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The Isfahan Communications Project

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The Isfahan Communications Project (ICP) was a multiphase program using mass media and functionaries (respected members of the community) to inform the population of Isfahan, a province of Iran, about family planning. The project began with the collection of baseline data about the population in May 1970 and ended with an evaluation of accomplishments in May-June 1971. Currently a revised project drawing on information from the ICP is ongoing. This work was supported with funds supplied by USAID.

This issue is devoted to six articles covering the various aspects of the project. The first article presents a summary overview of activities during the entire period and describes the setting of the project. Subsequent articles deal with the KAP presurvey that initiated the project; the theory and procedures developed for the pretesting of materials for the media; the mass media project and its evaluation; the functionary and intensive projects; and the current activities in Isfahan and in Iran that are based on information gained in the project. Taken together the articles form a chronological review of the entire project; each article may also be considered as a discrete entity, describing procedures and analyzing data that could be relevant elsewhere.

Many people assisted in developing the project. The research design was worked out by Robert Gillespie, Advisor in Communications from the Population Council, based in Isfahan; Dr. M. Loghmani, Deputy Director, Isfahan Health Department; and Professor Wilbur Schramm, Director of the Institute for Communication Research, Stanford University. In the Population and Family Planning Division of the Ministry of Health, under whose auspices the project was conducted, Dr. A. M. Sardari, the Undersecretary, and Directors-General Dr. L. Ziai and Dr. A. A. Zahedi gave advice and essential support. Mr. Abedi, Health Educator in Isfahan, served as translator and tabulator. Dr. John Friesen, the Population Council Resident Advisor in Iran, Harry Levin, former director of Informational Services of the Population Council, and Professor and Mrs. John Gulick of the University of North Carolina all provided valuable assistance. S. S. Lieberman, graduate student at Harvard University, played the major role in preparing this report.

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I. The Isfahan Communications Project in Perspective

The object of the Isfahan Communications Project was to prepare an intensive communications campaign and to study the impact of this campaign on knowledge, attitudes, and practice of family planning in Isfahan Ostan (or province), Iran. The major components of the program were: use of mass media in stages of varying intensity and training of rural and urban functionaries to give information and to recruit new acceptors. The design and implementation of this program tested a number of instruments and approaches. The project may be considered a response to some questions posed by Bernard Berelson on how the message of family planning can be taken to the people where medical, mass media, educational and other similar facilities may not be adequately available. "What means," he asks, "are administratively feasible and supportable from the standpoint of cost and personnel?" (1963, p. 164).

In a country like Iran, a communications research project that aims at achieving maximum impact should proceed in three stages. First, different groups in the population should be studied to determine the degree of interest in family planning, and these groups should be ranked accordingly as potential target audiences. Second, this preliminary information should be used to develop a communications strategy that will reach the various segments of the population with an appropriate appeal. In this stage of designing appropriate strategies, techniques of pretesting and evaluating the effectiveness of materials and messages will be of primary importance. The third and final stage of such a project consists of the coordinated application of the various communications methods so that they will be mutually reinforcing. We may say that this stage is, in effect, a "total effort" when the public is being contacted through the mass media, by word of mouth, by field workers, and through educational and social institutions, and when complete contraceptive services have been made available.

The Structure of the Project

For the purposes of exposition, we may treat the Isfahan Communications Project (ICP) as having four stages: (1) an ostan-wide sample presurvey, conducted in May 1970; (2) a pretesting of radio programs, posters and other materials for use in the media campaign; (3) an ostan-wide mass media campaign, conducted from August 1970 through March 1971; and (4) a functionary project conducted on a limited scale in two rural areas with 200,000 population and an intensive project conducted in urban and rural areas with 20,000 population. A chronology of these stages appears in the box below. All the projects were conducted in Isfahan Ostan, population, 2 million. Following, in brief are the major activities and findings of each stage.

Chronology of the Isfahan Communications Project

May–July 1970	Presurvey (Isfahan Ostan)
June–August 1970	Pretesting and preparation of materials
June–July 1970	Functionary surveys (Isfahan Ostan)
21 August–21 November 1970	Action program: Phase I, radio only
August–October 1970	Training of functonaries and implementation of functionary project (specified areas)
October–November 1970	Baseline surveys, intensive project, 1st home visits
21 December 1970–21 March 1971	Action program: Phase II, use of all media
February–March 1971	2nd home visits, intensive project
March–April 1971	3rd home visits, intensive project
April–June 1971	Postsurvey (Isfahan Ostan)
November–December 1971	4th home visits, intensive project
March–June 1972	Mass media and functionary projects expanded to six ostans

The presurvey, described in detail in article II, was conducted to obtain data on the knowledge, attitudes, and practice (KAP) of family planning among the population and on their media behavior (exposure to radio, movies, newspapers, magazines, and other sources). In terms of media behavior and KAP characteristics, a profile of the potential audience for the ICP was built up. We believe that a distinct target group, receptive to use of family planning, exists in Isfahan. The data indicate that those practicing family planning were likely to be urban, more educated, and more wealthy than other members of the ostan (ownership of consumer durables was used as a surrogate for wealth). However, these individuals, like all contraceptors in the area, tended to rely on traditional methods of family planning and to use these methods unsuccessfully to the extent that their completed family sizes were at the same general level as those of other groups in the society. The media campaign was designed to appeal to this target audience of couples who were assumed to be predisposed to adopt family planning and, because of their exposure to media, could be influenced to actually use family planning by the information provided in the mass media.

During the summer of 1970, materials for use in the media campaign were pretested on women attending health clinics. As an introduction to the discussion of pretesting in article III, the concept of pretesting is discussed, and it is argued that as in any marketing campaign, greater impact in family planning is achieved when materials are preselected and pretested. Women attending clinics were chosen as subjects for pretesting because many of them were already users of contraceptives, and materials preferred by present users were expected to be those that would appeal to future users. The women rated slogans, posters, radio spots, and other materials according to such criteria as "most informative," "most truthful," "most relevant," and so on.

The materials selected for the mass media campaign were to a large extent composites formed from elements preferred by these women.

The mass media project, described in article IV, took place in two stages: (1) from 21 August through 21 November, only radio was used. From 22 November to 20 December no media were used. (2) From 21 December to 20 March 1971, all forms of mass media, including radio spots and programs, films in cinema houses, exhibits, mailings, leaflets, banners, posters, newspaper and magazine inserts, and a mobile van, were employed. From April through June 1971, the impact of the campaign was evaluated by measuring the levels of contraceptive acceptance at clinics before, during, and after the media effort, by taking a province-wide sample postsurvey (April 1971) of the KAP and message recognition of respondents and comparing this with results from the presurvey, and by applying other procedures discussed in article IV. Among findings of the evaluation were the following: The number of pill users in the ostan increased by 54 percent, from 1,270 before the campaign to 1,960 a month after the campaign. The net increase for all methods of contraception was 64 percent during the six-month period of the project. Major increases occurred also in numbers of people who had heard of family planning through the media.

Although the program increased overall awareness of family planning, there was considerable evidence in the pre- and postsurvey findings that figures on reported contraceptive practice were inflated and, even if they had been accurate, the unsuccessful use of contraceptives demonstrated in the pre- and postsurveys and the lack of sufficient outlets for obtaining contraceptives were felt by the evaluators to be major barriers to changing fertility practice.

The functionary project, described in article V, began an effort in Isfahan to alleviate the shortage of motivators and outlets for contraception. The objective was to identify and mobilize those people who have a designated function in the community and who are held in respect in the community (functionaries), to examine ways in which they might support the efforts of the family planning program, and to mobilize them to participate through repeated contacts with eligible women. The project had two stages: a general functionary project in rural areas and an intensive project in both rural and urban areas.

In the general project carried out in two sharestans (counties) of Isfahan Ostan: (1) Individual surveys, conducted in June 1970, gathered information on the KAP and media behavior, work responsibilities, and potential usefulness for family planning programs of such functionaries as teachers, midwives, Literacy and Health Corps workers, and village leaders. (2) In the fall of 1970, groups of functionaries were given brief orientation courses on population issues and on how to disseminate family planning information and recruit new acceptors. The responsible government departments directed functionaries to contact potential contraceptive users on appropriate occasions. (3) The project was evaluated by examining changes in acceptances and coupons returned by acceptors and by other indirect indicators.

The intensive project, in a depressed area of Isfahan City and in several villages, combined the media and functionary treatments in an experimental effort but relied mainly on repeated visits by field workers and a home delivery contraceptive service to increase family planning practice. Following a baseline survey of each household in the area (October 1970) and an accelerated media campaign, full-time field workers and functionaries conducted home visits and group meetings. All told, each household was visited four times between October 1970 and November 1971, and contraceptive services were brought directly to the doorsteps of the population. Although limited in time and space, this intensive effort was a first attempt to coordinate media and personal contact with the provision of services in what is referred to above as a "total effort."

The results of the general functionary project and the intensive project were mixed. Although many types of functionaries—school teachers, health workers, doctors, midwives, and others—expressed willingness to inform the population about family planning and to motivate acceptors, their actual performance was limited. Two major limitations of the project were felt to be largely responsible for the low level of activity: there was no system of contraceptive services and distribution points for supplies to support functionary activities and there was no provision of incentives to them. Education by functionaries is thought to be an effective means of carrying the message of family planning to the rural population. Article VI describes present activities along these lines in the Isfahan program and in the Iran National Planning Program that resulted from the experiences of the ICP, in addition to reviewing other achievements and shortcomings of the project.

One important aspect of the ICP is that it was carefully tailored to the society in which it occurred. Before we review the various stages of the project in detail, we present a summary of the setting: the socioeconomic conditions, the available media, and the existing family planning services.

The Setting

The ostan of Isfahan has a population of well over 2 million and an area of 172,000 square kilometers. Over 51 percent of the population live in towns of greater than 5,000 population; the largest settlement is Isfahan City (estimated population, 515,000 in 1970). According to the 1966 Census of Housing and Population, 55 percent of the population was under age 20. For those older than seven, the literacy rate was 30.8 percent in 1966 (males 44.8 percent, females 16.4 percent). According to our presurvey in the summer of 1970 of 1,000 men and women in Isfahan City and Ostan, the literacy rate is now 33 percent (men 41 percent, women 28 percent). The estimated crude birth rate is 48 per thousand, the crude death rate 18 per thousand. Because of rapid in-migration, the cities have been growing at an annual rate of 5 percent. Some 18.3 percent of the population are married women in the reproductive age group (15 to 45). Half of all girls marry by age 19, and 96 percent by age 24.

Economic Development

In recent years the economy of the province has been subject to rapid change. Isfahan was long known for its textiles, handicrafts, and cottage industries, and peasant agriculture. Now a

TABLE 1 **Breakdown of gross regional product for Isfahan Ostan by sector of origin, 1972–1973 and projected for 1977–1978**

Sector	Percent	
	1972–1973	*1977–1978*
Industry	29	34
Agriculture	19	13
Construction	10	9
Transportation	9	8
Social services	6	4
Government	5	5
Trade/commerce	18	22
Utilities/ communications	4	5

Source: Report to the Plan Organization, Government of Iran, Tehran.

diversified industrial complex centered on a massive steel mill and satellite industries is growing up. After Tehran, Isfahan is the most industrialized area in Iran, and it is projected that by 1977 Isfahan will be the principal industrial region of Iran. Value added in manufacturing already exceeds that in agriculture, and this ratio will increase in the future (Table 1). Industry has been growing at 15 percent annually, compared with about 3 percent for agriculture.

