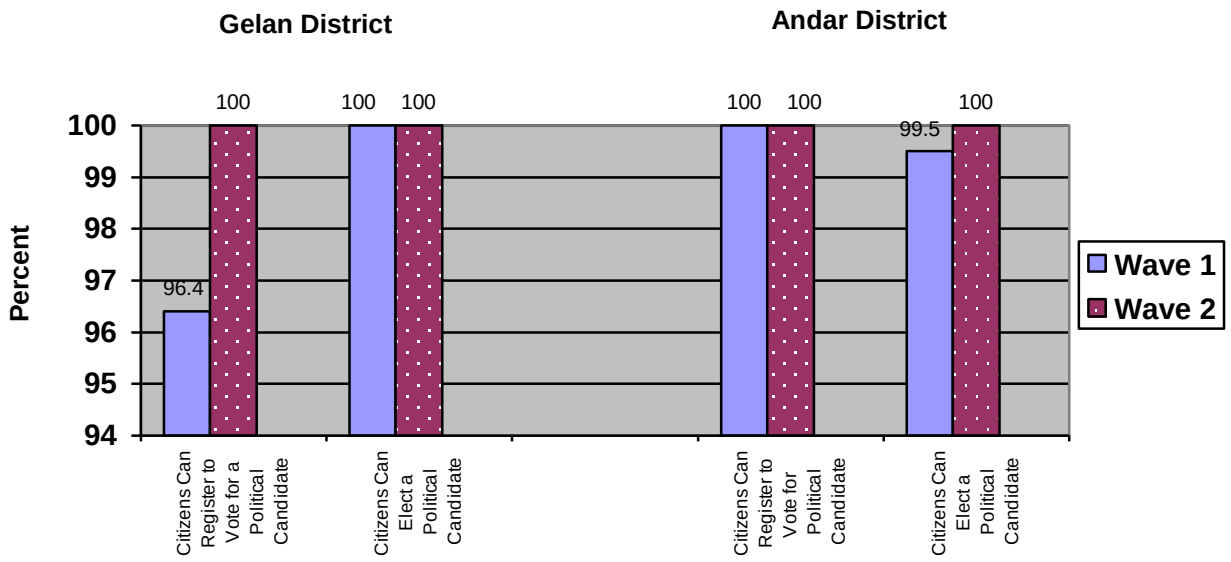

Figure 12. Percentage of Respondents That Knew What Happens During an Election by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: Wave 1, N=166; Wave 2, N=172; Andar: Wave 1, N=192; Wave 2, N=190).

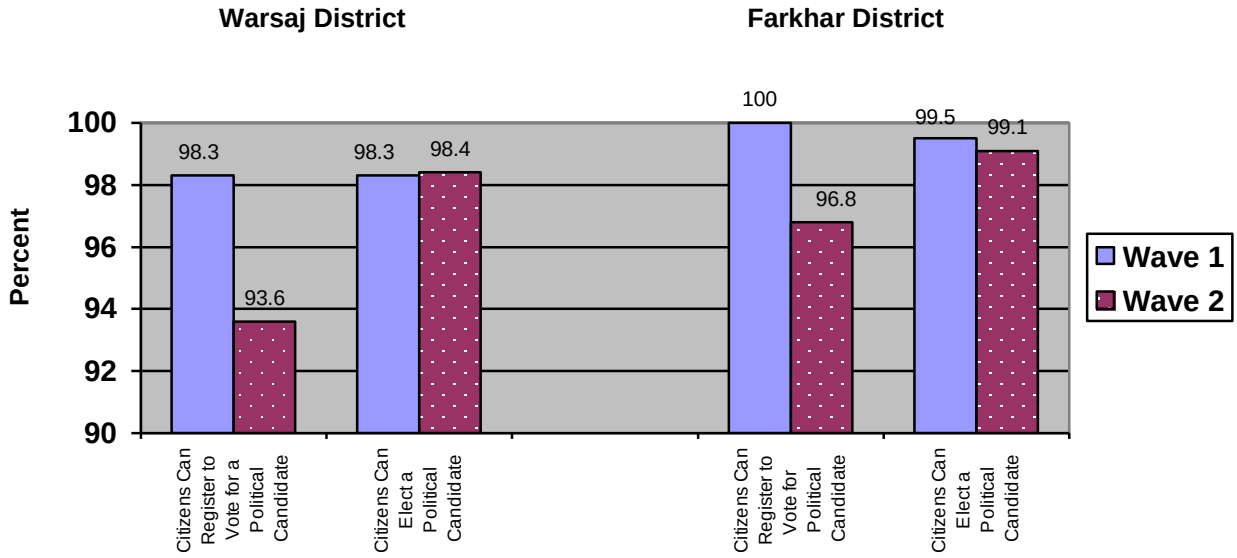

Figure 13. Percentage of Respondents That Knew What Happens During an Election by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: Wave 1, N=176; Wave 2, N=187; Farkhar: Wave 1, N=206, Wave 2, N=218).

The majority of study participants in both the experimental and control groups could identify both items that described the main events in an election (96

percent in the non-*Sada* control group, and 98 percent in the *Sada* experimental group). A comparison of the differences in knowledge about what happens during an election for *Sada*-exposed and *Sada*-non-exposed respondents showed that these differences were not significant (F(1, 727)=.58, p=.449).

H2: Afghan individuals that were exposed to *Sada* audio information are more likely to know about human rights than Afghans who were not exposed to *Sada* content.

Figures 14, 15, 16, and 17 depict changes in knowledge about human rights in each of the four study districts. In Gelan, respondents showed increases in knowledge for six out of the seven response items (ranging from 3.1 to 13.5 percentage points); there was no change in knowledge for "Right to an education" (Figure 14). In Andar, there was no change in knowledge for "Freedom of expression", and an increase in knowledge was observed for all other response categories that ranged between 0.8 and 8.1 percentage points (Figure 15).

Respondents in Warsaj showed increased knowledge about human rights for five out seven response items that ranged from 2.9 to 5.3 percentage points (Figure 16). There was a decrease in knowledge for (1) "Right to an education" (minus 0.2 of a percentage point), and (2) "Right to employment" (minus 2.5 percentage points) between the baseline and follow-up surveys in Warsaj. Farkhar showed gains in knowledge for six of the seven response categories that ranged between 4.2 and 28.4 percentage points (Figure 17). There was no change in "Freedom of expression" in Farkhar.

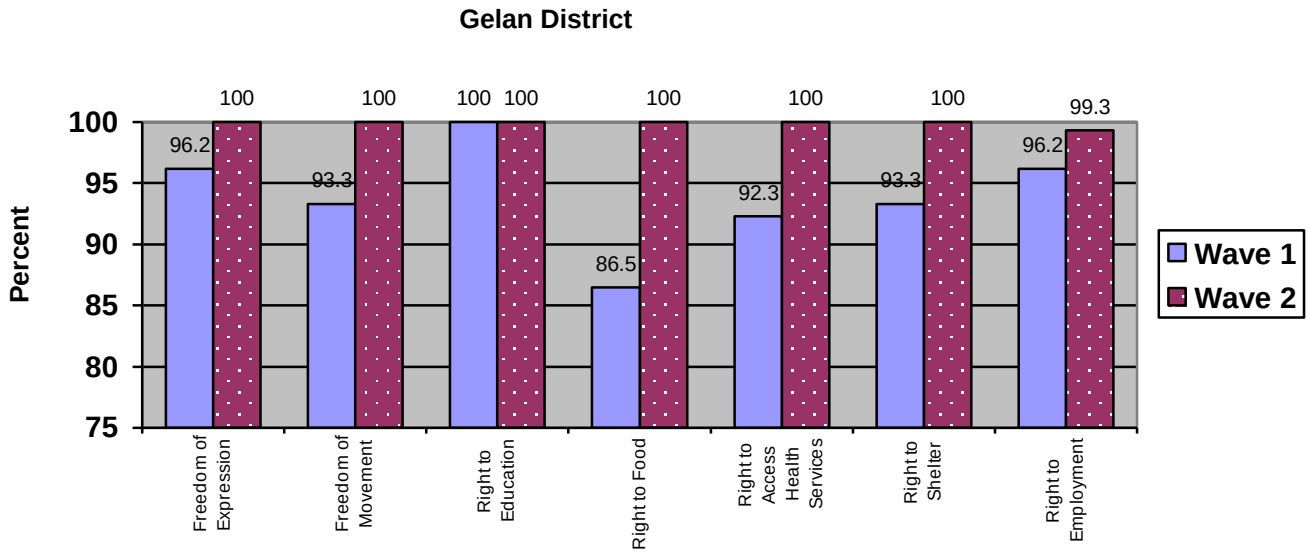

Figure 14. Percentage of Respondents That Knew Basic Human Rights by

Survey Wave in Gelan District, Ghazni Province, Afghanistan (Wave 1, N=104; Wave 2, N=140).

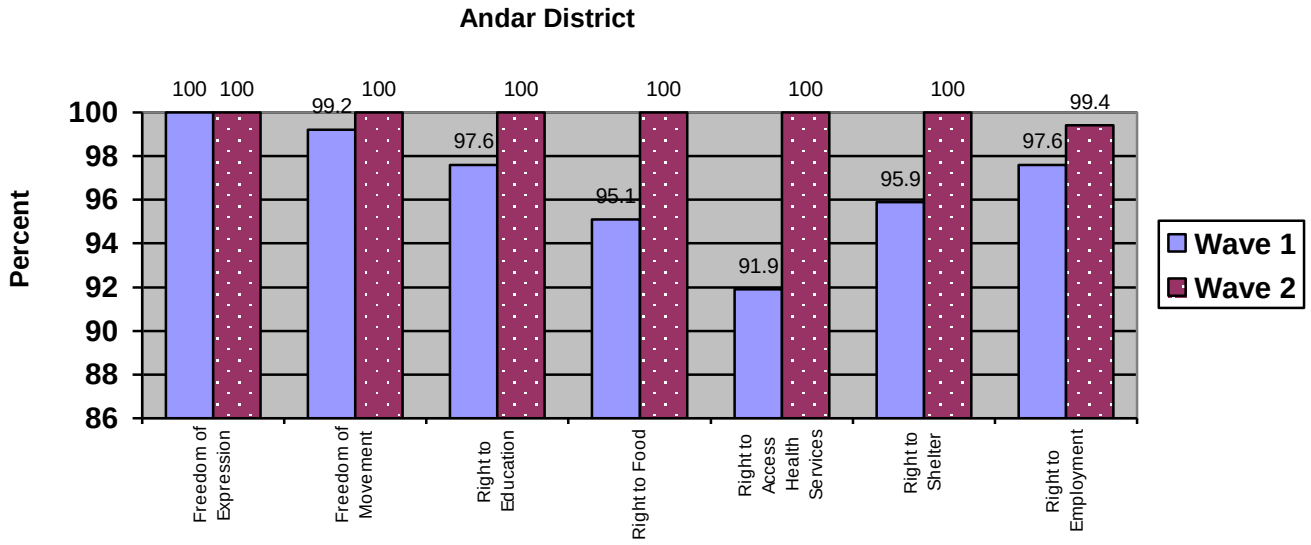

Figure 15. Percentage of Respondents That Knew Basic Human Rights by Survey Wave in Andar District, Ghazni Province, Afghanistan (Wave 1, N=123; Wave 2, N=170).