Agriculture is already relatively efficient: in Iran, Isfahan records by far the highest average wheat yields on irrigated land (1,830 kilograms per hectare). High yields (particularly in garden crops, meat, milk, cereals) are achieved on very small holdings that are farmed in a highly labor-intensive fashion: of 210,000 farming units, 66 percent are less than five hectares in size. Most operators received legal title to their holdings under the land reform that began in 1962. That reform, in undermining the social and economic authority of the landlord and his retinue, was a necessary and most significant step in the quest for development and self-determination in the countryside. Increased migration to urban areas continues, however, and, as the government realizes, farmers with small holdings can raise their standard of living and sustain and increase their production only by more credits, modern management and inputs, and better marketing and processing of their crops.

In Isfahan, as in other ostans, the government has followed a policy of increasing social services in the countryside. Construction of schools and clinics has expanded. In the cities, the government has established a social security system that presently covers employees of large institutions. In the rural areas, new personnel—Health, Literacy, and Development Corps members, agricultural extension and home economics agents, cooperative society supervisors, and malaria auxiliaries—have been deployed; many of these people have received some instruction in family planning. The full impact of these programs and personnel on village life will doubtless be felt in the second decade of the White Revolution (1973–1983).

The distribution of the labor force of the ostan by major occupational group does not correspond closely to the breakdown of the regional product by sector of origin. This implies that workers in the modern sectors have a much higher productivity than those in agriculture. The government predicts that the occupational distribution of the labor force will alter in the years ahead, as increasing numbers of people leave the land and as the modern sector becomes even more predominant.

Labor force activity rates for women in urban and rural areas of Isfahan were, with the exception of those in two ostans, the highest in Iran (1966 Census of Population and Housing). Among those aged seven and above, 52 percent of the urban women and 31 percent of all women in Isfahan province had received some schooling. These proportions were by far the highest recorded in Iran (1966 Census of Population and Housing).

We may summarize and interpret these diverse facts by saying that growth and modernization in industry and the much slower development in agriculture, together with increasing employment opportunities for women and educational opportunities for children, have probably raised the relative costs of parenthood and lowered the purely economic benefits—short- and long-term—of having many children. In short, social and environmental conditions are such that a growing number of couples are eager to limit the size of their families.

Media Availability

At any time two radio channels can be heard in Isfahan Ostan, Radio Isfahan and Radio Iran. Both are owned and operated by the Ministry of Information and are transmitted from Isfahan and Tehran, respectively. The major newspapers are *Keyhan* and *Etelaat*, each of which had a circulation of approximately 5,000 in 1970. A television station in Isfahan transmits programs originating in Tehran. Fourteen cinemas in the ostan, 12 of which are in Isfahan City, have a total seating capacity of 13,000. All the weekly magazines have a circulation in Isfahan of less than 13,000. Direct mail is not used by advertising agencies, except among a limited number of professionals, and advertising is not widely employed, in billboards or elsewhere.

Family Planning Services and Acceptors

During the action phase of the Isfahan functionary project, we observed that the effectiveness of the communications inputs can be limited by the delivery system for family planning services and the types of contraceptive methods stressed. Before the action phase began, in August 1970, the ostan had 133 health stations and seven hospitals, all urban. The family planning program, active since 1966, provided pills* and condoms at 54 health stations, one hospital, and three Social Insurance Organization clinics,† as well as through eight Health Corps teams. The private sector distributed more pills than the public sector. Although the cost of pills at a pharmacy was US $0.75 a cycle compared with $0.13 in rural clinics and $0.26 in urban clinics,‡ there were more pharmacies (77) than official health premises (55), and they were open longer and often sold pills without a prescription. The IUD was provided in only 11 clinics, all in Isfahan City, ten of which were staffed by female doctors.

In 1968, 43 Health Corpswomen were assigned to work full-time on

* Official policy in Iran has favored provision of the oral contraceptive rather than the IUD. Medical opinion held that the IUD was not suitable for multiparous women. Other factors in the predominance of the pill include the limited experience of doctors and midwives in inserting the IUD and the reluctance of women to be examined by male physicians.

† The Social Insurance Organization reported its acceptors independently to their National Headquarters in Tehran; hence, their activities are not covered in this report.

‡ In 1972 free distribution of oral contraceptives was established in government clinics.

TABLE 2 **Coverage of family planning services in Isfahan Ostan, 1970**

Shahrestan (county)	*Estimated number of women aged 15–45*	*Estimated number of villages*	*Number of family planning services*
Isfahan	171,805	1,239	40
Ardestan	8,835	745	2
Semirom	6,228	182	2
Feridan	26,730	178	3
Najafabad	20,704	135	2
Shahreza	19,133	138	2
Golpaygan	16,905	130	2
Nain	8,301	757	1
Natanz	6,063	211	1
Total	284,704	3,615	55[a]

[a] Total official family planning premises: 54 in health stations and one in a hospital.

family planning. They spent half their time at clinics and were supposed to spend the other half making home visits to recruit acceptors and making follow-up visits to women who did not return for resupplies. But little relationship was found between acceptances at a clinic and the number of Corpswomen employed.

Provision of services was and remains highly uneven. During the campaign, only Isfahan City and its environs were adequately covered (40 family planning centers). In the other eight shahrestans (see Table 2), there was a total of 15 centers where pills and condoms were distributed (not including three Social Insurance Organization facilities). These centers were all located in cities or towns, but the target populations were far more rural than the population of Isfahan Shahrestan. Eight mobile Health Corps teams periodically visited a rural center and two subcenters, but the teams' family planning productivity was not significant. In all centers inventory levels of contraceptives were highly variable, because the process of distribution was never systematized.

Some 2.6 percent of all couples in the ostan were benefitting from government provided contraceptive services.

During 1970 the "typical" female acceptor was 32 years old, had five children, thought the ideal number of children was four, and wanted no more children. The average number of living children by age of the acceptor is representative of women in the childbearing ages in Isfahan:

Age of acceptor	*Average number of living children*
15–19	1.54
20–24	2.61
25–29	3.87
30–34	5.02
35–39	5.96
40+ and older	6.47

Source: Clinic records, Ministry of Health, Isfahan, Iran.

II. Isfahan: Results of the Presurvey

During May, June, and July 1970, prior to the action program, a presurvey of married individuals was carried out in Isfahan City and Ostan that provided benchmark data and program guidelines. One thousand people, 419 men and 581 women, were interviewed. Except for a small number of cases (which are indicated subsequently), the pattern of responses for men and women was quite similar.

The presurvey covered personal characteristics, knowledge of, attitudes toward, and practice of family planning, media behavior and community participation, and fertility motives. The questionnaire was long (231 questions) and challenging for the interviewer since it contained several open-ended questions. Eight Health Corpswomen were trained as interviewers. Their activities were supervised by the Deputy Director of the Isfahan Health Department and the Population Council resident advisor.

Respondents were chosen randomly from urban and rural clusters. The universe of one million (from which one interview per 1,000 was drawn) was smaller than the 1966 population of the ostan, since several autonomous districts were not covered. In Isfahan City (1966 population, 424,000), 424 interviews were conducted. The other towns and villages of the province were ranked in population groupings of 0–49, 50–100, and so forth, and 576 interviews were distributed among these groupings in proportion to the total number of people living in communities of such sizes.

Within Isfahan City and the largest provincial towns, clusters of 20 households each were drawn according to such social and economic criteria as the availability of public services and the value of residential lands and structures, and these clusters were designated as containing high, middle, or low income households. A set of clusters, whose number depended on the total number of clusters that fell into each income class, was drawn at random from each class. Within every cluster a husband or wife from each household was interviewed. In like manner the villages that had been grouped by population size* were divided into clusters of equal size. Clusters were randomly selected, and, again, in each cluster some 10 men and 10 women, on average, were interviewed.

In comparison to the 1966 census, rural women aged 30 and over are overrepresented in the survey sample, and, therefore, rural women under 30 are underrepresented. Nevertheless, the age distribution of female respondents corresponded fairly closely to the census age pyramid of married Isfahani women, except for a slight underrecording of women aged 45 and over. The age distribution of male respondents was overly representative of older groups. Thus, cross-tabulations involving age data were made for female respondents alone, as in Table 3.

The effect of these age biases in the sample was minimal. For all respondents, the relationships of age and number of living children and of age and number of pregnancies resembled those of family planning acceptors at clinics. The cross-tabulations by age and other factors for females only were similar to such cross-tabulations for males since men and women generally gave similar answers to the various questions. The relationships of awareness of population trends, family size and attitudes,

* Size of village is an indicator of the prosperity of the settlement.

TABLE 3 **Demographic and family planning characteristics by age, for females, Isfahan Ostan, May 1970 presurvey**

Characteristic	Age 15–19	20–24	25–29	30–34	35–39	40–44	45+	All ages
Number of respondents	69	153	124	105	81	33	8	573
Fertility and family size				Average				
Number of living children	1.5	2.6	4.2	5.3	5.5	—4.6[a]—		4
Number of pregnancies	1.9	3.5	5.7	6.8	6.8	—6.1[a]—		5.6
Ideal family size	2.7	3.6	3.9	4.3	5.1	3.7	3.5	3.8
Awareness of population trends				Percent				
Perceived mortality decline	57	50	55	64	59	73	38	57
Thought population growth excessive	48	58	52	54	56	55	50	52
Expectations for old age								
Expected old age support from children	91	88	94	95	89	91	88	92
Pregnancy status and attitudes								
Currently pregnant	16	20	12	11	9	3	0	14
Desired last pregnancy	88	63	60	50	51	—61[a]—		65
Family size attitudes								
Discussed family size with spouse	77	76	77	64	63	—78[a]—		73
Felt family size was up to God	19	16	10	16	14	21	25	16
Approved of family planning	96	86	81	86	83	82	100	85
Knowledge and use of contraception								
Knew methods	88	88	85	80	77	85	88	84
Ever used	38	52	46	37	38	42	62	44
Current users	29	41	41	30	31	36	25	35

[a] Refers to respondents aged 40 and older.

and knowledge and use of contraception with age for females, as given in Table 3, were similar to those found in KAP studies elsewhere.

Characteristics of Respondents

Fertility History

For men and women, the mean and median number of living children was 4.0; the mean number of pregnancies per woman was 5.6. Fifty-six percent of the women and of the wives of the men interviewed had been pregnant in the previous two years, 70 percent in the last three; 65 percent of all respondents desired their or their spouse's last pregnancy, and 14 percent were pregnant or had pregnant wives at time of interview. Among those with at least one living child, the proportion desiring their or their wives' last pregnancy declined uniformly with number of living children (Table 4). Two-thirds of respondents believed they were still fertile; only 1.4 percent had been sterilized. Half had experienced the death of at least one child, one-fifth two or more; 28 percent had had a miscarriage or stillbirth. For all couples, number of living children varied directly with the number of child deaths (Table 5).

TABLE 4 **Percent with specified characteristics by number of living children, Isfahan Ostan, May 1970 presurvey**

Characteristic[a]	Number of living children 0	1	2	3	4	5	6	7	8	9	Total
Expecting old age support from children	84	96	96	93	98	98	96	95	100	100	92
Desired last pregnancy	62	95	77	69	69	54	45	42	38	37	65
Would pledge to have no more children	22	8	22	31	42	40	66	46	52	47	35
Would have taken the pill on the spot	16	16	24	23	27	35	24	33	21	42	26
Use of contraceptives											
Ever used	32	31	45	44	45	34	46	40	41	32	41
Currently using	19	26	39	38	36	29	37	27	38	37	33

[a] For female respondent or wife of male respondent.

TABLE 5 **Average number of living children and average ideal family size by number of child deaths, Isfahan Ostan, May 1970 presurvey**

Number of child deaths	Average number of living children	Ideal family size	Number of respondents
0	3.3	3.5	483
1	3.9	3.8	202
2	4.6	4.2	147
3	4.8	4.1	76
4+	4.9	4.2	92
Total	4.0	3.7	1,000

Ideal Family Size

Men reported an ideal family size of 3.8, and women 3.7; 17 percent felt that family size was up to the will of God. Those under age 24 had lower ideals, as did professionals, army and government employees, and, in general, all urban groups. Families with few child deaths had lower ideal family sizes than those with many child deaths (Table 5).

Perception of Population Trends

As shown in Table 6, 52 percent thought population growth excessive. Of those, 43 percent cited declining mortality and 56 percent higher fertility as causing the high rate of growth.

Perception of mortality varied widely. Fifty-seven percent expressed the belief that more children were surviving than in the past, 40 percent that fewer were surviving; two-thirds feared some of their own children would die. Awareness of declining mortality was not related to age, education, or occupation, but was closely associated with place

of residence (Tables 3 and 7). Villagers were the most aware of declining child mortality.

Sources of Fertility Motives

A number of questions attempted to clarify the sense in which fertility motives were a response to the experiences and expectations of respondents.* Several types of questions were posed: some called for a "yes," "no," or "don't know" answer, where some past or possible future action by the respondent was indicated; others asked for approval or disapproval of some contemplated public action that would affect the population at large ("Would you approve of a law requiring parents to provide minimum standards for each additional child?"). Respondents were also asked to qualify as true or false and to rank in order of importance some hypothetical statements about the reasons why couples (in general) have large families. Finally some open-ended questions of the following type were asked: "What would be the best way of rewarding couples who have only 2 or 3 children?" These findings merit attention if only because of the limited knowledge of these matters. The interviewers did not attempt to measure the intensity of attitudes reported, but some questions used a rank order technique.

The results suggest that fertility attitudes are closely related to perception of the demands of the environment. The vast majority of respondents indicated that they expected their children's help as laborers and sources of support in old age. However, most respondents very readily associated the notion of declining fertility on their part with improvements in their life style. For example, 57 percent agreed that government old-age support would encourage couples to have small families; this question was asked in several forms. Ninety-five percent agreed that two or three children could get a better upbringing, and that a few educated children could provide better support for their parents' old age than four or five uneducated children. Sixty-nine percent of farmers and 57 percent of workers stated that they would prefer mechanical aids rather than more children to assist them in their work.

* For a complete set of these questions and answers write to Health Department, Box 11-1758, Tehran, Iran, and refer to "Beyond Family Planning Questions."

TABLE 6 **Percent with specified characteristics by occupation for men and husbands of women; Isfahan Ostan, May 1970 presurvey**

Characteristic	Workers	Farmers	Government employees	Army, police	Teachers	Shopkeepers	Specialists/doctors/businessmen	Total
Number of respondents	317	265	84	23	35	215	16	960
Family size attitudes								
Ever discussed family size	77	60	88	70	74	78	88	74
Ideal number of children								
Left to God	13	32	3	13	14	14	0	17
Number (average)	3.8	4.3	3.3	2.7	3.6	3.6	3.0	3.7
Wants work force support from children	96	99	85	87	94	97	75	96
Expects old age support from children	92	96	84	78	80	93	62	92
Thought population growth excessive	59	27	70	83	60	58	56	52
Family planning attitudes and knowledge								
Had heard of the family planning program	23	13	46	61	60	21	62	62
Approves of family planning	83	69	98	87	94	89	100	83
Knew methods	83	65	94	91	97	85	100	80
Practice of family planning								
Ever used	42	17	71	70	74	45	81	41
Used currently	35	12	61	65	54	39	75	33
Used pill currently[a]	10	8	16	13	3	9	62	10
Used withdrawal currently	29	9	47	57	54	31	81	28

[a] Or, whose spouse used the pill currently.

Ninety percent expressed the belief that large families should pay higher taxes; two-thirds agreed with the suggestion that Social Insurance Organization child allowances should stop after the third child; half stated that they would have fewer children if such benefits and free maternity services were abolished. Eighty percent approved of a hypothetical plan for a scheme of child allowances declining with number of living children. Nearly all (98 percent) agreed with the suggestion that small families be given some kind of reward. Fifty-two percent felt that a good education was the most suitable reward; 25 percent thought cash was. Ability to provide more education for fewer children was most frequently cited as a rationale for limiting family size. With or without a reward, 35 percent were prepared to pledge to have only two or three children.

On attitudes about use of contraceptives (Table 7), 83 percent expressed approval of family planning. Seventy percent thought their religion (Islam) approved of contraception; but fewer rural (53 percent) than urban (82 percent) respondents thought so. Although 93 percent stated that approval of their spouse was prerequisite to practice, only 52 percent believed that approval would be forthcoming (not shown in tables). Questioned separately, husbands and wives registered high approval. And most respondents indicated that they had discussed their desired family size with their mate.

Knowledge and Practice of Contraception

Of all respondents, 80 percent knew some method of contraception; for each method women were more aware than men.

Method	Percent		
	Men	Women	All respondents
Pill	77	89	84
IUD	39	56	49
Withdrawal	48	53	51
Sterilization	27	27	27
Condom	55	64	60

Knowledge hardly varied by age (Table 3), but there were differences by occupation (Table 6). Among all groups, uneducated peasants were the least aware. Of those who had heard of the pill, 40 percent had heard only negative information—this may even understate the prevalence of misleading and erroneous information. Thus, stated figures should be regarded as absolute minima. Seventy-nine percent of respondents expressed the desire to obtain more information on contraception.

The women indicated that on the

TABLE 7 **Percent with specified characteristics by place of residence and sex: Isfahan Ostan, May 1970 presurvey**

Item	Isfahan City		Other cities		Villages		Total
	Women	Men	Women	Men	Women	Men	
Number of respondents	255	160	50	60	251	213	989
Family size attitudes							
Ideal number of children							
Left to God	5	7	10	18	24	30	17
Number (average)	3.5	3.4	3.3	3.7	4.8	4.4	3.7
Wanted old age support from children	88	88	90	89	94	97	92
Wanted work aid support from children	93	94	98	92	98	100	96
Perceived mortality decline	47	42	62	51	68	72	57
Thought population growth excessive	65	58	76	67	41	36	52
Family planning attitudes and knowledge							
Approved of family planning	95	90	98	89	72	69	83
Thought Islam approved	87	78	84	80	57	47	70
Would pledge to have 2 or 3 children	45	37	38	25	32	26	35
Would have taken pill on the spot	24	26	18	15	29	25	26
Had heard of the family planning program	72	70	80	69	53	47	62
Contraceptive knowledge							
Knew							
Pill	97	91	92	80	84	46	84
IUD	81	67	82	72	46	29	49
Withdrawal	48	48	56	39	30	23	51
Sterilization	42	42	42	54	24	22	27
Condom	82	80	84	77	51	51	60
Contraceptive use							
Ever used contraceptives	69	63	48	44	18	15	41
Currently used contraceptives	62	54	30	32	11	12	33
Ever used pill	30	23	22	20	12	10	19
Currently using pill	12	12	8	5	8	7	10
Ever used withdrawal	53	46	34	34	8	5	22

Note: Place of residence was illegible on 11 questionnaires; they were not used in this table.

average they desired family planning field workers to be female, married, over 25 years old, and practicing contraception.

Of all respondents, 41 percent (44 percent for women) had ever used a method of contraception (Table 7). When questioned directly, 38 percent of those ever practicing contraception mentioned having used the pill, 41 percent withdrawal, 18 percent the condom, and 3 percent the IUD. Thirty-eight percent expected to use a method in the future. Among all respondents, 19 percent had used the pill and 22 percent had practiced withdrawal. Of those who did not want their (or their spouse's) most recent pregnancy, only 46 percent were currently practicing contraception. Half of those interviewed believed their relatives or friends had ever practiced contraception.

Use of all methods was relatively rare in rural areas (Table 8B) and among those whose work demanded little formal education (Tables 8A and 6). Current use of contraception decreased with age (see Table 3). Ever use showed an irregular pattern with age.

In spite of disparities in contraceptive practice, urban and rural groups and all occupational groups arrived at similar average completed family sizes and average numbers of pregnancies experienced. This similarity in average numbers of living children and pregnancies may reflect a dependence on traditional methods and an inability to use these methods effectively. For instance, among those currently practicing, traditional methods were relied on more often—withdrawal (41 percent), condom (21 percent)—than the pill (18 percent), IUD (5 percent), and sterilization (2 percent).

Education was moderately related to contraceptive use. For both men and women, those with three years or more education had ever used and were currently using contraceptives considerably more than those without any formal education (Table 9). These differences by education were primarily due to use of traditional methods rather than to use of the IUD and pill, which were used by respondents with no and with three-or-more years education to about the same extent (data not shown).

It seemed possible that those who had experienced or feared high child mortality levels might be less likely to practice contraception. But only the older, rural women have experienced atypical levels of child mortality, and, as shown above, they were unlikely to practice contraception anyway.

Users of all methods preferred to get their resupplies and advice from private doctors rather than from the health stations.

Exposure to Mass Media

Information on mass media exposure was gathered to assist in designing the mass media campaign and to determine which media should be emphasized.

Radio: 75 percent have ever listened and 65 percent owned a set. Of all listeners, 84 percent listened at home, 50 percent daily, and about the same number in the morning and at night (30 percent). Sixty-nine percent listened on Friday, whereas for 25 percent the day of week and for 66 percent the season made no difference. Of the two radio stations, 36 percent listened to Isfahan, 64 percent to Tehran. Among programs, music (23 percent), news (44 percent), plays (40 percent), the educational program (15 percent) and stories (6 percent) were preferred. Twenty-seven percent had heard family planning information on the radio before the campaign began.

Mail: 59 percent received mail at least monthly and 58 percent had home delivery, 6 percent daily, 11 percent weekly, and 38 percent monthly. Among those who could not read, about half had their spouse or children read letters for them; the others called on friends.

Television: 36 percent watched once in a while, and 12 percent owned a set. Of all who watched TV, 34 percent watched every day, 46 percent in the home of relatives. Of those who had watched the day before the interview, 37 percent watched in the evening and 23 percent in the morning. "Peyton Place" (17 percent) and "Sarkar Ostovar," a comedy about the gendarmarie, (21 percent) were program favorites followed by Iranian music (9 percent), the news (8 percent), and films (8 percent).

Movies: 28 percent went to movies: of these, 31 percent weekly, 16 percent monthly, 53 percent sometimes. Twenty-four percent remembered pre-film advertisements with music, 11 percent remembered all the ads, and 6 percent remembered the colorful ads.

Newspapers: 33 percent of the total population were able to read newspapers, and 73 percent of these actually did: 24 percent weekly, 23 percent monthly, 36 percent daily. Fourteen percent read all sections of the paper, 34 percent the news, 22 percent traffic accidents. Of illiterates, 22 percent had the news read to them (by their spouse or children). In all, 14 percent had read something on family planning in the newspaper.

Magazines: 21 percent read magazines, of these 56 percent read *Today's Woman* and 20 percent *Weekly Etelaat.*

Contact with these standard communications channels varied with age, education, and residence of respondent, although not always systematically (see Tables 10, 11, 12). As expected, those living in the city of Isfahan were the most exposed to newspapers and the radio and also were more likely to have heard about family planning through these sources.

Modern Consumption, Fertility, and Contraceptive Practice

For the Isfahan region, income data are suspect and wealth estimates do not exist. In the analysis of the effects of economic status on the fertility of households and on the use of contraceptives, the level of ownership of modern consumer goods was adopted as an index of the material resources. However, modern consumption may be regarded as a variable of special significance in itself. Thus, Deborah Freedman (1970) noted that of the 2,443 families interviewed in the family planning survey of Taichung, Taiwan, families owning modern objects were more likely to be "modern" in the use of family planning. From this larger sample, Freedman took three groups of 100 families—each group "substantially comparable" with regard to family income and education of husband but representing different levels of possession of modern consumer goods. Here too she found that families who were more modern in consumption were more likely to be modern in other ways favorable to development, such as in the use of family planning.