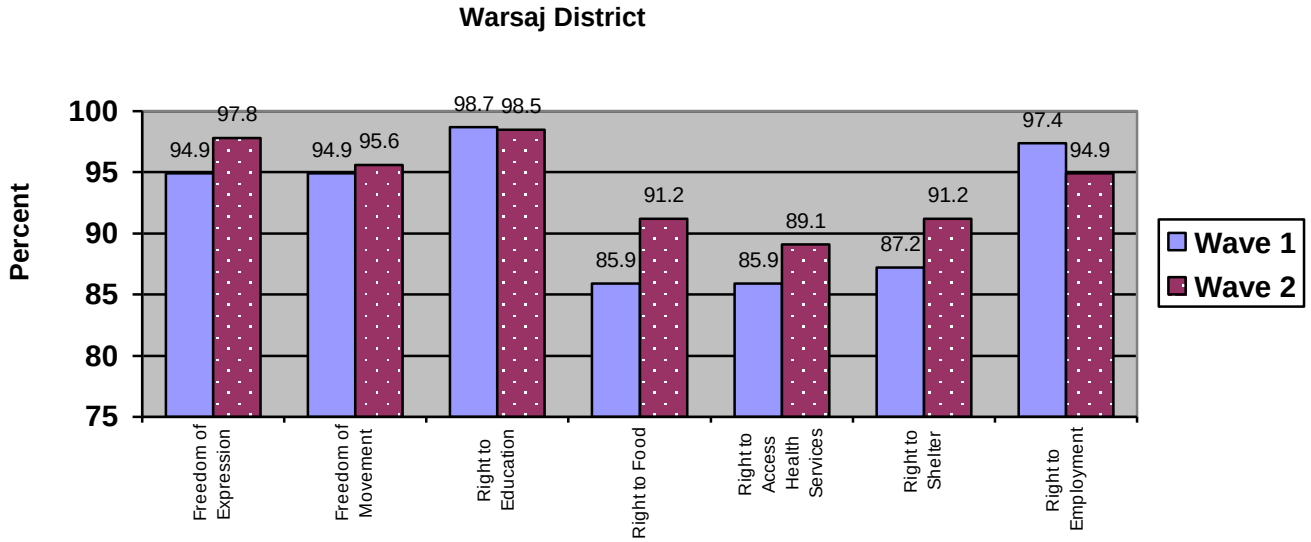

Figure 16. Percentage of Respondents That Knew Basic Human Rights by Survey Wave in Warsaj District, Takhar Province, Afghanistan (Wave 1, N=104; Wave 2, N=137).

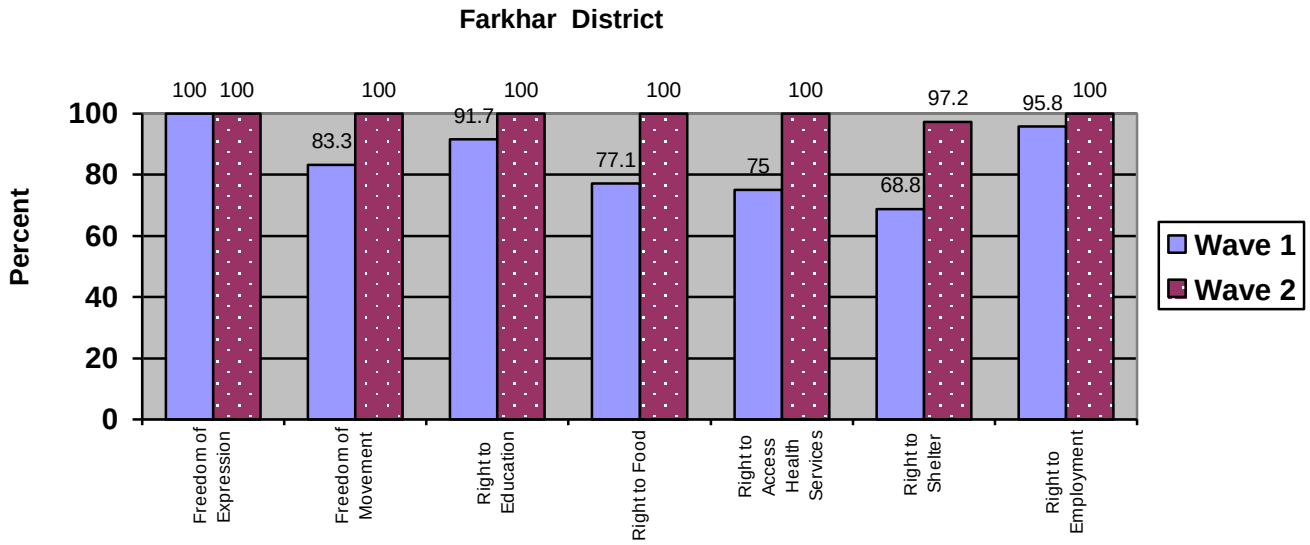

Figure 17. Percentage of Respondents That Knew the Basic Human Rights by Survey Wave in Farkhar District, Takhar Province, Afghanistan (Wave 1, N=48; Wave 2, N=36).

Almost all respondents could identify the seven basic human rights. The percentage of respondents that knew all seven of the scale items was greater for *Sada* non-recipients (89 percent) compared to those that received a *Sada* unit (99 percent).

Further analyses were conducted to determine whether the differences in knowledge about basic human rights for those who received a Sada and those who did not receive a *Sada* were significant. The effect of *Sada* exposure on knowledge differences was not significant ($F(3, 212)=.71$, $p=.546$).

H3: Afghan individuals that were exposed to *Sada* audio information are more likely to know about women's rights than Afghans who were not exposed to *Sada* content.

Figures 18, 19, 20, and 21 portray the changes in knowledge about women's rights in Gelan, Andar, Warsaj, and Farkhar, respectively. In Gelan, respondents reported increases in knowledge for all six response categories (Figure 18). These changes ranged from 1.4 to 13.4 percentage points). Respondents in Andar showed increased knowledge about women's rights for three out of the six response items, ranging from 1.3 to 1.7 percentage points (Figure 19). There was no change in knowledge about a woman's right to access health services, but decreased knowledge were noted with respect to the right for women to decide on the number and spacing of their children from baseline to follow-up

(minus 4.5 percentage points), and the right for women to vote in an election (minus 1.1 percentage points).

Figure 20 suggests that, overall, knowledge about women's rights in Warsaj decreased from Wave 1 to Wave 2 of the survey. There was increased knowledge about (1) the right for women to decide on the number and spacing of their children (3.0 percentage points), and (2) the right for women to receive equal pay (with men) for equal work (7.6 percentage points). In Farkhar, respondents gained knowledge about all six of the response items, ranging from 0.8 to 19.3 percentage points) (Figure 21).

A higher percentage of respondents that received a *Sada* knew all six women's rights items (84 percent) compared to respondents that did not receive a *Sada* (69 percent). More non-*Sada* respondents knew five or fewer items compared to *Sada*-recipients.

Further analyses were conducted to assess whether the differences in knowledge about women's rights between those exposed to Sada and those not exposed to *Sada* were significant. These differences were not significant ($F(3,365)=.08$, $p=.970$).

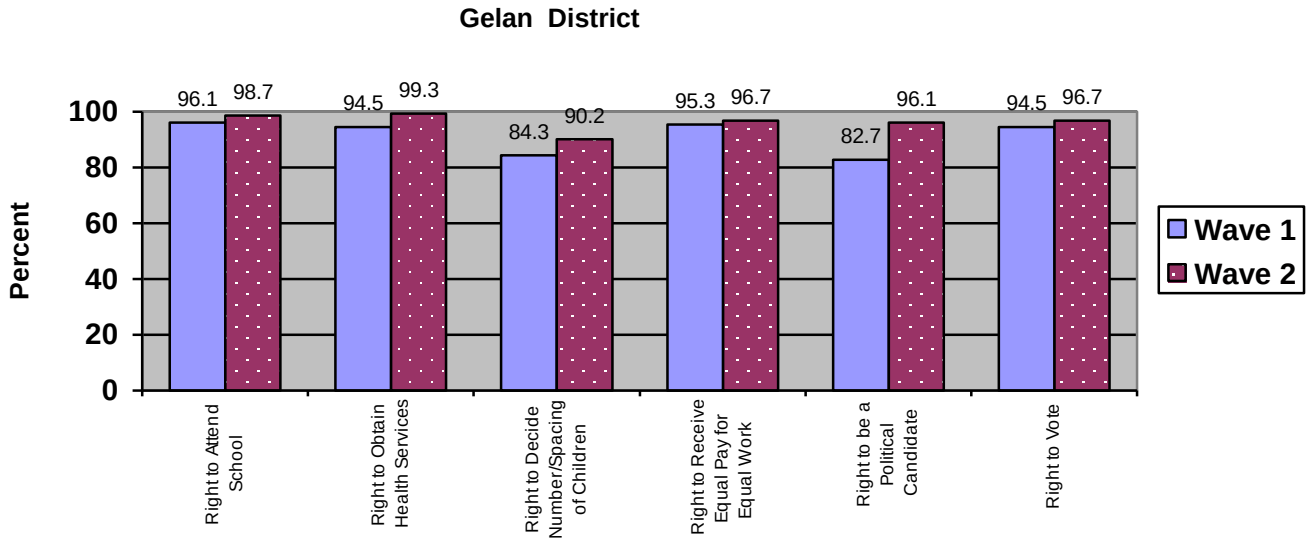

Figure 18. Percentage of Respondents That Knew Women's Rights by Survey Wave in Gelan District, Ghazni Province, Afghanistan (Wave 1, N=127; Wave 2, N=153).

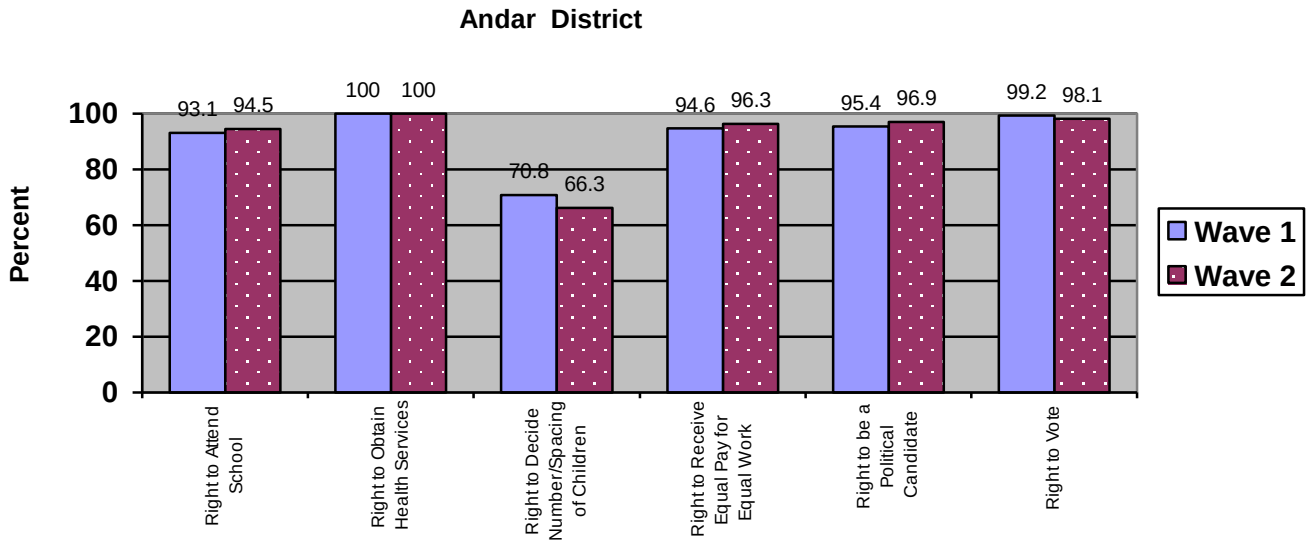

Figure 19. Percentage of Respondents That Knew Women's Rights by Survey Wave in Andar District, Ghazni Province, Afghanistan (Wave 1, N=130; Wave 2, N=163).