TABLE 8 **Demographic and family planning characteristics (A) by occupation for men or husbands of women aged 35 or over and (B) by residence and sex for those aged 35 or over, Isfahan Ostan, May 1970 presurvey**

A. By occupation

Characteristic	*Worker*	*Farmer*	*Government employee*	*Tradesman*
Number of respondents	124	102	35	77
			Average	
Number of living children	4.5	4.7	5.1	4.8
Number of pregnancies	6.2	7.2	6.7	8.1
			Percent	
With more than 7 children	20	25	26	23
Ever used contraceptives	39	18	68	40
Currently using[b]	34	12	56	36
IUD	0	0	3	0
Pill	10	8	21	12
Sterilization	1	1	0	0
Condom	6	1	15	9
Withdrawal	20	5	29	14

B. By residence and sex

	Rural		*Urban*	
Characteristic	*Female*	*Male*[b]	*Female*	*Male*[b]
Number of respondents	62	95	36	102
			Average	
Number of living children	5.6	5.5	6.1	5.6
Number of pregnancies	8.6	8.0	8.3	7.5
			Percent	
With more than 7 children	23	33	39	24
Ever used contraceptives	19	17	58	61
Currently using[a]	11	13	47	53
IUD	3	0	0	3
Pill	6	10	17	13
Sterilization	3	0	0	0
Condom	0	1	25	5
Withdrawal	2	4	22	36

[a] Breakdowns of users by method do not sum to 100 because of use of methods not specified here and because of inconsistent responses.
[b] For males aged 40 or over.

TABLE 9 **Percent with specified characteristics by education and sex, Isfahan Ostan, May 1970 presurvey**

Characteristic	*3 years or more education*[a]		*No formal education*	
	Men	*Women*	*Men*	*Women*
Number of respondents	157	166	216	339
Discussed family size	84	83	73	71
Ideal family size				
Left it to God	16	23	31	28
Number (average)	4.0	3.6	4.1	3.9
Expected old age support	86	86	94	92
Thought population growth excessive	87	92	88	84
Approved of family planning	87	95	76	83
Knew[b]				
Pill	93	97	80	88
IUD	65	81	53	60
Withdrawal	48	48	24	35
Sterilization	42	41	28	30
Condom	77	81	57	61
Ever used contraceptives	60	72	24	33
Currently used contraceptives	49	61	18	27

[a] Excludes a small number with indeterminant levels of education.
[b] Open-ended question. Withdrawal was underreported.

TABLE 10 **Percent with selected media exposure by age, Isfahan Ostan, May 1970 presurvey**

Media exposure	Percent							All Ages
	15–19	20–24	25–29	30–34	35–39	40–44	45+	
Number of respondents[a]	77	171	173	179	152	116	123	991
Listened to radio	79	80	76	69	68	77	68	75
Had heard about family planning on the radio	35	30	23	25	19	25	19	27
Read newspapers	30	23	22	21	18	28	32	25
Watched TV	39	41	36	31	32	41	33	36

[a] Excludes seven with no response.

TABLE 11 **Percent with selected media exposure by education and sex, Isfahan Ostan, May 1970 presurvey**

Media exposure	3 or more years education		No formal education[a]		Total[b]
	Men	Women	Men	Women	
Number of respondents	157	166	216	339	
Listened to radio	90	93	60	67	75
Read newspapers	65	62	10	2	25
Saw films	53	59	14	2	28
Spouse saw films	40	61	6	16	28

[a] Respondents may have attended literacy classes.

[b] Total includes those with intermediate education and those with education unknown, not shown separately.

TABLE 12 **Percent with media exposure by place of residence and sex, Isfahan Ostan, May 1970 presurvey**

Media exposure	Isfahan City		Other cities		Villages		Total
	Women	Men	Women	Men	Women	Men	
Number of respondents	255	160	50	60	251	213	989
Listened to radio	89	85	68	67	59	66	75
Owned a radio	87	76	60	56	45	50	65
Heard of family planning on the radio	40	39	20	18	13	15	27
Able to read newspaper	59	51	14	51	7	28	33
Read newspapers	38	39	10	39	5	22	25
Had read of family planning in newspaper	24	13	6	8	4	2	14
Read magazines	37	33	13	28	4	14	21

The data obtained in the 1970 presurvey of Isfahan Ostan do not permit such a fine cross-classification by characteristic of respondent. The relevance of Freedman's results for Isfahan and possibly for much of Iran and the Middle East, however, can be put to broad test.

Ownership of consumer durables was in fact related to current use of contraceptives. As shown in Table 13, a higher percent of current contraceptors owned each of ten different consumer durables than did current noncontraceptors, and, conversely, a higher percent of owners of each of the ten consumer durables were currently using contraception than were nonowners. For each good, moreover, owners had a greater tendency to save than nonowners. In addition, according to data not shown in the table, 56 percent of those who saved for the future used contraceptives as opposed to 30 percent of nonsavers.

The relationship of contraceptive use to ownership of particular goods is confounded by interrelationships with income, wealth, age, tastes, leisure preference, and place of residence. Thus, the respondents were classified by age (under 35 and 35 and over), place of residence (village and city), and number of consumer durables owned (0–3, 4–6, and 7–10), and values on selected demographic, family planning, and savings characteristics were computed for each combination as shown in Table 14. For young city women, there is virtually no difference in number of living children, number of pregnancies, or ideal number of children by number of durable goods owned. Young village women, however, do have an inverse relation between these characteristics and number of owned goods. For the older women, the relation of number of goods with living children and pregnancies is either direct for village women or U-shaped for city women; ideal number of children is inversely related to number of goods owned for both village and city older women. Although ideal number of children is inversely related to number of durable goods for all groups, as expected, actual numbers of living children and of pregnancies are not so related, in general.

The explanation for this seemingly contradictory relationship does not come in differentials of knowledge or general use of contraception, which in general are inversely related to number of consumer durables owned within age and residence controls. Neither does the type of contraceptive currently used by those who used contraception appear to explain the lack of the expected inverse relation between number of durable goods owned and actual fertility. For instance, for both the older and younger village women, current pill use is higher for women with more durable goods, even though for older women, those with more durable goods have had higher previous fertility than those with less goods. Conversely, for the older city women, but not for the younger city women, those with 7–10 goods have much higher use of the uncertain method of withdrawal than have women with fewer goods but they also have lower fertility than women with 4–6 goods.

Thus, the data tentatively support the observation that in Isfahan Ostan as in Taichung, Taiwan, those who were modern in consumption were also modern in their attitudes toward ideal family size and use of family planning. But, in Isfahan, modern consumption did not distinguish those who had successfully avoided unwanted children. On the contrary, modern consumers appeared to depend on ineffectively used methods, and the older women had about two children more than their stated ideal. In the absence of further data, success in limiting family size appears not to be related to either the desire for a certain number of children or the process of acquiring modern goods.

TABLE 13 **Percent owning consumer durables by contraceptive use, using contraceptives by owning, and saving by owning, for specified durables, Isfahan Ostan, May 1970 presurvey**

Characteristic	Consumer durable									
	Bicycle	*Radio*	*Watch*	*Clock*	*Phonograph*	*Electric fan*	*Sewing machine*	*Refrigerator*	*Electric heater*	*Stove*
Owning each consumer durable										
All respondents	38	65	69	24	9	36	42	23	9	22
Current contraceptors	44	89	82	43	17	62	69	45	20	23
Current noncontraceptors	35	57	59	15	6	24	29	12	5	13
Using contraception currently										
Owners of durable	38	43	42	58	59	57	54	65	68	62
Nonowners of durable	27	17	12	25	31	20	18	24	30	25
Saving										
Owners of durable	23	21	22	41	49	32	30	41	52	39
Nonowners of durable	13	8	6	9	13	8	7	10	13	10

Implications

We may summarize the results of this and the preceding sections. The respondents who were modern in consumption, educational background and/or occupation (membership in these three groups was highly correlated) displayed favorable attitudes toward family planning and professed to have practiced contraception extensively. But possession of such modern characteristics was not correlated with successful limitation of family size. On the contrary, individuals with such attributes used contraception ineffectively or irregularly, and went on to have one to two children more than their stated ideal.

The literate and relatively well-off segment of the population was more likely to accept modern family planning methods and, thus, was likely to respond favorably to a media campaign that recommended adoption of modern contraceptives. Apart from their apparently favorable attitudes toward and previous experience with birth limitation, this group was regarded as a primary target for a selective media campaign by virtue of their consumption pattern. Their already considerable holdings of modern goods (7–10), including radios and televisions; their high media exposure; and their high savings rates (Table 14) distinguished this group as one likely to respond favorably to selective advertising appeals. Moreover, with a dynamic local economy, increasing educational opportunities for children and employment opportunities for women, the

TABLE 14 **Characteristics of respondents by age, residence, and ownership of consumer durables, Isfahan Ostan, May 1970 presurvey**

Characteristic	*Under age 35*					*Age 35 and over*					
	Village		*City*			*Village*		*City*			
	0–3 goods	*4–6 goods*[a]	*0–3 goods*	*4–6 goods*	*7–10 goods*[a]	*0–3 goods*	*4–6 goods*[a]	*0–3 goods*	*4–6 goods*	*7–10 goods*	*Total*[b]
Number of respondents	202	26	90	127	116	193	22	45	65	49	374
	Average										
Number of living children	3.4	2.7	3.0	3.2	3.2	5.0	5.6	4.8	5.6	4.9	4.0
Number of pregnancies	5.1	3.8	4.1	4.3	4.1	7.4	8.0	6.8	7.6	6.4	5.6
Ideal number of children	4.2	3.4	3.3	3.3	3.2	4.6	3.7	4.6	3.4	3.1	3.8
	Percent										
Who had one or more children die	64	47	33	38	29	71	50	58	51	49	50
Left ideal family size to God	26	19	4	5	3	27	27	13	14	6	17
Knew[c]											
Pill	84	100	93	98	97	77	95	93	95	92	84
IUD	43	69	74	75	88	42	73	69	74	76	49
Withdrawal	34	54	36	54	50	19	32	53	46	49	51
Sterilization	25	38	52	36	51	21	22	42	48	35	27
Condom	51	65	76	89	81	55	64	82	77	67	60
Ever used contraceptives	17	44	48	70	74	18	22	47	62	71	41
Use currently	10	15	40	59	66	11	22	42	51	63	33
Of all who ever used, currently using											
Pill	18	19	6	18	19	5	23	9	20	16	10
IUD	—	—	1	2	3	1	4	—	—	2	1
Sterilization	—	—	—	—	2	1	—	5	—	—	1
Condom	2	—	5	11	20	2	—	11	14	10	1
Withdrawal	3	4	32	34	29	4	—	22	28	45	8
Nothing	77	77	56	35	27	87	73	53	38	27	69
Who saved money	5	31	10	32	52	4	23	7	11	45	17

[a] Includes a small number of respondents in villages owning 7–10 modern goods.
[b] Sixty-five questionnaires were rejected for inadequate specification.
[c] Open-ended question.

potential market for modern contraceptives seems destined to grow.

Reliability and Validity

We have referred in several instances to problems of reliability and validity of data. All income data were rejected and education data used conservatively because of obvious unreliability in responses. In some cases reported use of withdrawal was probably understated and extent of use of the pill exaggerated. Older respondents probably tended to understate the number of pregnancies, stillbirths, and other pregnancy losses that they had had. We now mention several other cases where validity and reliability of the data are in question.

Simple cross-tabulations tested the validity of contraceptive knowledge and practice. Fortunately, there were very few people who claimed to practice family planning, and, in particular, to use the pill, while stating elsewhere they had no knowledge of this and other methods. One minor response error showed up. Of the 37 who had no living children, 23 stated that they did not want their last pregnancy (Table 3). It is true that 15 of these had suffered the death of one child. But it is doubtful if the difference can be made up entirely by abortions, miscarriages, and stillbirths.

The data shown in Table 8 lead to questions about the validity of reported ever and current use of the pill. For example, urban women (47 percent currently practicing contraception, 17 percent using the pill) still emerged with an average parity above that of village women; wives of government employees had the highest recorded average parity and were the most consistent pill consumers. Future surveys should correct against an upward bias in reported pill use by requiring interviewers to see the current cycle in use.

A comment on abortion is appropriate. Based on presurvey responses, we should conclude that abortion is neither widely accepted nor practiced. Only 38 women (3.8 percent) admitted having had an abortion. When asked if they would visit a doctor to get an abortion in the event of an unwanted pregnancy, 92 percent gave negative responses; 87 percent disapproved of providing abortion on request—and virtually no difference in response emerged from educated groups (83 percent) as opposed to uneducated groups (86 percent). These results were confirmed in other Isfahan surveys. In the Isfahan postsurvey, 2.4 percent said they had had an abortion. In the functionary surveys, doctors and midwives reported that women wanting abortions came to them only infrequently. Nonetheless, midwives, when asked to mention popularly used abortion methods, provided interviewers with a virtual catalogue of folk remedies. There is other evidence that the validity of the presurvey abortion responses is questionable. Dr. Abedin-Zadeh (1970) found that 30 percent of the 786 acceptors interviewed at family planning clinics in Khuzestan in 1969 had had at least one abortion. In the Gulicks' study of fertility in Isfahan,* the calculated abortion rate was low when based on responses to direct questions. But an examination of individual pregnancy histories revealed that at least 13.9 percent of respondents had had induced abortions.†

* Personal correspondence with M. Gulick.

† Abortion is at present illegal in Iran unless the life of the mother is endangered, but the law is not enforced rigorously. Abortion early in pregnancy is apparently frequently attempted and widely accepted.

III. Pretesting Family Planning Communications Materials

There has been little pretesting of the message content of family planning communications programs. The Isfahan Communications Project (ICP) pioneered in this area. In this article, we argue that pretesting should be an integral part of a communications effort, and we indicate what pretesting should accomplish. Actual procedures, the development of instruments, and the elimination of bias are described. We illustrate by explaining how the materials used in the ICP were pretested.

Why Pretest

In many communications campaigns, decisions over message content, at best, reflect program objectives, highly visible audience characteristics, and the limitations of available media. At worst, selection of media and materials are haphazard or are left to artists and others who are not knowledgeable of the public's needs and reactions. Concern with specific message content must increase with the recognition that a large proportion of those married women who approve of and have practiced some form of contraception are not effectively controlling their fertility. This situation holds even though knowledge of new methods is widespread.

Careful pretesting of materials is necessary because acceptance of contraceptives, like that of any other new product or process, depends on the tastes and preferences of consumers. Establishing family planning as a mass phenomenon is a problem in marketing. Reputed benefits must be established credibly; the practice itself must be legitimized.

Businessmen know that advertisements differ significantly in the extent to which they convey intended meaning and in the intensity of involvement they arouse. Advertising is most successful when, as a result of underlying conditions, there is a rising primary demand for the product. In such a case, selective advertising campaigns will be effective when powerful emotional buying motives can be appealed to, when the product can be differentiated from possible substitutes, and when is it relatively inexpensive and easy to acquire. Pretesting is considered advantageous when a new product is to be introduced, when advertising is the dominant force in the marketing campaign, and when people are likely to change their ideas about a product.

These guidelines governing the use of advertising in general, and pretesting in particular, apply to the diffusion of family planning in areas like urban Isfahan where contraceptive services are adequate. Modern contraceptives are new goods, superior to old methods, for which a distinct and growing market exists. Furthermore, the decision to use contraceptives reflects fundamental feelings and motives. But, because of our imperfect understanding of the motives and factors favoring or limiting fertility in developing countries, we need to undertake research to isolate particular qualities of contraceptives and family planning that, when publicized, would stimulate widespread

adoption. In this respect, findings of KAP surveys, such as the May 1970 Isfahan presurvey, with regard to stated attitudes toward fertility, population growth, and family planning may be useful. Pretesting takes the inquiry a step further by addressing two problems. First, what do people want to know about family planning and what aspects are considered relevant and beneficial? Second, how can these qualities be effectively communicated? For example, in the pretest of radio spots in the ICP, 119 women were asked questions relating to these problems: what type of information would arouse interest and encourage women to seek assistance at clinics, why do people have large families, and who should make the broadcasts.

At the same time, exclusive reliance on pretesting should be avoided. For a number of reasons the pretesting context differs from that of the normal encounter with media. Even if sample and interview bias can be minimized, there remains the fact that pretesting occurs in an artificial environment at a fixed moment of time. The effect of constant repetition of the message and the interaction of the message with other channels cannot be ascertained. These problems will be considered in the section of this article on diagnosing bias.

The Theme

In market economies, new products are often quickly accepted following media campaigns that, in a striking way, establish the basic advantages of a product and the product's capacity to deliver these advantages. Thinking is directed to an identifying symbol, a keynote idea or slogan that serves as a focal point. Pretesting may be applied to the overall theme or to such components of the symbol and slogan as musical background, design, color, lettering, and so on. Family planning goals may be conceptualized and publicized in this way as well. By constantly using a single theme, a design integrated with a verbal message, the notion of family planning may be established.

Pretesting is employed to develop a unified and harmonious theme that fits local media possibilities. This theme is made up of a symbol, a design, a catchy slogan, a musical jingle, and a concept (such as a comment on the safety of the pill). The theme that is finally adopted must conform to the communications strategy of the family planning program. In the ICP, standard and local media were used intensively to create and sustain interest in contraception. Furthermore, messages consisting of brief sentences conveying relevant reasons for having small families and using contraceptives were repeated constantly. Our main criterion was that the symbol be immediately recognizable and without prior significance so that for the audience it would stand only for family planning. As for the design, simplicity, boldness, and ease of reproduction were key criteria. In Isfahan, after extensive pretesting the theme that was finally adopted was "Two or three children are better; the loop and pill are safe" accompanied by the rhythmical ringing of a bell called the zangole and illustrated by drawings showing the family planning symbol and a female doctor displaying the loop and pill to a two-child family. The symbol was provided by the national family planning program. It was the Persepolis flower enclosing a family of four.

Procedures and Instruments

Pretesting is essentially a matter of comparing slogans or designs. There are three basic techniques of comparative analysis—the monadic design, the paired comparison, and the rank order test. In the monadic design, each respondent is asked about a single slogan or picture. Effectiveness depends on how the respondents value the materials using varying criteria. In the paired comparison design, people are exposed to two messages and asked to rate them and to explain their preferences. For more than two messages the test can be repeated until each possible combination has occurred with the same frequency. In the rank order test, respondents rank three or more messages according to one or more criteria. In the Isfahan pretest, we employed the criteria of simple preference, truthfulness, most informative, and most understandable.

The issue of the frame of reference employed by the particular respondents is related to the general problem of bias in sample and interview. Several problems can be distinguished, all stemming from the abnormal context in which pretesting occurs. (1) The persons questioned may not fully represent the target audience. (2) Respondents may give more attention to the messages than they would normally. (3) The slogan or designs may appear in artificial and preliminary forms and sequences. For the most part, corrections can be made for bias, or the very abnormality of the context can be used creatively.

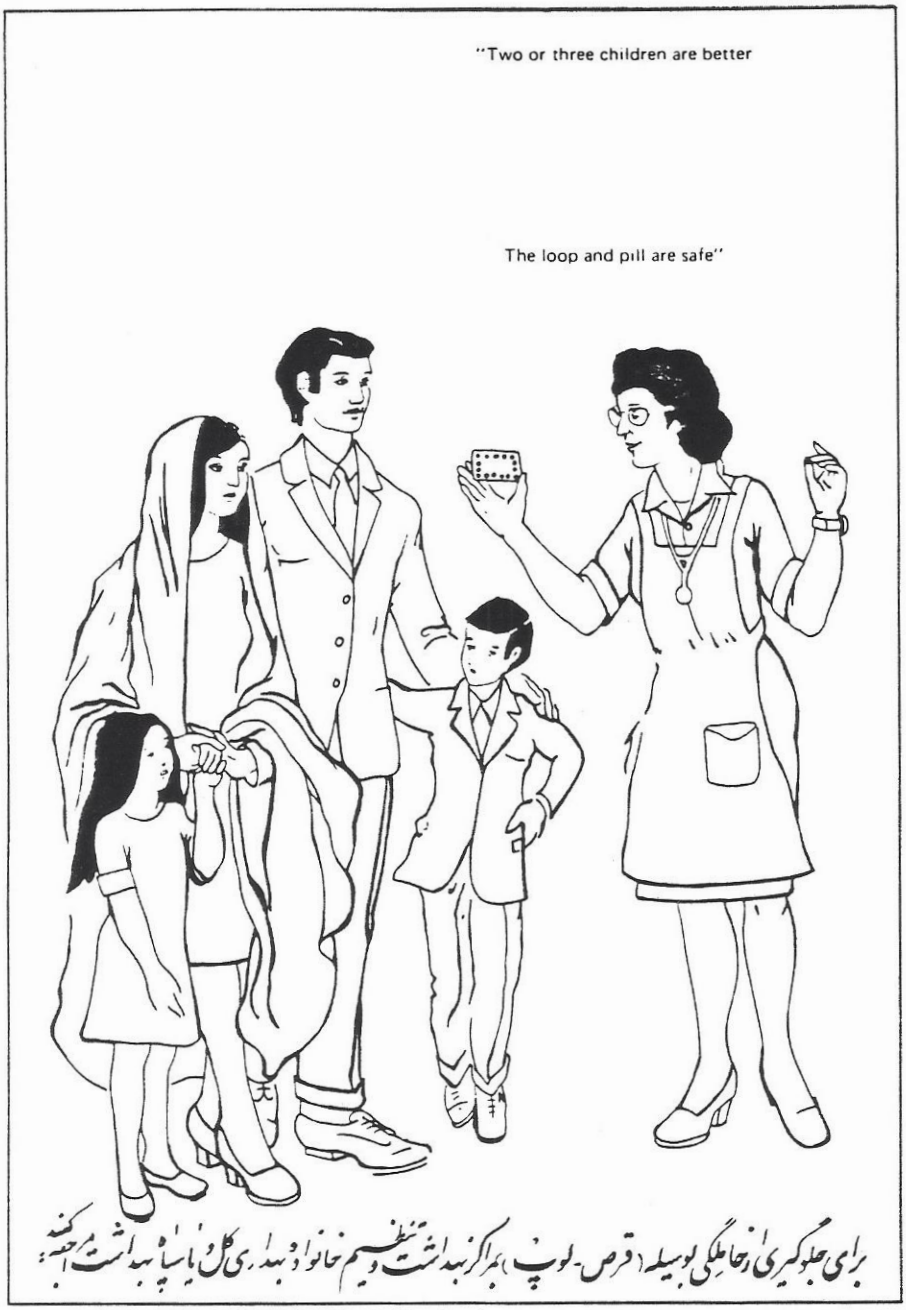
(1) In advertising research, pretest respondents are often selected by a judgmental rather than a probability sample. This procedure should be followed in testing family planning messages. Various programmatic objectives, KAP survey results that reflect the levels of awareness, acceptor characteristics, and baseline data collected in pretest interviews must be used to define the audience for a family planning communications program.