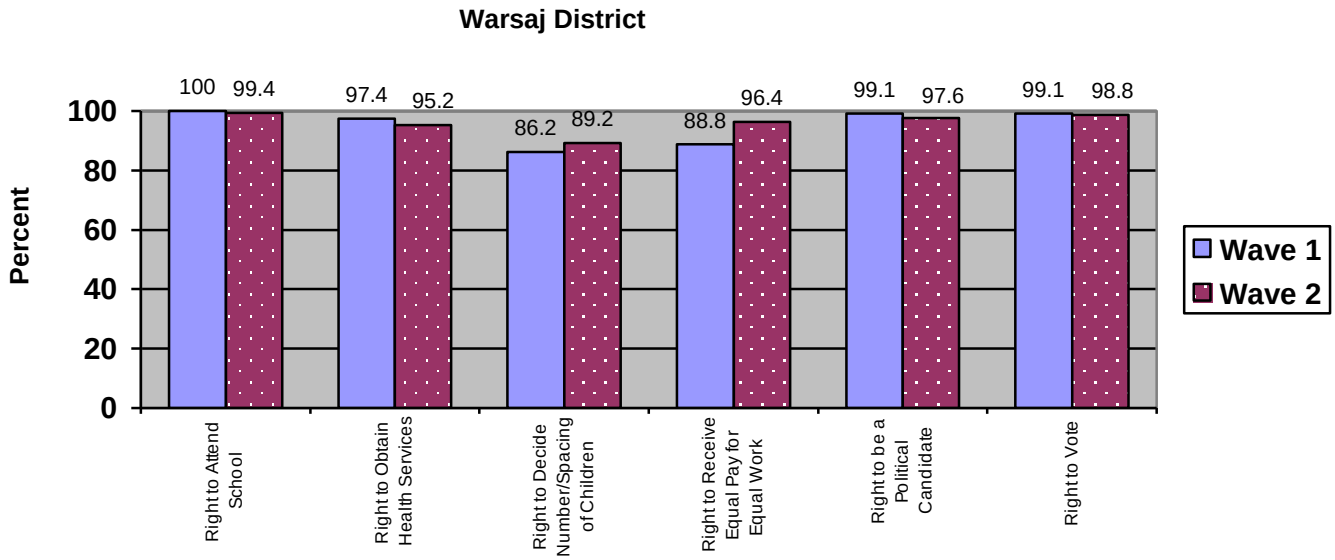

Figure 20. Percentage of Respondents That Knew Women's Rights by Survey Wave in Warsaj District, Takhar Province, Afghanistan (Wave 1, N=116; Wave 2, N=166).

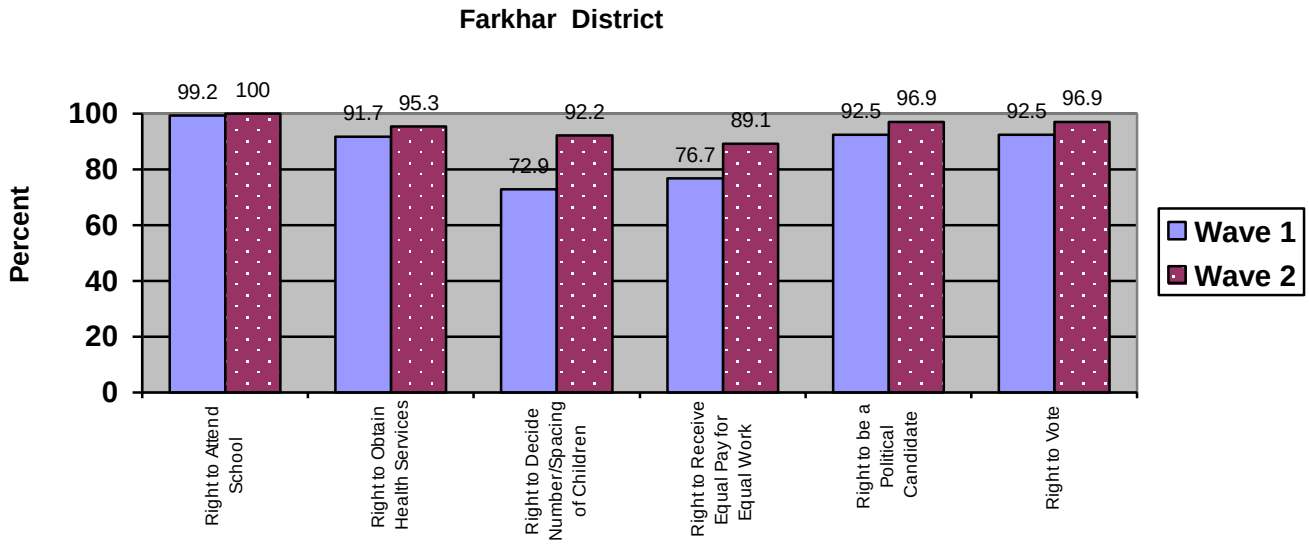

Figure 21. Percentage of Respondents That Knew Women's Rights by Survey Wave in Farkhar District, Takhar Province, Afghanistan (Wave 1, N=133; Wave 2, N=64).

H4: Afghan individuals that were exposed to *Sada* audio information are more likely to know about the government's security schemes (i.e., turning in weapons in to the government, and the national security slogan "one nation, one army") than Afghans who were not exposed to *Sada* content.

Figure 22 shows that in Gelan, the experimental district in Ghazni province, there were changes in knowledge about the two government security schemes between the pre-election and post-election surveys. There was a slight decrease in knowledge about the government program that encourages Afghans to turn their weapons over to the government (2.3 percentage points), and a large increase in knowledge about the government slogan "One nation, one army" (30.9 percentage points). In Andar district, knowledge about turning in weapons increased by 10.9 percentage points from Wave 1 to Wave 2, and knowledge about the national security slogan increased by 22.8 percentage points.

In the experimental district in Takhar province, Warsaj, knowledge about government schemes encouraging Afghans to turn in their weapons increased by 21.2 percentage points, and knowledge about the national security slogan increased by 40.7 percentage points (Figure 23). The increases in the control district, Farkhar, were lower than in Gelan; 15.3 percentage points for knowledge about the government's weapons surrender scheme, and 20.8 percentage points for knowing the slogan.

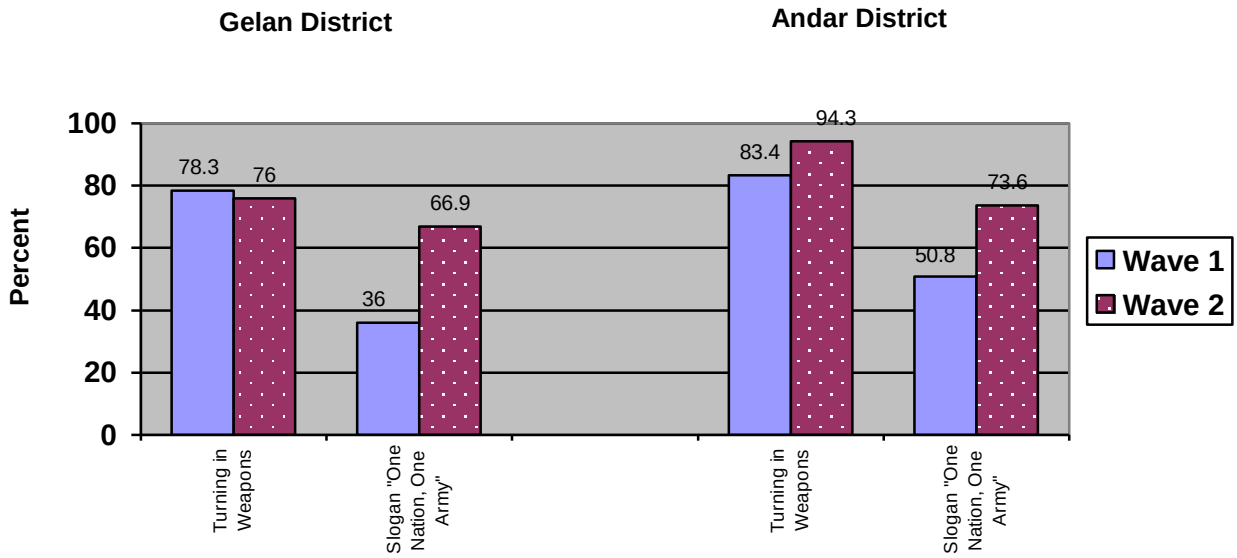

Figure 22. Percentage of Respondents That Knew About Security Programs by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: N=175; Andar: N=193).

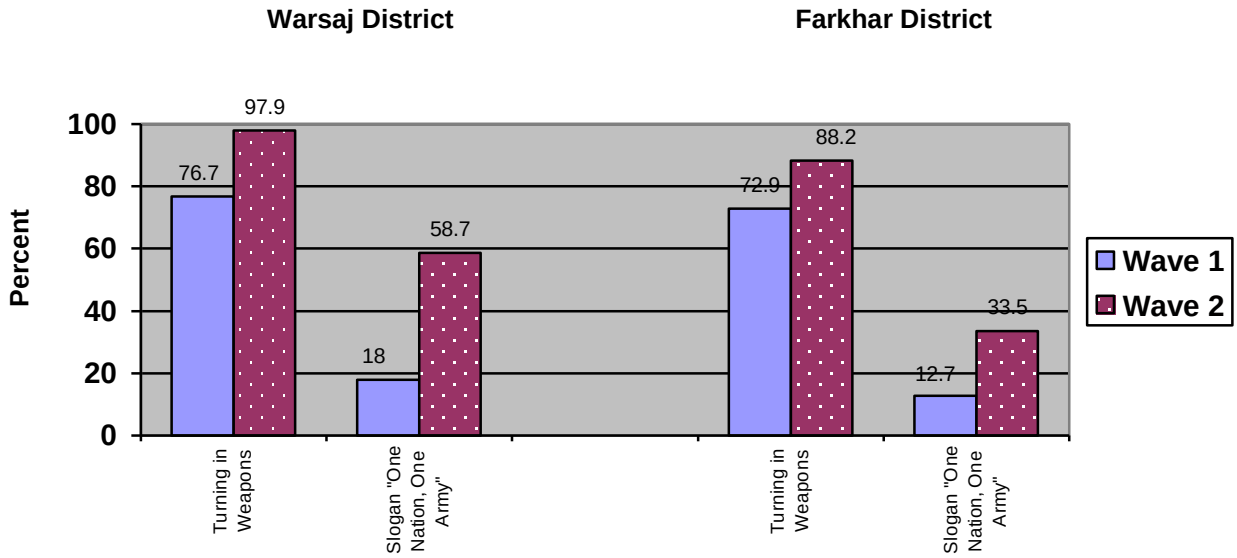

Figure 23. Percentage of Respondents That Knew About Government Security Programs by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: N=189; Farkhar: N=221).

More respondents in the experimental districts knew of both security items (56.3 percent), compared to respondents in the control districts (50.7 percent). Fewer

Sada recipients knew zero security items, or either item, compared to non-*Sada* recipients.

Further analyses were conducted to establish whether the differences in knowledge about the Afghan government's programs to improve national security were significantly different for those who were exposed to the Sada and those who were not exposed to the *Sada*. The effect of *Sada* exposure on security knowledge differences was significant ($F(1, 776)=4.17$, $p=.041$). Subsequent analyses showed that there were significant differences in knowledge for respondents with different levels of exposure ($F(3, 774)=2.86$, $p=.036$). [17] Post hoc tests (i.e., the Bonferonni test) confirmed that the non-exposed group was significantly different from the group with low exposure (mean difference=-.41, $p<.05$).

Regression analyses were used to test the simultaneous association between multiple independent variables and the dependent variable (i.e, knowledge of national security programs) (Table 3). Four variables were significantly associated with change in knowledge about government programs to improve national security: (1) Exposure to *Sada* ($\beta=.114$, $p<0.01$), (2) gender ($\beta=-.196$, $p<0.001$), (3) literacy ($\beta=-.103$, $p<0.05$), and (4) doing paid work outside the home ($\beta=.171$, $p<0.001$). These data suggest that respondents who were exposed to *Sada*, male, literate, and did paid work outside of the home, were more likely to have higher knowledge about the government's national security programs.