In the ICP, a rather narrow definition of audience was adopted for pretest purposes. To test the posters, slogans, pamphlets, and radio spots, 449 female visitors to health clinics were selected at random and individually interviewed. Compared with a profile of Isfahani women derived from the presurvey these women were younger, of lower parity, more literate and urban, and more exposed to media and government services. They were more aware of contraception and far more likely to have used or to be using modern methods. These characteristics of the pretest group are close to those of the average acceptor. In fact, many of the women interviewed must have been investigating or already using the family planning services available in the clinic. The rationale for testing family planning materials on a sample of users follows from the assumption that however broad the scope of the communication effort, the next cluster of adopters is likely to be similar in background to current users.

(2) In all likelihood, pretest respondents with acceptor-like characteristics devoted greater than normal attention to the message content. This should not invalidate their judgments: elements in messages that were salient to them would probably be the elements that would be salient—although to a lesser extent in a broader context—to potential acceptors.

(3) There are several ways of counteracting artificiality in the pretest con-

FIGURE 1 **Family planning poster, "Two or three children are better; the loop and pill are safe"**



For prevention of pregnancy go to the Family Planning Center at the Health Station or Health Corps Team for the loop and pill

text to avoid biasing the results. When slogans or designs are presented serially, the order should be rotated so that attitudes toward successive messages are not systematically affected. The designs or posters should be within a physical arrangement that is close to the natural exposure. In Isfahan, slogans were shown for three seconds and then flipped down, corresponding to the exposure time of most media. Pamphlets and leaflets were left with respondents overnight. The order of pretest of all materials was changed routinely.

(4) Procedures are also available that indicate the extent of differential interviewer preference where interviewers are suspected of influencing the answers of respondents in ways that are harmful and unplanned. Proper selection and training of interviewers is the best solution. Interviewers can be given the pretests. Afterwards, the interviewers should be assigned to respondents and rotated randomly. Interviewers' responses to key questions can be correlated with answers of their own respondents, and, if there are clear-cut patterns, this indicates bias. Finally, adequate supervision should be built into the pretesting process. To prevent bias in Isfahan, the six participating field workers were first given the pretests and then trained. The workers were each assigned an identifying color for quick detection of bias, and they were rotated so that each did one-sixth of the interviewing. There was no significant similarity between preferences of interviewers and interviewees.

Pretesting in Isfahan

In the Isfahan pretest, 24 slogans, 18 posters, 9 pamphlets, 4 leaflets, and 10 one-minute radio spots were evaluated. Technical advice was provided by commercial advertising firms. The pretest questionnaire had baseline and content analysis questions.

To select a campaign theme, 102 women were shown 24 slogans written on cards in large letters. Before the cards were flipped down, literate women were given three seconds to read each slogan; for illiterates the cards were read at the same rate. A paired comparison technique was used for evaluation. Initially, the slogans were divided into four subject groups: (1) contraceptive information, (2) advantages of small families, (3) appeals based on the health and welfare of the family, and (4) various messages with "family planning" concepts. The first and last groups of slogans were preferred by 36 and 35 of the women, respectively, whereas only 15 and 16 chose the second and third. No slogans from the fourth group were used because answers to content analysis questions showed that respondents were inconsistent and confused in their understanding of "family planning." In the comparative rating of pairs of messages, those providing information on contraceptives and the appeals for a two-or-three-child family were the most popular, whereas slogans using the phrase "family planning" were strongly disliked by a number of respondents. All pretest interviews showed that women were

concerned with side effects of contraceptives and with the safety of methods. From these and other findings, the Persian slogan "Do ta se batcheh behtareh; ghors o halgheh bizarreh," or "two or three children are better; the pill and loop are safe," was developed. The slogan was printed on all materials —leaflets, posters, banners, mailings, newspaper and magazine inserts—and broadcast on the radio, in cinema houses, and from loudspeakers.

Posters were pretested using a combination of the paired comparison and rank order techniques. In addition to the usual criteria of preference, clarity, and truthfulness, 116 women were asked how the posters could be improved and what captions could be added. Respondents were asked to rank posters according to their suitability for various groups, such as those with many children. Three posters generated much favorable response. One showed a hand holding a cycle of pills next to photos of three women. The second was one of several posters with a small family motif, all of which were popular. It was a photograph of a happy and prosperous looking two-child family in a suburban context. The third poster showed a doctor talking to a woman. Respondents' reasons for choosing a particular poster seemed mostly to relate to its physical appearance rather than its message. When asked why they liked their favorite poster, most said that it was beautiful, colorful, and best. As a result of this pretest, a composite poster, seen in Figure 1, was developed, containing all of the elements liked by those interviewed. It shows a prosperous family, mother in chador (a long shawl that serves as an over-garment), entering a family planning clinic. The poster was exhibited on banners and in newspaper advertisements, and shown three times in the film clip.

Since the slogan stressed the safety of methods, pamphlets and radio announcements were developed mentioning in detail possible side effects. In the pretest of the pamphlets, 102 women were asked to evaluate pamphlets for clarity and effectiveness. Interviewers were instructed to have the women look at the nine pamphlets for 20 minutes. Two pamphlets were motivational in intent, stressing the advantage of limiting family size and not mentioning contraceptives. There were three pamphlets on methods, describing the IUD, condom, and pill, respectively. A sixth pamphlet was a pictorial contrast of differences between large and small families. The seventh pamphlet discussed mother and child health, and the eighth, the world population problem. The motivational pamphlets and the condom pamphlet attracted considerable attention and the rest only scattered responses. The first pamphlet was the most popular among all respondents. Half the women said it contained the information they would want before going to a clinic. All but three women understood its content. The pamphlet was preferred for all occupational and age groups as well. However, the physical appearance, a drab, unadorned reddish brown, was unappealing. The second motivational pamphlet was highly preferred by urban women since it was attractive (bright green) and compact. The condom pamphlet was liked least by 23 people, but its color (blue) and length were liked, and it was chosen as best for rural people: 47 women felt several pamphlets should be combined.

In the radio-spot tests, 119 subjects evaluated each of the ten announcements in terms of preference and perceived truthfulness. The taped messages were entitled: messages for men; messages for opinion leaders; messages for young married couples; the population problem in Iran; advantages of the pill; benefits and side effects of the pill; advantages of the IUD; benefits and side effects of the IUD; the concept of family planning; and advantages of having a small family. The largest group (49 percent) preferred the spot that discussed the advantage of the pill, and this was also judged, in the content analysis, to be the best for all groups. The message that mentioned good and bad things about the pill (favored by 23 percent) and the one that praised the IUD (favored by 10 percent) were the next most popular. In choosing the "most truthful," respondents accurately discriminated between messages giving a full account of the contraceptive and those listing only beneficial effects. In content analysis, 91 percent of the women stated that radio spots should give all relevant information, good and bad. Sixty percent of the respondents recognized the sound symbol preceding a message by the time two announcements had been played. When we tested recall, by far the largest group remembered the messages on the effectiveness of the pill and IUD.

The following materials can be obtained by writing to The Population Council, Box 11-1758, Tehran, Iran: (a) a combined questionnaire for all media; (b) ranking charts; (c) data summary sheets; (d) actual messages and radio spots pretested.

IV. Isfahan: The Mass Media Project

This article is concerned with the production of media inputs; the arrangements that were made with local leaders and institutions; the implementation of the action program (radio, 21 August–21 November 1970; full media treatment, 21 December 1970–21 March 1971); and the evaluation of the project.

Production of Materials

RADIO MATERIALS

From June through August 1970, 90 items were prepared for use on the radio, including radio spots of 20-seconds' to one-minute's duration, announcements, dramas, discussions, news items, interviews, and talks. A complete review of a month's radio programs was made. Local scriptwriters adapted family planning materials for such special interest programs as weekly programs for farmers and soldiers. All spots were to be preceded or followed by the slogan and sound symbol. Post box and telephone numbers were to be given so that listeners could get further information.

MASS MAILINGS

Mailings were prepared for 300 professionals, including religious, business, and government leaders. The mailings consisted of an explanation of the population problem in Iran, statements by the Shah and Muslim leaders supporting the program, and leaflets on contraceptives.

A second mailing prepared for 1,500 women who had recently given birth contained a covering letter, leaflets on the pill and IUD, a return postcard,

and two "special introductory cards for friends." The covering letter bore the family planning symbol and slogan and was signed by Dr. Mehdi Loghmani, Deputy director, Isfahan Health Department.

The introductory card stated that the bearer could get her first cycle of pills free at any clinic shown. A map locating the nearest clinic was stamped on the back of each card. The leaflets described both pills and the IUD in detail and listed all the clinics on a coupon. The coupons as well as introductory cards were to be turned over by the acceptor to the clinic she attended and sent on by clinic staff to the ostan family planning office.

Press Materials

Seven newspaper publishers and reporters were invited for a meeting with Dr. Loghmani to discuss ways to use the press in the project. Newspaper releases covering the project and the national program were prepared. Thirty thousand inserts aimed at men were prepared for magazines and newspapers. They described the population problem and the contraceptives and listed clinic locations.

Films

A film clip was prepared by a film company in Tehran specializing in advertisements shown at movies prior to the feature. The film clip lasted 90 seconds. First the poster was shown with the slogan and sound symbol; then the camera zoomed in on the symbol. A poor family with many children was shown with the following narration:

> At one time a large family was needed because many children died. Today more children are living. Many children were needed to support their parents in old age. Now two or three well-educated ones can earn more than seven or eight uneducated children.

As a child in a poor family is shown having difficulty studying, the shot fades out, and the viewer then sees an attractive living room where a two-child family is living comfortably. A well-dressed child studies undisturbed. There is a fade-out, and then the slogan is repeated along with the poster. As the camera zooms into the symbol, there is a fade into a doctor's office. A popular female doctor in Isfahan is explaining the loop and the pill to a woman. After an explanation of the method, there is an announcement that those interested can go to the nearest health station or Health Corps team for information or supplies or write a designated post box number or call a designated telephone number. The last shot is of the poster with the slogan repeated. Five prints of the Disney family planning film were shown in the largest cinema houses.

Sound Truck Materials

The tape for the sound truck carried the slogan and sound symbols. The announcement was only 18 seconds long:

> Two or three children are better, the loop and pill are safe. Think about the number of children you want. For safe, reliable, inexpensive, and easy-to-use methods of stopping or spacing pregnancies, go now to the nearest health station or Health Corps.

Exhibits

Twenty exhibits were set up, each with three panels and suitable for display on a table or wall. The slogan and symbol were on the top of the exhibit. One panel had two pictures contrasting a large family and a small one; the large area panel had a display of the contraceptives and explained the location of the nearest clinic. The third panel had a chart showing the rate of Iran's population growth. Iran's age profile was contrasted with the Swedish age profile, with an explanation of the implications.

The Action Program

The mass communications project lasted six months. Starting on 21 August 1970 and continuing for three months, only radio programs were used. After a month's interval, we introduced all mass media on 21 December and continued until 21 March.

The director of the radio station provided free radio time after we received the approval of the Isfahan Governor-General and the Ministry of Information and Broadcasting. For the first three months a one-minute spot was aired three times daily, at 11:00 A.M., 12:00 noon, and 6:00 P.M. Five- or ten-minute announcements by various officials were broadcast about once a week between 6:00 P.M. and 7:00 P.M.

Based on pretest results, the spots described the advantages of the two-or-three-child family and the pros and cons of contraceptives. A telephone operator was instructed to answer questions and mail leaflets to persons requesting more information. The telephone service was provided ten hours a day.