Table 3. Multiple Regression Coefficients for Change in Knowledge about National Security Programs on *Sada* Exposure and Socio-emographic Characteristics Among Respondents in the Four Study Districts in Afghanistan (N=778).

Independent Variable	Dependent Variable
	Change in Knowledge About National Security Programs
Exposure to *Sada*	.114†
Gender	-.196*
Age	$.001^{ns}$
Marital Status	$-.071^{ns}$
Literacy	-.103‡
Paid Work Outside the Home	.171*

[17] A variable for levels of exposure was created with the following categories: (1) No exposure, for respondents that did not receive a *Sada*; (2) low exposure, for individuals that listened to *Sada* two times per week or less; (3) medium exposure, for participants that listened to *Sada* at least three times per week; and (4) high exposure, for individuals that listened to *Sada* one or more times per day.

Significant at *p<0.001; †p<.01; ‡p<.05; ns=not significant.

H5: Afghan individuals that were exposed to *Sada* audio information are more likely to know about rural development programs (e.g., the importance of substituting opium crops with other crops, herding cows and goats, and planting trees and plants) than Afghans who were not exposed to *Sada* content.

Figure 24 shows differences in knowledge about three Afghan government rural development programs: (1) a program to encourage Afghan citizens to convert their opium crops to higher yielding crops, (2) a program to encourage citizens to herd cows and/or goats, and (3) a program to promote growing trees and plants. In Gelan, knowledge increased for two out of the three schemes: (1) converting opium crops (6.3 percentage points), and (2) herding cows and/or goats (13.2 percentage points). There was a decrease in knowledge about the government program to promote planting trees and plants (8.5 percentage points). In Andar, knowledge about all three rural development schemes increased between 7.7 and 26.5 percentage points.

In Warsaj, there was an increase in knowledge about the government's program to encourage the conversion of opium crops to other crops (30.7 percentage points), and to promote the planting of trees and plants (4.7 percentage points). There was a decrease in knowledge about the government scheme to promote animal husbandry (i.e., herding cows and/or goats) (5.3 percentage points) (Figure 25). In Farkhar, knowledge about the program to encourage individuals to raise cows and/or goats, and knowledge about the program to plant trees and plants, decreased (13.1 and 4.1 percentage points, respectively).

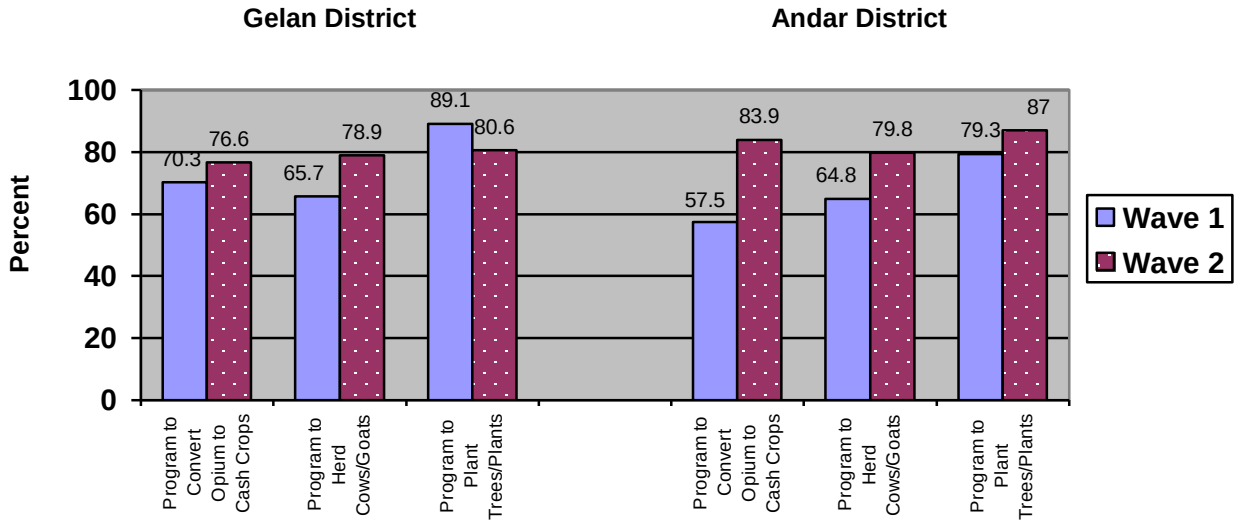

Figure 24. Percentage of Respondents That Knew About Rural Development Schemes by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: N=175; Andar: N=193).

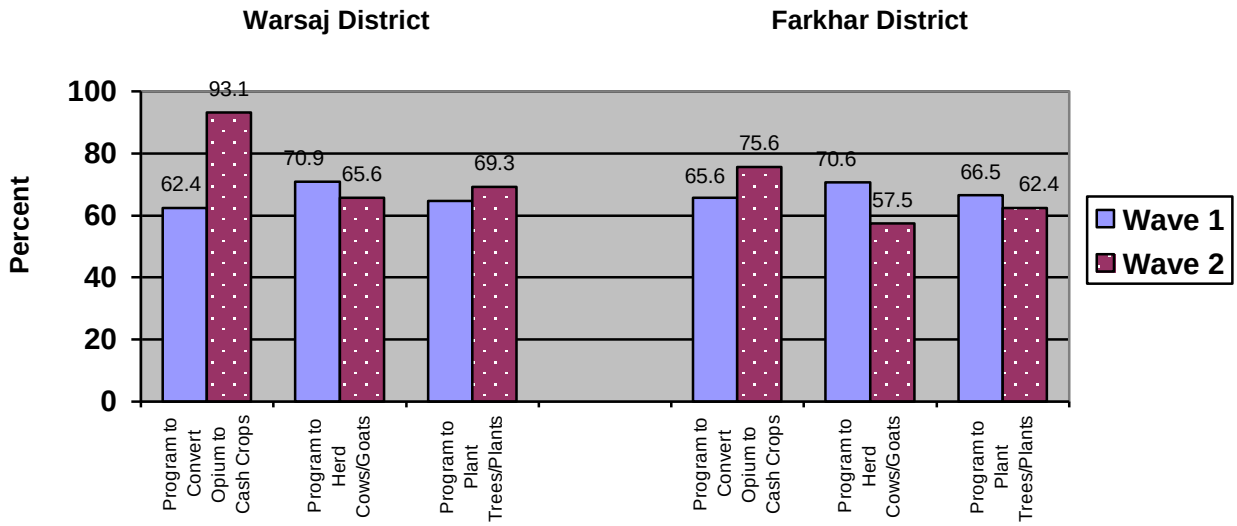

Figure 25. Percentage of Respondents That Knew About Rural Development Schemes by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: N=189; Farkhar: N=221).

There were more respondents in the *Sada*-exposed group that could identify all three of the rural development schemes (61.5 percent), compared to the non-exposed group (54.8 percent). The percentage of study participants that could not identify any of the three rural development schemes was slightly higher for those that were not exposed to *Sada* (7.7 percent), than for those that were exposed to *Sada* (5.8 percent). The same percentage of respondents could name at least one of the rural development schemes (18.1 percent). A somewhat higher percentage of non-exposed participants could identify two rural development schemes (19.3 percent), compared to participants that were exposed to *Sada* (14.6 percent).

We tested whether differences in knowledge about rural development schemes for respondents that were exposed to *Sada* and those that were not exposed to *Sada* were significant. These differences were not significant ($F(1, 776)=.04$, $p=.846$).

Changes in Attitudes

H6: Afghan individuals that were exposed to *Sada* audio information are more likely to have positive attitudes about civil society governance (e.g., democracy, the constitution, elections, parliament) than Afghans who were not exposed to *Sada* content.

Figure 26 presents the differences in attitudes about civil society in Gelan and Andar districts. In Gelan, fewer respondents were “extremely positive” about civil society governance concepts in the Wave 2 survey (a decrease of 9.2 percentage points). There was an increase in the percentage of respondents that were “very positive” (6.3 percentage points) and “positive” (5.7 percentage points). Gelan residents were less inclined to respond “somewhat positive” (a decrease of 1.7 percentage points), and “not very positive” (a decrease of 0.6 of a percentage point).

In Andar, there were increases in percentages of respondents that were “extremely positive” (7.8 percentage points) and “very positive” (2.6 percentage points) about civil society governance between the Wave 1 and Wave 2 surveys. Respondents showed a decrease in “positive” attitudes (20.2 percentage points), an increase in “somewhat positive attitudes” (12.5 percentage points), and a decrease in “not very positive attitudes” (2.5 percentage points) (Figure 26).

In Warsaj, (Figure 27), there was a decrease in “extremely positive” attitudes (18 percentage points), and an increase in “very positive” (9.5 percentage points) and “positive” (9.5 percentage points) attitudes toward civil society governance. There was a slight decrease in “somewhat positive” and “not very positive attitudes” (0.6 of a percentage point in each category). The data from Farkhar show decreases in the first two categories, “extremely positive” (4.1 and 6.3 percentage points, respectively) (Figure 27). Respondents that felt “positive” about civil society governance, showed an increase of 3.7 percentage points in Wave 2. Those who were “somewhat positive” decreased by 2.7 percentage points. The “not very positive” category increased by 9.5 percentage points among residents of Farkhar in the follow-up survey.

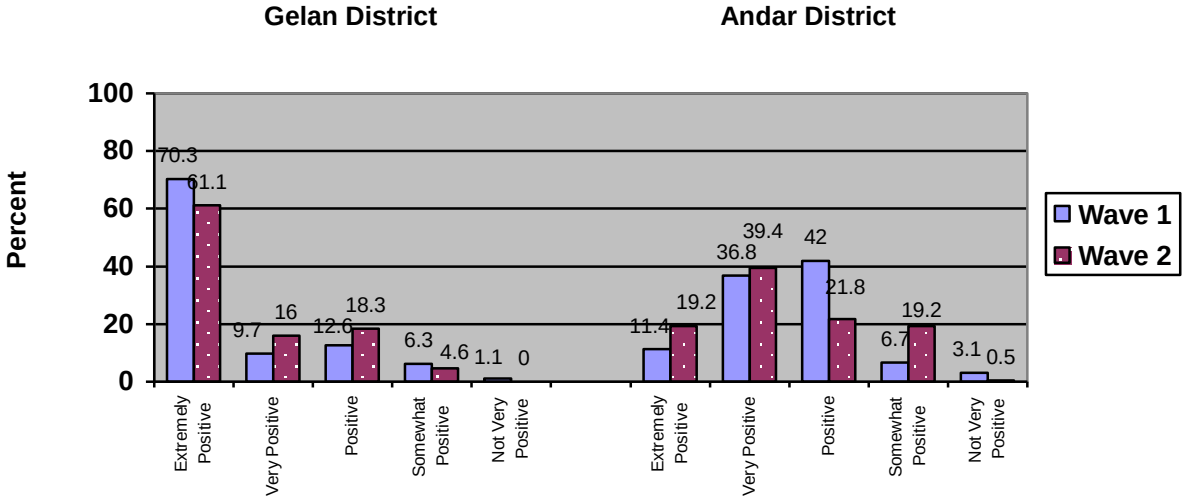

Figure 26. Percentage Distributions for Attitudes Toward Civil Society Governance by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: N=175; Andar: N=193).

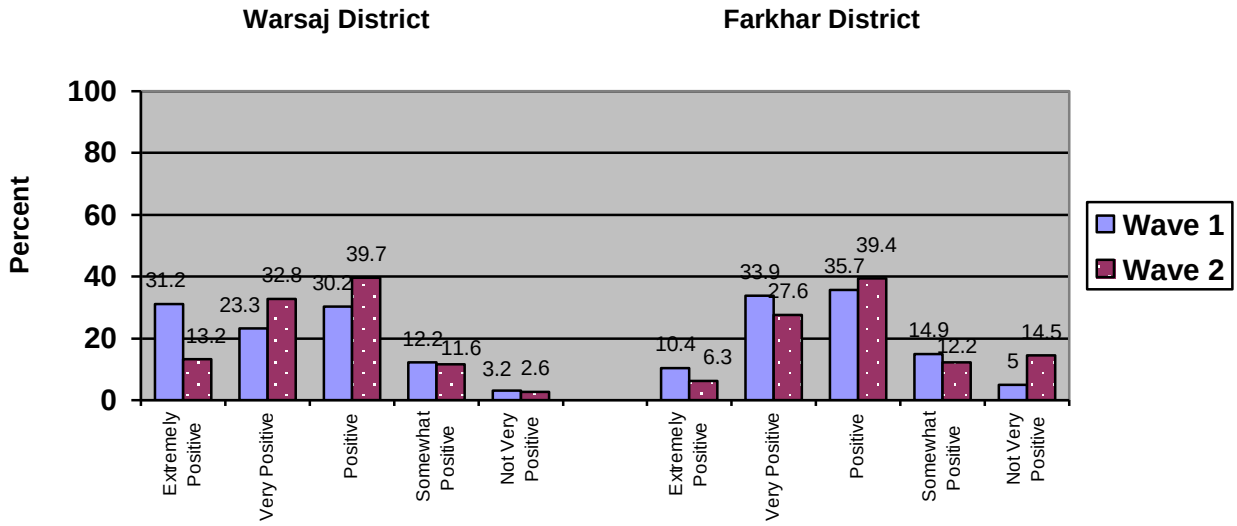

Figure 27. Percentage Distributions for Attitudes Toward Civil Society Governance by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: N=189; Andar: N=221).

The differences in attitudes toward civil society governance between the districts were significant (F(1, 774)=3.50, p=.015). However, post hoc tests revealed that these difference were between Andar (the control district in Ghazni province) and Warsaj (the experimental district in Takhar province), and between Andar and Farkhar (the control district in Takhar province). These differences are to be expected given the differing ethnic and language make-up of the two provinces.

Analyses to answer the question "Are there significant differences in attitudes toward civil society governance for respondents that were exposed to *Sada* and those that were not exposed?" showed that the exposed and un-exposed groups were not significantly different (F(1, 776)=2.80, p=.597).

H7: Afghan individuals that were exposed to *Sada* audio information are more likely to have positive attitudes about women's rights than Afghans who were not exposed to *Sada* content.

Overall, respondents in Gelan were more positive about women's rights than those in Andar (Figure 28). In Gelan, there was (1) an increase of 4.6 percentage points for respondents that were "extremely positive" in Wave 2, (2) an increase of 3.4 percentage points for those who were "very positive" in Wave

2, and (3) decreases in the percentage of participants that were “positive” and “somewhat positive: (4.6 and 4.5 percentage points, respectively). In Andar, there was a marked increase in the percentage of participants in the “positive” and “somewhat positive” categories.

Findings from Warsaj and Farkhar showed decreases in attitudes toward women’s rights for individuals in the “extremely positive” category (10.6 and 4.0 percentage points, respectively) (Figure 29). In Warsaj, there was an increase in the percentage of respondents with “very positive” attitudes (11.4 percentage points), and those with “somewhat positive” attitudes (0.5 of a percentage point). There were slight decreases among those with “positive” and “not very positive” attitudes (1.6 and 0.5 percentage points). In Farkhar, the percentage of respondents that had “extremely positive” or “very positive” attitudes decreased in Wave 2 (4.0 and 1.8 percentage points). The “positive” and “somewhat positive” categories saw increases of 0.4 and 5.5 percentage points, respectively.

Respondents that were exposed to *Sada* and those that were not exposed, were not significantly different with regard to attitudes toward women’s rights issues (F(1, 774)=2.06, p=.105).

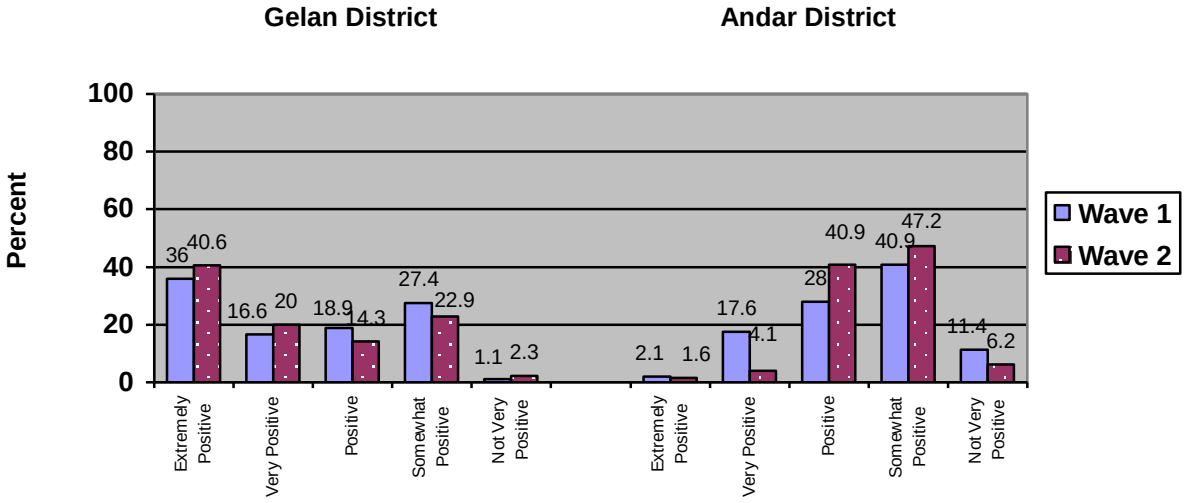

Figure 28. Percentage Distributions for Attitudes Toward Women’s Rights by Survey Wave in Gelan and Andar Districts, Ghazni Province, Afghanistan (Gelan: N=175; Andar: N=193).

Changes in Voting Behavior

H8: Afghan individuals that were exposed to *Sada* audio information are more likely to vote in the September 2005 parliamentary election than Afghans who were not exposed to *Sada* content.

Almost all of the respondents in each of the four study districts who reported their intention to vote in the 2005 parliamentary election, also reported voting in the 2004 presidential election, and in the 2005 parliamentary election (Table 4). The lack of variance for this outcome variable restricted our ability to conduct further analyses.

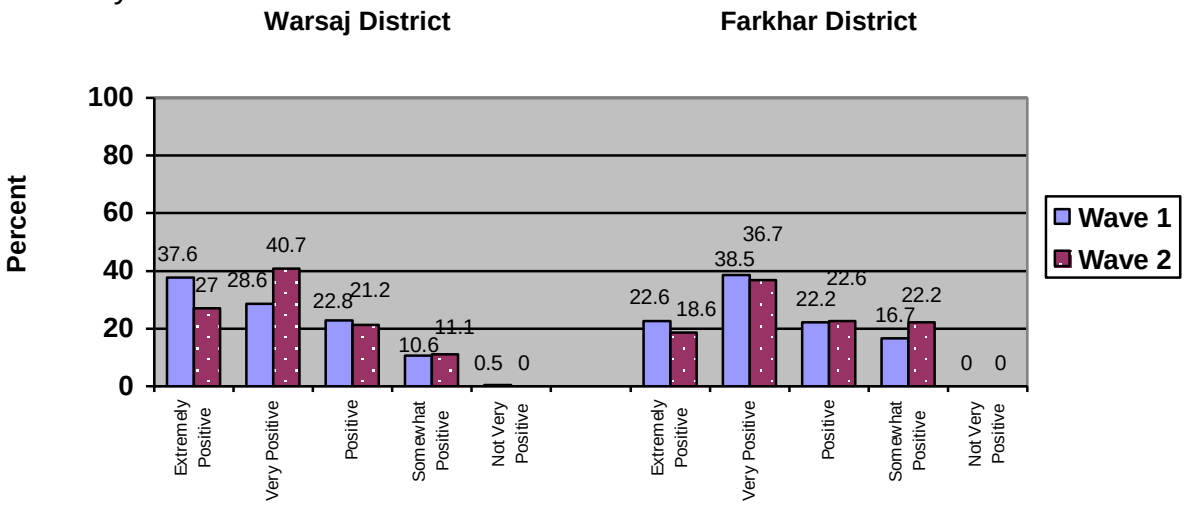

Figure 29. Percentage Distributions for Attitudes Toward Women's Rights by Survey Wave in Warsaj and Farkhar Districts, Takhar Province, Afghanistan (Warsaj: N=189; Farkhar: N=221).

Table 4. Percentage of Respondents Who Reported Their Intention to Vote in the 2005 Parliamentary Election, and Who Reported Voting in the 2005 Parliamentary Election (N=778).

District	Voted in 2004 Presidential Election	Intention to Vote in 2005 Parliamentary Election	Voted in 2005 Parliamentary Election
Gelan	98.9	98.3	99.4
Andar	97.4	97.4	94.3
Warsaj	91.0	98.9	98.9
Farkhar	94.1	91.4	95.0

5. Findings: *Sada* Use and Technology Assessment

The follow-up survey questionnaire contained questions for respondents in the experimental districts to assess (1) how they used their *Sada* (e.g., did they listen with others, did they organize listening sessions in their homes), (2) how they liked the contents, (3) their attitudes toward the contents, and (4) what they thought about the technology/device (e.g., ease of use, color, battery life).

Only three individuals (out of the 175 that received a *Sada*) in Gelan district did not have their *Sada* at the time of the follow-up survey; two respondents had given the *Sada* to a friend, and one person gave their device to a neighbor. All of the respondents in Warsaj reported current ownership of their *Sada*.

Locations Where Respondents Listened to *Sada*

Figure 30 shows the percentage distributions of locations where *Sada* recipients listened to the audio content. The majority of respondents in both Gelan and Warsaj listened to their *Sada* in their own homes, or in a relative's home. In Warsaj, more than half of all respondents said that they also listened to the *Sada* at a friend's house.

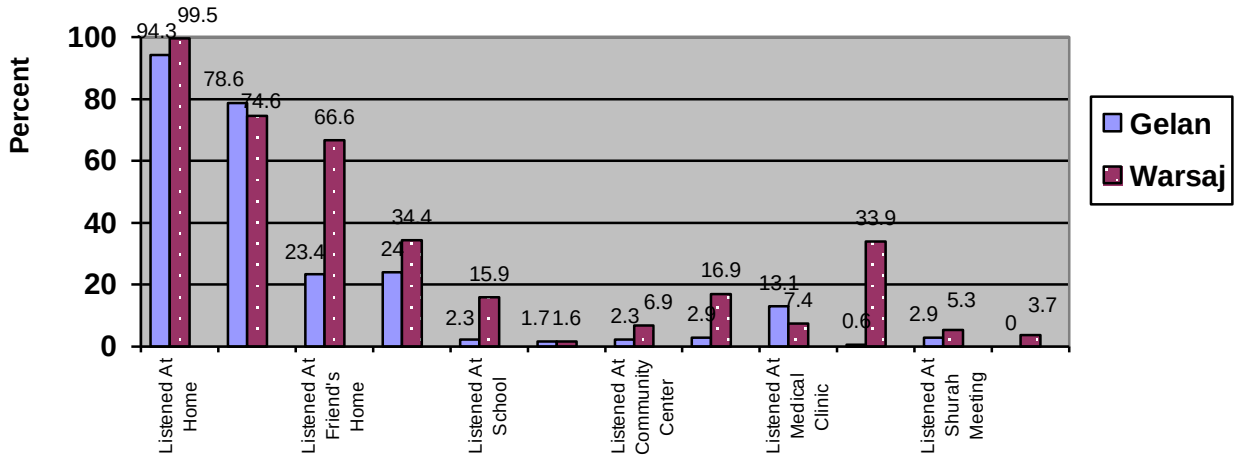

Figure 30. Percentage Distribution of Locations Where Respondents Listened To *Sada*, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

Listened to *Sada* With Others

In Gelan, 75 percent of respondents listened to *Sada* with other individuals (N=131). Some 96 percent of *Sada* recipients in Warsaj listened with others

(N=182). Figure 31 shows the percentage distribution for individuals or groups with whom *Sada* was shared. The majority of respondents in both districts listened with their spouse and/or family members.