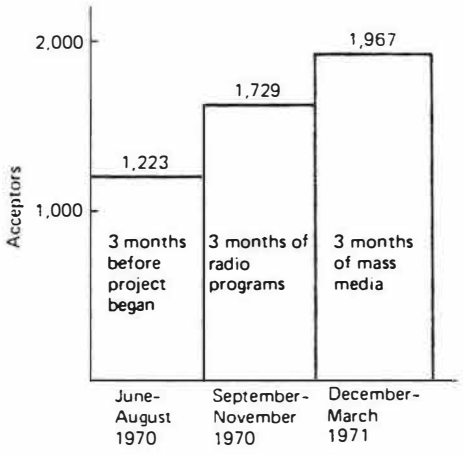
Before starting the intensive campaign in December, permission had to be obtained from the chief of police to hang the banners on telephone poles and light posts. Clearance was received from the Director of Culture and Arts for showing the Disney film and film clips in cinema houses. For mailings, the head of the Registration Department released the names and addresses (some were incorrect) of women registering recent births. The ostan's Governor-General chaired a meeting to inform leading business and government leaders of the program. Once clearance from appropriate officials was obtained, the mechanics of the campaign were performed easily. The 1,500 mailings to women with recent births were addressed and sent out during the first month of the campaign. Since the government stamp was used, postage was free of charge. In the three days prior to the full media treatment, the 200 banners were placed along Isfahan's streets and near traffic circles where most pedestrians walk and vehicles pass. In two weeks, two students placed 4,500 posters in shopwindows, on walls, and in buildings and clinics. The posters were fixed at a height of seven feet, beyond the reach of passers-by.

Each month the one-minute radio spots were changed. Each of the two largest newspapers ran a one-page family planning advertisement five times from December to March. Midway through the combined media campaign, an insert was placed in all magazines and papers (total circulation, 46,000). In addition, about 50 news items were carried by the newspapers during the three months. In the final month, the sound truck patrolled all the streets of Isfahan City at least once.

Minor problems developed immediately. Commercial printers protested the use of the government offset press. The street sweepers began to remove posters after they had been up only three days. Most of the shop owners took down the posters in their windows within a week. About 14 percent of the mailings to women and 2 percent of those to the elite group were returned due to incomplete and inaccurate ad-

dresses. One newspaper carried an article about a young mother who was taking the pill and died of thrombosis. Another news article acknowledged the need for a campaign but criticized the intensity. When several words for IUD were pretested, the Persian word for "ring" was chosen as most popular; however, the word is also slang for homosexuality and may have given rise to some confusion. Although the banners were covered with snow twice, they held up for the three months' campaign. With the exception of three or four protest phone calls, there was no real opposition to the campaign.

FIGURE 2 **New pill acceptors at clinics, monthly averages for three-month periods**



The Results

The campaign was evaluated by measuring levels of acceptances at the clinics, comparing results with trends in other provinces, contrasting pre- and postsurvey findings, counting returned coupons and cards, enumerating telephone calls and letters requesting information, and evaluating reports from a man-on-the-street survey and from diary takers. The evaluation mechanisms were used to determine changes in practice and knowledge of family planning, the impact of individual media, and the amount of discussion generated by the campaign.

Acceptance Levels

The acceptances at the clinics provide the most significant results (Table 15 and Figures 2 and 3). Three months prior to the project the average number of new pill acceptors per month was 1,273; during three months of radio programming it rose by 36 percent to 1,731 per month; and during three months of the campaign using all media, the monthly total was 1,960, an increase of 54 percent from before the survey (see Figure 2). The number of women returning for pills increased from 8,155 per month at the start of the project to an average of 11,465 during the final three campaign months. The IUD acceptors increased by 42 percent from 69 per month before the campaign to 98 at the close of the campaign (see Figure 3). Condom acceptors increased by 71 percent from a three-month average of 670 per month prior to the project to a three-month average of 1,184 per month during the all-out effort of the mass media campaign. Condoms issued each month increased from 7,345 at the beginning to 15,496 at the end of the campaign. The net increase in new acceptors for all methods of contraception was 54 percent from the three months prior to the campaign to the three months at the end of the campaign.

In the first three months after the campaign, IUD acceptors fell to an average of 159 per month and then rose again to 199 per month in the next three months. New pill acceptors declined slightly but old acceptors re-

FIGURE 3 **New IUD acceptors at clinics, monthly averages for three-month periods**

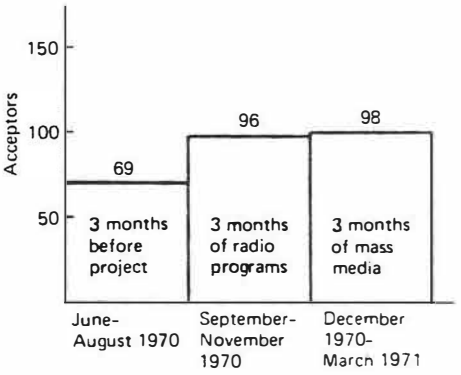


TABLE 15 **Comparison of numbers of acceptors at clinics in Isfahan Province, and in Iran, 1970-1971, by three-month periods, before, during, and after the campaign**

	Isfahan Province				*Iran*		
3-month periods	*New pill acceptors*	*Pills, continuing users*	*IUDs inserted*	*Total new acceptors*	*New pill acceptors*	*IUDs inserted*	*Total new acceptors*
Prior to campaign (June–August 1970)	3,820	24,465	206	6,125	67,033	2,899	80,277
Index base	100	100	100	100	100	100	100
Radio campaign (21 August–21 November 1970)	5,186	25,953	287	7,236	78,146	2,792	87,737
Index[a]	136	106	139	118	116	96	109
All out effort (21 December 1970–21 March 1971)	5,900	34,397	293	9,411	84,087	3,266	94,740
Index	154	141	142	154	125	113	118
First 3 months following the campaign (April–June 1971)	5,246	38,980	273	9,620	95,944	3,810	116,781
Index	137	159	132	157	143	131	145
Second 3 months following the campaign (July–October 1971)	4,443	41,041	409	9,435	93,747	3,671	112,913
Index	116	168	199	154	139	127	141

[a] From period 3 months prior to campaign.

Source: All data are from clinic records sent to and tabulated by the Family Planning Division, Ministry of Health, Tehran, Iran.

TABLE 16 **Percent with family planning knowledge, attitudes, and practice, Isfahan Ostan, May 1970 presurvey and April 1971 postsurvey**

Item	*Percent of total respondents*	
	Presurvey	*Postsurvey*
Knowledge		
Knows of at least one contraceptive	77	89
Knows of pill	77	82
Knows of IUD	49	66
Knows of family planning program	62	85
Attitudes		
Expects to use a contraceptive in the future	38	47
Wanted last pregnancy	35	37
Believes more children are surviving today	57	90
Fears the death of children	68	43
Three or fewer children ideal	42	54
Four or five children ideal	45	39
Six or more children ideal	13	7
Current use		
Pills	10	14
IUD	1	1
Condoms	1	2
Withdrawal	17	14
Total number of respondents	1,000	968

Note: The respondents in the presurvey are not the same individuals as those in the postsurvey.

turning for supplies increased to 13,680 a month four to six months after the campaign. Condom acceptors rose 5 percent three months after the campaign.

Overall the ICP seemed to have brought about an increase in new acceptors of all methods in Isfahan Ostan that was greater than the increase in all of Iran not only during campaigning but continuing for at least six months after the campaign. For instance, total new acceptors in Isfahan increased by 18 percent during the radio campaign (21 August to 21 November 1970) and 54 percent during the total media campaign (21 December to 21 March 1971) over the precampaign period (June–August 1970), whereas for Iran the respective increases were 9 and 18 percent over June–August 1970 (Table 15).

After the campaign was over the percent increase in pill acceptors over the June–August 1970 level was lower in Isfahan than in all of Iran (37 percent from April to June 1971 and 16 percent from July to October 1971 in Isfahan as compared to 43 percent and 39 percent, respectively, for all of Iran). This relative decline in pill acceptors in Isfahan may have occurred because much of the pool of pill acceptors in the ostan accepted during the campaign, thus leaving fewer motivated women to accept thereafter. Nevertheless, the ratios of IUD acceptors and of total acceptors after the campaign to those in the precampaign period were higher in Isfahan than in Iran.

The Post-Campaign Survey*

A total of 968 men and women were interviewed in the postsurvey during April, May, and June 1971. The Iran Statistical Center provided the names and addresses, and maps, identifying the houses of the individuals. The sample had been used previously for a household survey conducted by the Iran Statistical Center to obtain census-related data (e.g., family size, mobility, infant mortality). To assess the extent of comparability of this sample with that of the presurvey, 10 percent of the presurvey individuals were asked the postsurvey questions in addition to the 968 new respondents. Insofar as the impact of the campaign was concerned, there was no significant difference between the 10-percent sample and the post-campaign survey sample. (The responses of the 10-percent sample are not included in any of the totals below.) The postsurvey respondents, however, were older and more likely to be villagers than the presurvey group. This feature worked to understate the recorded effects of the campaign. In the following paragraphs we summarize the survey findings that were of use in evaluating the action program.

Withdrawal was the most commonly used method of family planning both before and after the mass media project. However, the men and women stating they used withdrawal decreased from 17.2 percent in the presurvey to 14.2 percent in the postsurvey (see Table 16). When the women were asked about previous and current use of the pill, 10.3 percent claimed they were using the pill at the time of the presurvey and 13.5 percent at the time of the postsurvey. A net increase of 3.2 percent corresponds roughly with an increase of 11,000 new pill acceptors in the ostan. Between the two surveys, 8,500 additional acceptors were recorded at family planning clinics. That this figure is 2,500 less than the number claiming to be new pill acceptors in the postsurvey provides some indication of the extent of gross overstatement in reported use of the pill in the postsurvey over the presurvey.

Reported use of the IUD was roughly constant at just over 1 percent before and after the project. Current use of the condom increased from 1.2 percent in the presurvey to 2.4 percent in the postsurvey. These figures corresponded to the increased acceptances at clinics. Few men had had a vasectomy and less than 1 percent of the women had had a tubal ligation before or after the campaign.

Like the presurvey, the postsurvey detected a significant incidence of method failure: of 142 current users of withdrawal, 75 claimed to have become pregnant in the past while practicing the method; likewise, of 135 current users of the pill, 93 claimed to have become pregnant in the past while using the method.

A number of other before and after comparisons are shown in Tables 16 and 17.

The slogan, "Two or three children are better, the loop and pill are safe" was known by 59 percent of those responding in the postsurvey. Most had heard the slogan from more than one source:

Source of information	*Percent*
Friends and neighbors	42
Radio	52
Own children	21
Newspapers	13
Posters	24
Cinemas	6
Loudspeakers	5
Magazines	5

If the population outside the transmission range of the radio broadcast is discounted, about 69 percent of the postsurvey sample heard the slogan; if those with no media exposure are dis-

* A set of postsurvey questions and answers may be obtained by writing the Health Department, Box 11-1758, Tehran, Iran.

TABLE 17 **Ideal number of children, perceived mortality decline, and knowledge of family planning by sex and residence, before and after the campaign, Isfahan Ostan, May 1970 presurvey and April 1971 postsurvey**

Result	*Isfahan City*				*Other cities*[c]		*Villages*[d]			
	Females		*Males*		*Males and females*		*Females*		*Males*	
	Before[a]	*After*[b]	*Before*[a]	*After*[b]	*Before*[a]	*After*[b]	*Before*[a]	*After*[b]	*Before*[a]	*After*[b]
Average ideal number of children	3.5	3.1	3.4	2.9	3.3	3.3	4.8	3.45	4.9	3.5
Percent who perceived mortality decline	47	92	42	78	62	88	68	88	72	81
Percent who had heard of family planning program	72	95	70	90	80	90	69	84	53	60

Note: These results were obtained from samples of 100 questionnaires each, selected randomly from the following groups: Isfahan City females, Isfahan City males; "other urban" males and females (60 and 50, respectively), totalling 110; rural females and rural males.