The mean number of individuals in both experimental districts that listened to the *Sada* with the *Sada* recipient, in his or her home, was 7.8 (±5.5 persons), with a range of between one and 40 individuals. *Sada* recipients held approximately 5.7 listening sessions in their homes (±6.3 sessions). The number of listening sessions in one's home ranged from one to 50.

The mean number of listening sessions in public settings in both districts was 1.4 (±5.3). The majority of *Sada* users did not conduct listening sessions in public settings (64 percent). On average, 2.1 people (±4.8) listened to the *Sada* with the recipient in a public setting. In Gelan, 12 respondents reported connecting the *Sada* to loudspeaker and broadcasting the *Sada* programs. In Warsaj, only 4 individuals connected their *Sada* to a loudspeaker. The mean number of times that the *Sada* was broadcast in a large group setting was 3.1 (±1.2).

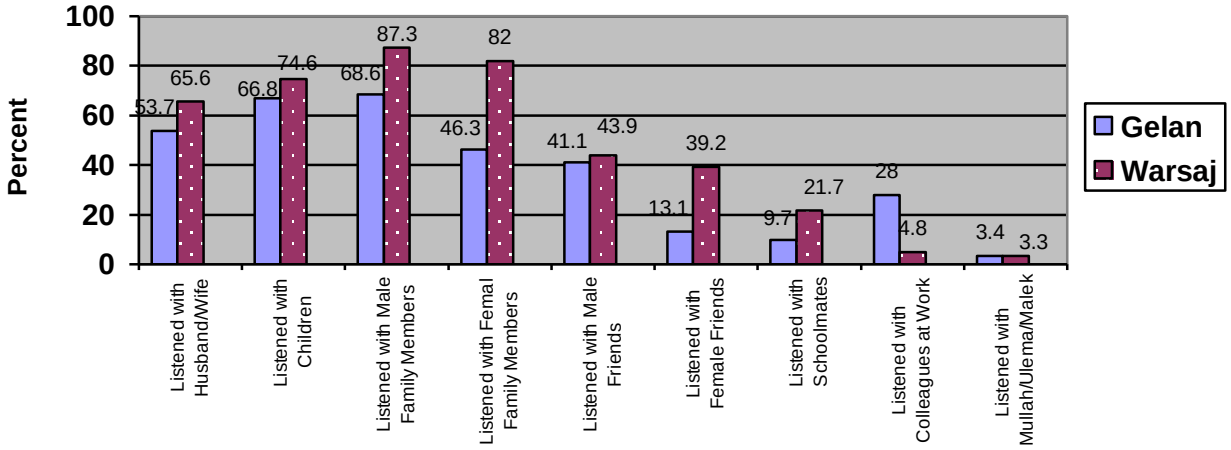

Figure 31. Percentage Distribution of Respondents That Listened To *Sada* With Others, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

Discussed *Sada* With Others

At least 63 percent of respondents in Gelan discussed what they heard on *Sada* with others (N=110). In Warsaj, some 47 percent of respondents discusses *Sada* contents with others (N=98). More respondents in Gelan discussed the *Sada* programs with their spouse and/or family members, compared to respondents in Warsaj (Figure 32).

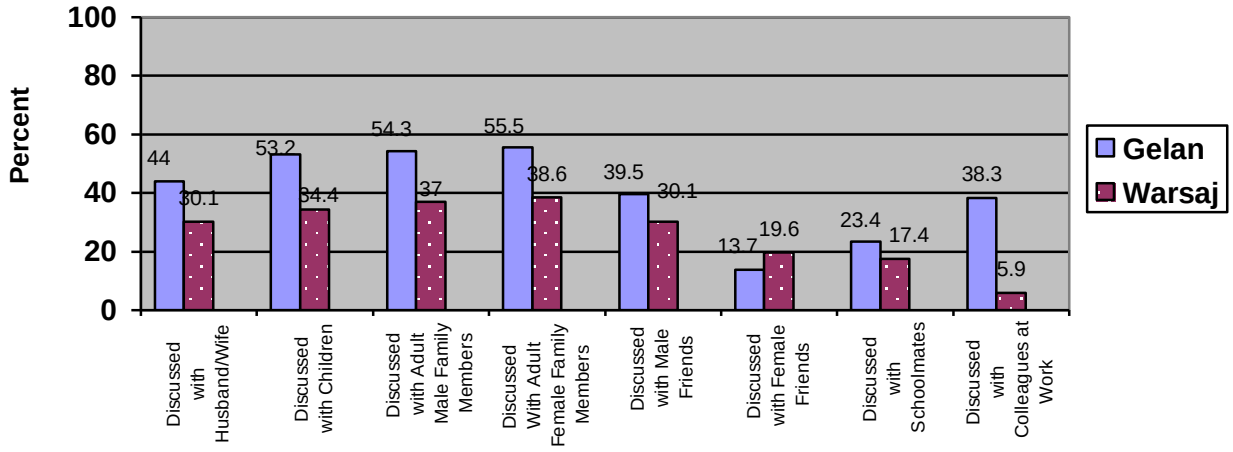

Figure 32. Percentage Distribution of Respondents That Discussed *Sada* With Others, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

Listening Habits

Sixty-one percent of respondents in Gelan listened to the entire *Sada* contents (N=107). Almost all respondents in Warsaj (99.5 percent) listened to the entire *Sada* contents (N=188). At least 37 percent of respondents in Gelan listened to their *Sada* two or more times per day (N=65). In Warsaj, 34 percent of *Sada* users listened to the contents two or more times per day (N=65). At least 46 percent of individuals in Gelan listened to the *Sada* once per day (N=80), compared to 50 percent in Warsaj (N=95).

Figure 33 shows the percentage distributions for *Sada* listeners' content preferences. Overall, listeners in both Gelan and Warsaj preferred the information about the importance of the parliamentary elections (49.1 percent and 59.8 percent respectively). In Gelan, messages about security issues (e.g., turning weapons over to the government) were liked the least (22.3 percent). Respondents in Warsaj did not like the messages about democracy and civil society, as much as any of the other content (34.9 percent).

Respondents were asked two opened-ended questions about the *Sada*: (1) "What did you like the most about using the *Sada*?" and (2) "What did you like least about using the *Sada*?" The majority of respondents liked listening to the drama, comedy, or songs (N=93), and many liked the information about the elections (N=18), about the parliament (N=15), about women's rights (N=11), and the children's programs (N=6). Several *Sada* users liked the battery and charger, and the fact that using the device did not have any associated expense (e.g., paying for batteries) (N=25). A few respondents liked the simple, local language of the programs (N=9). Some 55 listeners said that there were not enough songs

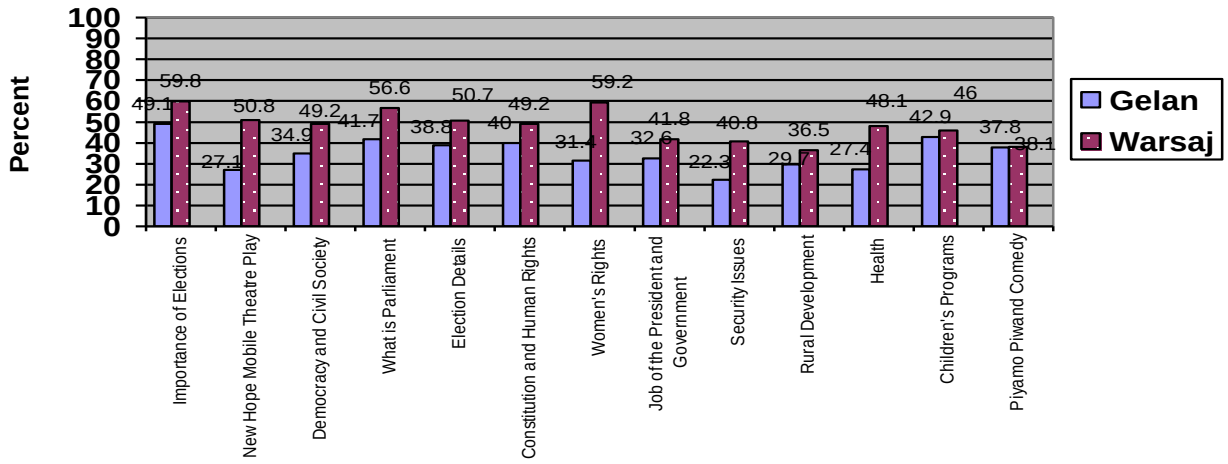

Figure 33. Percentage Distribution of *Sada* Listeners' Content Preferences, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

on the *Sada* or that the songs were not good (N=55). Several respondents remarked that they did not like the sound of the donkey in one of the programs (N=38). Other respondents did not like that the battery lost its charge quickly (N=16).

Post-Election *Sada* Use

Respondents in both Gelan and Warsaj districts reported listening to their *Sada* following the September 18, 2005 parliamentary election. In Gelan, 95 percent of respondents continued listening to their *Sada* (N=167), and in Warsaj, 98 percent of listeners played their *Sada* (N=186). At least 56 percent of Gelan residents that received a *Sada* listened once per day following the election (N=98); some 44 percent of *Sada* recipients in Warsaj played the contents in the post-election period (N=84).

Attitudes and Beliefs About *Sada* Content

Respondents in Gelan and Warsaj were asked a series of questions to determine how they felt about the *Sada* content. Figures 34-40 present the percentage distributions for listeners' attitudes toward the accuracy, trustworthiness, interest-level, helpfulness in understanding election issues, language, entertainment-value, and overall importance of the *Sada* information.

All of the respondents in Warsaj, and 98 percent of the respondents in Gelan, believed that the *Sada* provided correct information. At least 99 percent of *Sada* recipients in Warsaj, and 98 percent in Gelan, agreed that the *Sada* information was trustworthy. Almost all of the respondents felt that the *Sada* content was interesting to listen to (Gelan=97 percent; Warsaj=99 percent), and that what

they heard on *Sada* helped them to understand the importance of the parliamentary election (Gelan=98 percent; Warsaj=98 percent).

Some 78 percent of *Sada* users in Gelan, and 70 percent in Warsaj, agreed that the program language was easy to understand. Almost all agreed that the programs were entertaining (Gelan=93 percent; Warsaj=99 percent). Most of the respondents in both experimental districts said that the messages from local leaders made them believe that the *Sada* content was important (Gelan=87 percent; Warsaj=99 percent). Overall, the *Sada* contents were well-received; the programs were perceived as credible, trustworthy, and culturally appropriate.

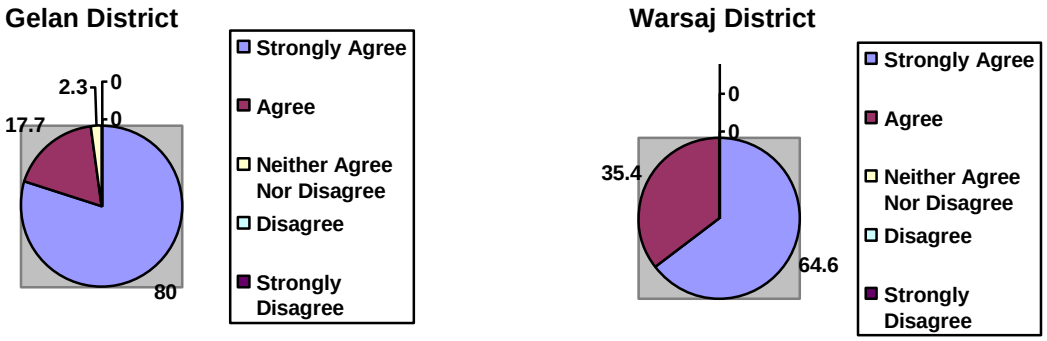

Figure 34. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "I Believe That the *Sada* Provided Correct Information," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

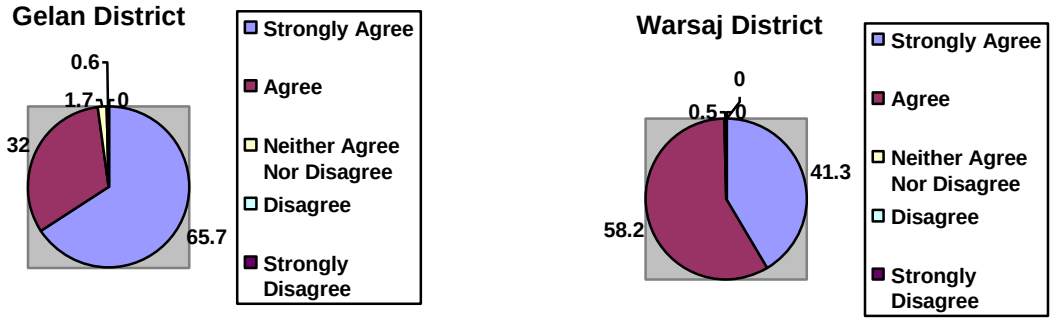

Figure 35. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "I Trust the Information That I Heard on the *Sada*," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

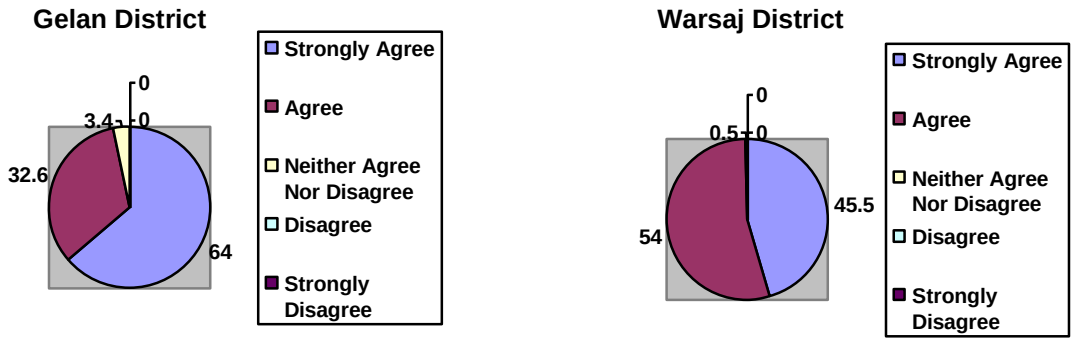

Figure 36. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "The Programs That I Heard on *Sada* Were Interesting," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

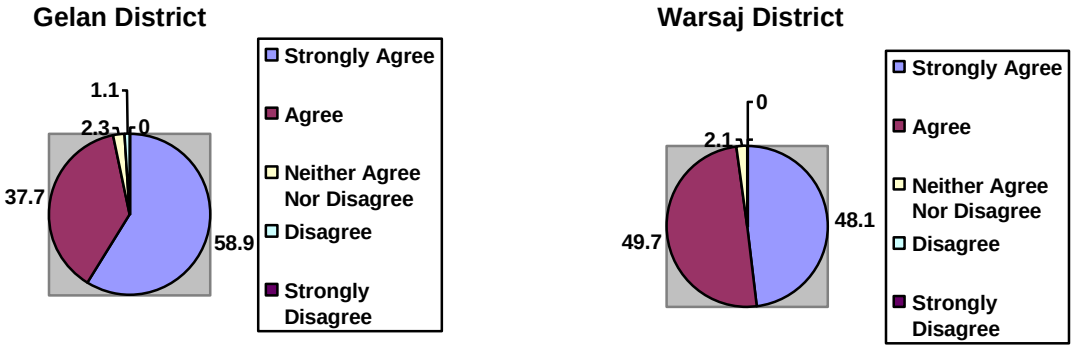

Figure 37. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "The Programs That I Heard on *Sada* Helped Me to Understand the Importance of the Parliamentary Election," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

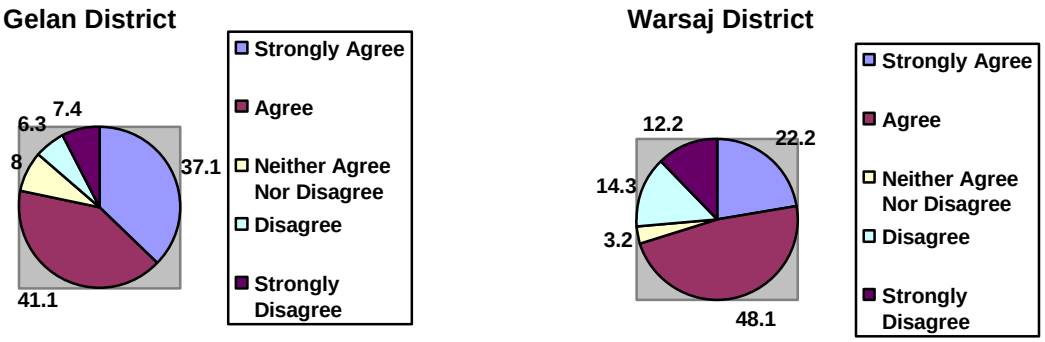

Figure 38. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "The Language Used in the *Sada* Was Easy to Understand," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

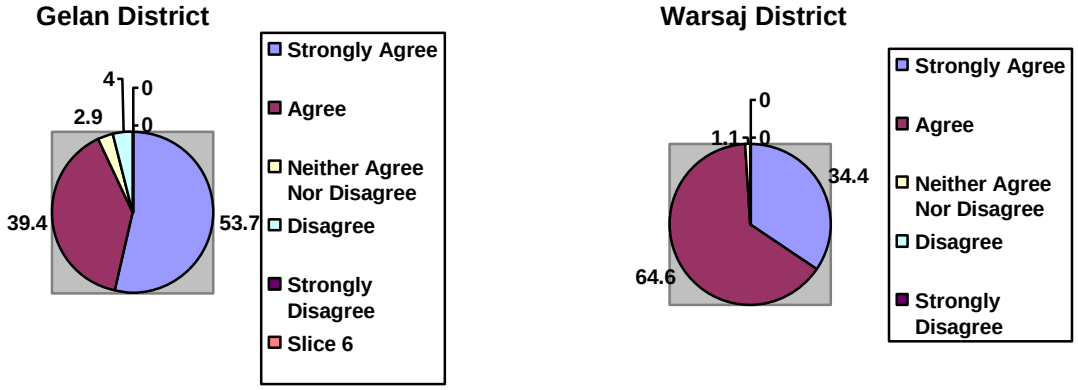

Figure 39. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "The Programs on *Sada* Were Entertaining," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

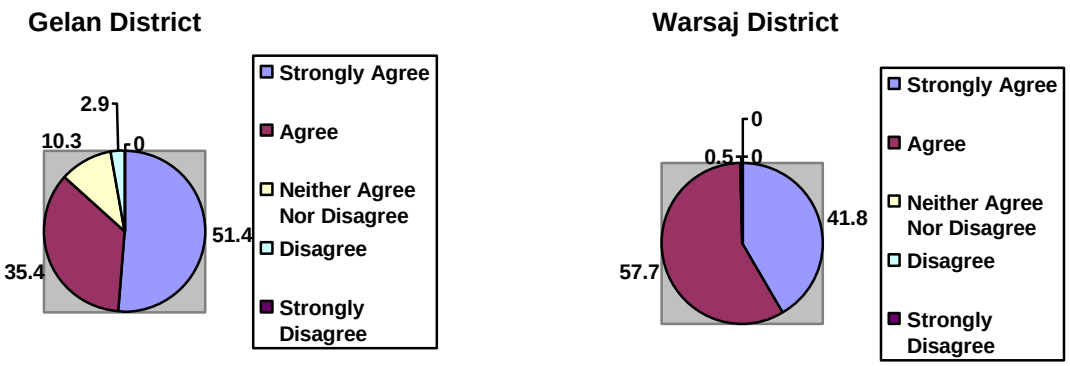

Figure 40. Percentage Distribution of Respondents That Agreed or Disagreed With the Statement "When I Heard the Messages From Local Leaders, I Knew That the *Sada* Content Was Important," in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

Preference of *Sada* Versus Radio

In Warsaj district, respondents reported that they would prefer to receive information about politics in Afghanistan from the *Sada* (58.7 percent) as opposed to receiving such information from the radio (40.7 percent). In Gelan, slightly more respondents would rather receive political information from the radio (47.4 percent) than from their *Sada* (44.0 percent) (Figure 41).

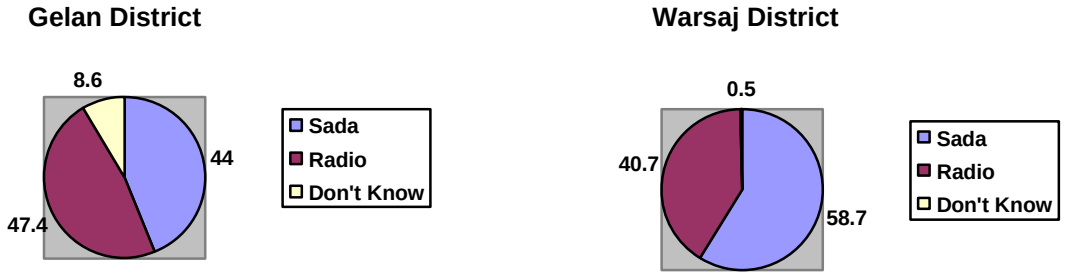

Figure 41. Percentage Distribution of Respondents' Preference of Sada or Radio for Receiving Information About Politics, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

Sada Technology Assessment

The majority of respondents were in possession of their *Sada* for at least four weeks at the time of the post-election interview (68 percent in Gelan, and 90 percent in Warsaj). Only four individuals in Gelan, and five respondents in Warsaj, reported that their *Sada* was not fully functional. The batteries failed in one *Sada* in Gelan, the solar battery charger did not work for two *Sadas* in Warsaj, the buttons did not work on two *Sadas* in Gelan and two *Sadas* in Warsaj, the speakers did not function on one device in Warsaj, and the earbuds were not working for one *Sada* in Gelan.

Some 85 percent of *Sada* recipients in Gelan received training on how to use the *Sada* device, compared to only 71 percent of recipients in Warsaj. Figure 42 shows the percentage distributions for the perceived level of ease or difficulty of use of the *Sada* device. Overall, the majority of respondents in both experimental districts found the *Sada* unit "very easy" or "easy" to operate.

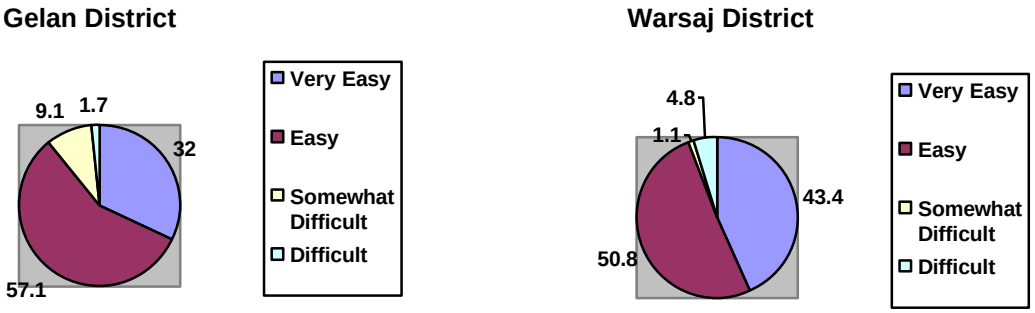

Figure 42. Percentage Distribution of Respondents' Perceived Ease of Use of the *Sada* Device, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

The length of time that the batteries lasted before having to be recharged (using the solar re-charger) varied between one hour (N=31) and 48 hours (N=3). The mean number of hours of battery use was 8.8 (±7.1 hours). The number of hours that respondents reported it took to re-charge the batteries using the solar re-charger was approximately 4.4 hours (±5.8 hours).

Figure 43 shows the frequency of use for the earbuds with the *Sada* device. Respondents in Warsaj used the earbuds more often than listeners in Gelan.

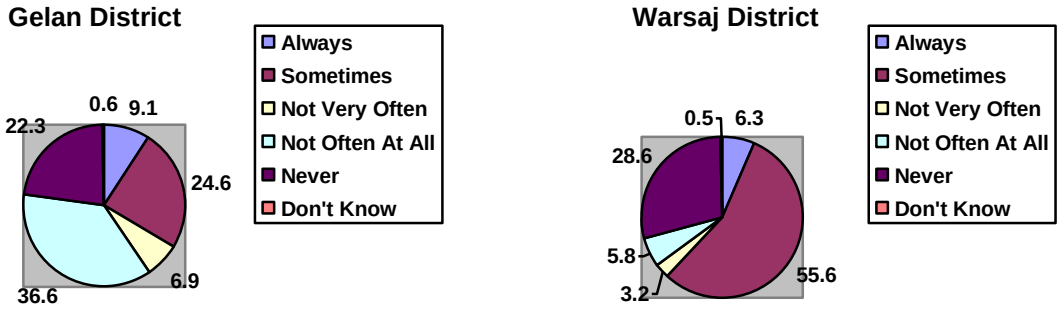

Figure 43. Percentage Distribution of Respondents' Use of Earbuds With the *Sada* Device, in Gelan and Warsaj Districts, Afghanistan (Gelan, N=175; Warsaj, N=189).

The majority of men (81 percent) and women (81 percent) in Gelan reported liking the color of their *Sada*. Almost all of the men (97 percent) and all of the women (99 percent) in Warsaj said that they liked the color of their *Sada*. When respondents in both districts were asked what color they would prefer for their *Sada*, 37 respondents answered: Black or brown (N=22), red (N=8), white (N=4), blue (N=1), gray (N=1), and pink (N=1).

6. Discussion and Conclusions

The present evaluation study (1) explored the impact of the small media device, *Sada*, on civil society knowledge and attitudes, and on voting behavior, and (2) assessed the appropriateness of the *Sada* technology as an educational vehicle, in Ghazni and Takhar provinces of Afghanistan.

This assessment answered the question, "Did *Sada* play a role in increasing knowledge about civil society governance, improving attitudes about civic engagement, and changing voting behavior in the 2005 parliamentary election?" The survey data provided support for a change in knowledge about the Afghan government's national security efforts, namely, (1) the program that encourages non-military citizens to turn in their weapons to the government, and (2) the promotion of the slogan "One nation, one army". The data did not support the other hypothesized changes in knowledge, attitudes, or behavior, between individuals that were exposed to *Sada*, and those that were not exposed.

The study's experimental design, with baseline and post-intervention (i.e., the introduction of *Sada* into one experimental district in each of two provinces) surveys, suggest internal validity of the evaluation, that is, the degree to which *Sada* impact was accurately measured. Here we discuss the threats to validity, or factors that might have influenced the outcomes measures (knowledge, attitudes, and behavior), and provide alternative explanations for the findings.

Threats to Validity and Alternative Explanations

Historical Uniqueness

On October 9, 2004, Afghanistan held its first-ever democratic presidential election. The Joint Election Management Body (JEMB) of Afghanistan was set up to register voters and organize the elections. The JEMB conducted an education campaign, using a network of 1,600 advisors, to inform individuals throughout the country (1) about the election process, and (2) about the presidential and parliamentary systems. The JEMB officials used the national media, training sessions, and mobile theatre troupes to promote civic engagement (namely, voting). Special efforts were made to engage and register women voters. These combined education efforts were estimated to have reached 1.3 million Afghans (USAID, 2004).

The events of the country's first free election in 2004 may have primed the population's (1) knowledge about civil society, democracy, parliament, constitutions, human rights and women's rights, and (2) attitudes about civic society governance and engagement. Our findings regarding the 2005 parliamentary elections indicated high levels of knowledge about civil society and election-related issues for both experimental and control groups, and no significant differences in knowledge between the *Sada* recipients and non-recipients. Similarly, our respondents had positive attitudes toward civil society and women's rights. Given that the presidential election occurred less than one year prior to the parliamentary election, it is likely that our study sample was affected by the campaign efforts for the 2004 presidential election, and there was little variance in the knowledge and attitude measures.

JEMBs education efforts in the 2004 presidential elections did not promote a national security program, suggesting that our findings supporting a difference in knowledge about the Afghan government's national security schemes in 2005, between *Sada* recipients and non-recipients, are valid.

Outcome Measures

Program intervention messages are expected to be more effective if they are tailored to the intended audience's particular stage of change (Prochaska & Velicer, 1992). The *Sada* programs provided information about topics that were previously promoted during the 2004 presidential election. The outcomes measures used for the present study captured existing knowledge about civil society-related topics, and attitudes toward civil society and civic engagement, and found high levels of knowledge and positive attitudes at baseline. Hence, the hypothesized differences in knowledge and attitudes were not supported.

Program Fidelity and Dose

Program fidelity refers to the degree to which the intervention was delivered in sufficient quality and quantity to have affected the intended population in the desired manner. Dose refers to the degree of exposure to the intervention or intensity of delivery. Some experimental group respondents received their *Sada* device only one or two weeks prior to the parliamentary election date. It may be that the length of time of exposure (i.e., the intensity of exposure) was insufficient to affect the desired outcomes of knowledge, attitude, and behavior change.

The Hawthorne Effect

The Hawthorne effect is the tendency for respondents to react positively to experimental conditions. The effect of being studied, and being given the *Sada* device, may have encouraged participants to provide positive (i.e., socially desirable) responses to the survey questions. This explanation is possible, but not probable since we selected a control group that resembled the experimental group as closely as possible, and the control group showed equally high levels of knowledge, positive attitudes, and voting behavior, as the experimental group.

Sada Technology Assessment

How appropriate was the Sada technology as a device for disseminating information in Afghanistan? Our findings suggest that a majority of the *Sada* recipients listened to the entire *Sada* content, usually in group situations, and spread over multiple listening sessions. A fairly high percentage of *Sada* recipients (63 percent in Gelan and 47 percent in Warsaj) reported discussing the *Sada* programs with others. At least 95 percent of the Sada recipients in Gelan, and 98 percent in Warsaj, continued listening to the *Sada* after the parliamentary election was over, suggesting the long-term utility of such educational devices.

Almost all of the *Sada* recipients in both Gelan and Warsaj believed that (1) the *Sada* provided correct information, (2) the *Sada* information was trustworthy, (3) the *Sada* content was interesting, and (4) what they heard on *Sada* helped them to understand the importance of the parliamentary elections. Most agreed that the program language was easy to understand, the programs were entertaining, and audio-taped messages from local leaders in the *Sada* made them believe that the *Sada* content was important.

The *Sada* technology worked well; only one percent of *Sada* users in our experimental districts experienced difficulties with the device, for example, a malfunctioning battery, navigational buttons, or solar charger. A majority of respondents (both men and women) in both experimental districts found the color of *Sada* attractive, and the device easy to operate.

Triangulation with Qualitative Research Findings

Findings from a qualitative study of *Sada* use in five provinces in Afghanistan, supported the present study's findings regarding high knowledge levels and positive attitudes toward civil society (including women's rights) and civic engagement (Sengupta, Singhal, Shefner-Rogers, 2005; Personal field notes, 2005). Women and men knew about the purpose for the parliamentary election, the importance of voting, and the voting procedure. Some men reported learning about the rules for voting, and the characteristics of a good candidate, from *Sada* (Personal field notes, 2005). Almost all male participants said that they encouraged their wives to vote. When asked about the importance of women's rights, most men said that the Koran contains teachings about equality among the sexes, so women should have equal rights in present-day Afghanistan (Personal field notes, 2005).

The qualitative findings suggested that the small media listening device was instrumental in (1) educating women and men about the negative consequences of forced marriages, namely, marrying daughters at too early an age, and especially to older men, (2) promoting discussion about the parliamentary election, and about women's rights, and (3) increasing women's participation in the parliamentary election (Sengupta, Singhal, Shefner-Rogers, 2005; Personal field notes, 2005).

Respondents found the *Sada* both educational and entertaining, and continued to listen to *Sada* programs after September 18th. An in-depth discussion with the research team leaders, suggested that respondents were very enthusiastic about *Sada* and its contents. One of the Altai Consulting Team Leaders received letters from the survey respondents in both the experimental and control districts, asking him to send them (more) *Sadas* (Personal Interview, 2005). Almost all male and female focus group participants asked for new plug-and-play *Sada* chips with educational information on such topics as child development, family planning, Islamic education, and health (disease control/hygiene) (Personal field notes, 2005).

Implication and Recommendations

Experimental evaluation methodology of the kind used for the present study can be useful for determining whether or not, or how, a program should be modified before it is expanded to other intended audiences. The following emerge as implications and recommendations for future *Sada* dissemination programs.

Sada Program Content: Build on the existing levels of knowledge, attitudes, and behaviors of the intended audience. Determine the baseline knowledge, attitudes, and behaviors, prior to developing the program content. Once the baseline is established, develop program content that will help the audience fill in

knowledge gaps, improve attitudes, and/or change behaviors. Use a theoretical framework to guide your program development. Identify the constructs that will encourage or inhibit your audience with regard to knowledge, attitude, and/or behavior change, and determine how you the process of change will occur.

Sada Distribution: The processes of knowledge, attitude, and behavior change require time. It is important to ensure that intended audiences have sufficient exposure to an intervention in order for the messages to have the intended effect. Not all *Sada* group members received their device four weeks prior to the election, as intended. The *Sada* device should be distributed in a timely manner, such that recipients have an adequate amount of time to listen, absorb, discuss, and accept the new ideas.

Sada Evaluation: The development of an evaluation plan to assess the impact of *Sada* on the intended audience should occur in the beginning stages of the project, as soon as the goals and objectives for the project are determined. The evaluation instruments should be pretested and revised as many times as necessary in order to ensure that the outcome variables are reliable and valid.

Limitations of the Study

The present study is characterized by both strengths and weaknesses. The strengths include (1) a rigorous experimental design in two provinces with a panel sample that allowed the evaluators to randomly assign participants in Gelan and Warsaj to the intervention groups, and eliminated any differences of individual characteristics in the pre- and post-test groups, and (2) high quality data collected by experienced fieldworkers in Afghanistan. The short time frame between the baseline and follow-up surveys may not have been sufficient for the respondents to make changes in knowledge and attitudes, making it difficult for the evaluators to capture the impact of *Sada* on the experimental groups. Also, the relatively high scores on outcome variables in the baseline survey made it difficult to demonstrate impact.

With these limitations in mind, the analyses presented in this report provide important lessons learned about *Sada* program content development, *Sada* dissemination, and the *Sada* technology. The present study was the first effort to assess the impact of *Sada* on a population. Future studies are needed to understand respondents' engagement with *Sada*, and to develop more accurate measures to assess *Sada's* impact.

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Appendix A: Profile and Photos of the *Sada* Device

VFH AUDIO PLAYERS

- **Designed for Oral Communicators**
- **Based on DSP technology**
- **Compresses Speech Data 125X**
- **Capacity up to 500 hours (428 CD's)**
- **No Moving Parts**
- **Multiple Power Options, e.g. solar**
- **Group or Individual Listening**
- **No instruction manual required**
- **3-tier hyper-speech indexing**
- **Plug and Play Content**
- **Cannot be Copied or Modified**
- **10x cheaper than equivalent capacity MP3 players, (i.e. cost per hour of play time)**

Appendix B: Baseline Survey Questionnaire

Appendix C: Post-Election Survey Questionnaire