[a] From presurvey.
[b] From postsurvey.
[c] Cities and towns of 5,000 population or more, excluding Isfahan
[d] All places of less than 5,000 population.

counted, about 90 percent of the remainder heard it. The family planning symbol was recognized by 38.6 percent of those interviewed.

As Table 18 shows, the mass media effort was most effective in the cities and among women. Although the presurvey showed that men had higher media exposure, women had a better recall of family planning messages. Several factors may be cited in explanation. The campaign inputs were pretested on women, and the poster showed a female doctor displaying female methods to a family. Still, the arguments for low fertility were oriented to men and women ("more children means less per person" and "family planning for a better life").

In the postsurvey, 44 percent of the respondents said they talked with their friends and neighbors about family planning. Almost all of the discussion centered around the contraceptives, with the pill being most frequently discussed.

The percentage of persons hearing about family planning on the radio increased from 27 percent in the presurvey to 57 percent in the postsurvey. Most of the men and women who listened to the radio remembered hearing the slogan and information about contraceptives. The loudspeaker on the jeep was heard by 11 percent of the postsurvey respondents.

Clinic Interviews and Other Sources

The survey results are confirmed by information obtained at clinics, from man-in-the-street interviews, and from other sources.

At the clinics, women were asked to (a) indicate which of a list of sources of information about contraceptives they had been exposed to and (b) cite the most influential source. As shown in Figure 4, the radio and word-of-mouth communication were the most influential sources. Radio was cited as the most important source of information on contraceptives by 26 percent of clinic acceptors during the three-month radio campaign and 39 percent during the all-media campaign.

There is no doubt the campaign generated a great deal of discussion about family planning. The decline in referrals by family planning workers can be attributed to the fact that half of the workers were involved in collecting baseline survey data, coding, and conducting postinterviews. The clinics did not collect information on all media sources: for example, film clips in cinema houses and mailings were omitted.

The banners were seen by 29 percent of the persons interviewed during the postsurvey, by 94 percent of those interviewed in the city, and by most of the women going to the clinics. The newspaper and magazine advertisements were seen by very few respondents. There were many news items in the papers but the sample of persons interviewed was too small to gauge the items' effectiveness. The inserts were more conspicuous and less costly than the advertisements.

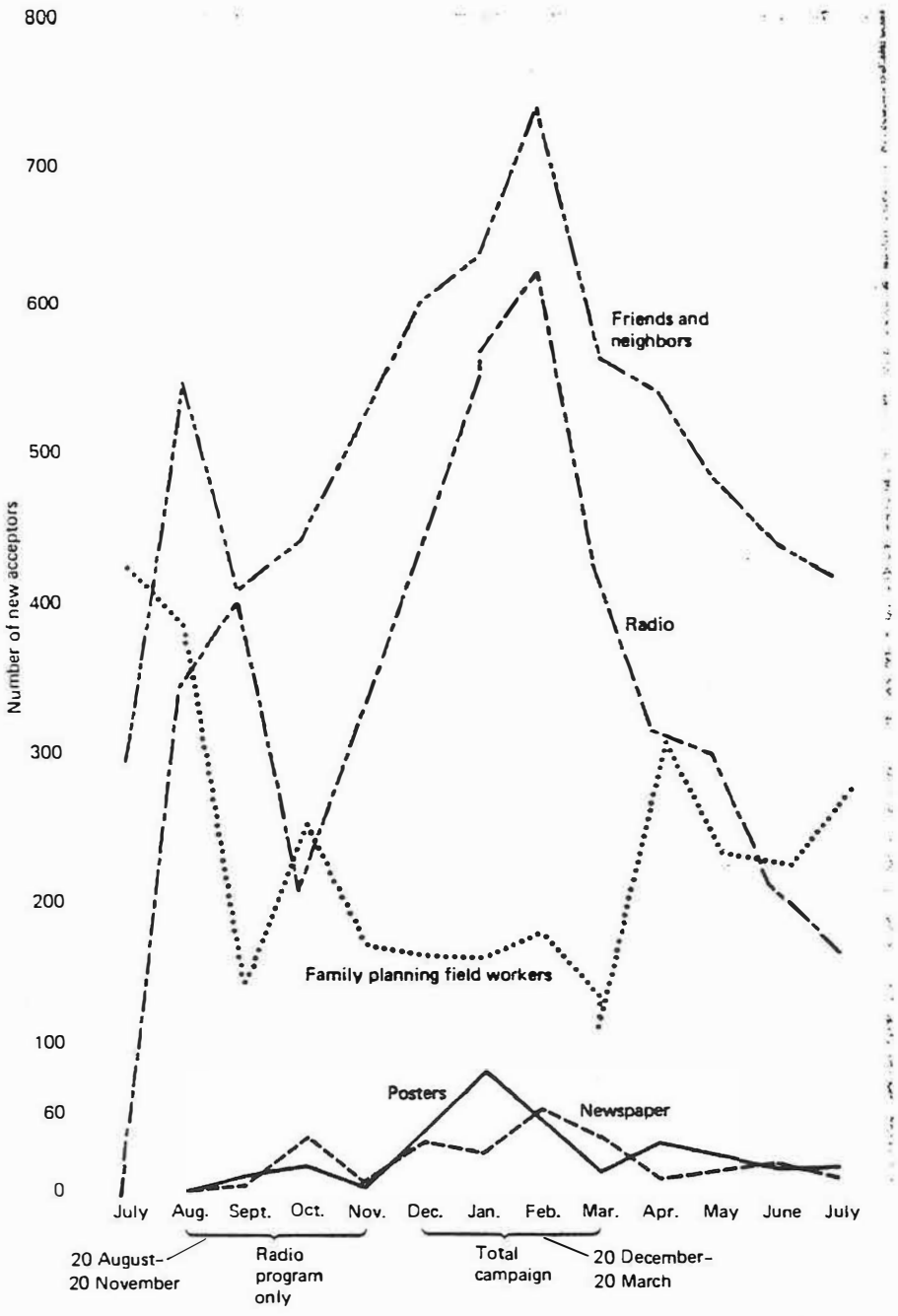
From attendance figures given by the 14 cinema houses, an estimated 900,000 people saw the three-minute film clip and 225,000 saw the Disney film. (Clearly, many attenders were counted more than once.) All respondents who said they had been to the cinema in the last three months remembered the film clip. Most of them remembered that the

TABLE 18 **Percent encountering family planning information through specified mass media by residence and sex, Isfahan Ostan, April 1971 postsurvey**

Exposure	*Isfahan City*		*Other cities*	*Villages*		*Total*
	Women	*Men*	*Women and Men*	*Women*	*Men*	
Where did you encounter the slogan?						
Radio	81	77	52	42	36	52
Newspaper	16	8	2	9	4	13
Banner	53	48	6	5	6	25
Poster	51	13	3	6	2	24
Mailing	2	3	—	—	—	2
Cinema	13	6	—	1	2	6
Magazine	6	5	1	2	1	5
Loudspeaker	8	8	—	1	2	5
Friends/relatives	56	68	32	33	15	42
Recognized the symbol	66	67	30	24	17	39
Of those who recognized the symbol, where had they seen it.						
Clinics	33	17	16	33	31	39
Banner	50	75	60	16	41	39
Elsewhere	17	18	24	51	28	22
Heard of family planning						
In cinema	6	13	2	1	2	8
On radio	65	69	60	45	30	57
Had seen:						
Poster	63	64	16	21	17	35
Banner	71	63	12	9	8	29
Talked about family planning in last 5 months	17	19	17	17	5	16

Note: See note to table 17 for numbers of respondents.

FIGURE 4 **The most influential source of family planning information reported by acceptors at clinics by month (23 July 1970–23 August 1971)**



Beginning one month after the end of the campaign, about half the clinics stopped recording "most important source of information."
The tics represent day 20 of each month.

loop and pill were shown and that there was a contrast in life styles between the large and the small family. A few remembered that the smaller family provided children with a better education. Half the persons interviewed on the street saw the film and liked it; the only criticism heard was that there was too much contrast between the small and large family.

Diary takers and postsurvey and clinic interviewers picked up some of the discussion generated by the campaign. The diary takers overheard a few people talking about the campaign slogan, but most of the conversations they heard dealt with the various advantages and disadvantages of contraceptives. One diary taker recorded 85 conversations on family planning in six months. The number of people he heard talking about family planning increased during the campaign. All but 21 of the conversations contained some reference to the pill. Several of the diary takers heard people claim that the loop caused cancer. They reported five conversations on a rumor that the government was going to charge a US $65.00 registration fee for the fourth child. Two heard children quoting the family planning slogan to two pregnant women. Many of the comments recorded by diary takers reflected a confirmed faith in the ability of the pill and the IUD to prevent pregnancies. There were numerous references to side effects such as headaches and weight gain, but most of the conversation was positive. One woman was overheard saying she cried more when she learned she was pregnant again than when her last child died.

The 20 exhibits were seen by 6 percent of the acceptors. The part of the exhibit displaying contraceptives was noticed by most passers-by. The population section was not generally read, and most respondents disapproved of the contrasting pictures of large and small families.

Telephone Calls and Letters

Telephone calls and letters from the public in response to radio spots were most frequent immediately after the start of the project and declined gradually thereafter. A full 60 percent of the telephone callers were men wanting more information on contraceptives. A few callers protested the intensity of the radio programming during the first months of the project.

Man-on-the-Street Interviews

The man-on-the-street interviews of 100 persons found that about half (52 percent) thought there was too much information on the radio about family planning. Most of the persons interviewed knew the slogan and remembered some discussion of the loop and the pill. One-quarter of the respondents remembered hearing that small families are more prosperous, and another quarter recalled learning where to go to get contraceptives.

The mailings to women with a recent birth occurred at the beginning of the campaign, with an estimated 1,100 women receiving the letters. The coupons, which were a part of the leaflets included in the mailings, were returned to clinics by 4 percent of these women,

the introductory cards by 6 percent. These return rates were higher than expected.

Cost Per Acceptor

The cost per acceptor cannot be precisely determined. The labor and material cost for developing the program was high but cost to expand the project has been relatively low. Radio time was free and no scriptwriters were used during the first three months. The only expense was the writing and translating of radio spots and announcements. During the mass campaign the items and costs were as follows:

Item	*Quantity*	*Cost US$*
Banners	200	410
Film clip production		2,000
prints	14	322
Mailings	1,500	61
Newspaper inserts	60,000	317
advertisements	1[a]	248
Exhibits	20	126
Scriptwriters		86
Translating and printing various materials		3,708
Over-time		1,400
Total		$8,678

[a] Placed in many newspapers.

If we assume the project increased acceptances 40 percent more than would have occurred without a program, the cost per new acceptor would be about US$2.75. Implementation of many features of the project in other ostans, however, would cost only a total of about $1,540, assuming preparation of 200 banners, 60,000 newspaper inserts, 2,000 mailings, 20 hours of programming by scriptwriters, 5,000 posters, and 500 man-hours of time by the Health Department to develop the campaign. The cost could be less than $1.00 per new acceptor if the increase in acceptors were 40 percent.

Problems in the Program

Although the rate and level of acceptances increased significantly during the six-month campaign, we must be careful in drawing optimistic conclusions. A pre-campaign follow-up survey of acceptors in Isfahan in 1970 conducted by the Ministry of Health found that 80 percent of pill acceptors and 50 percent of IUD acceptors had dropped out of the family planning program after two years. If acceptors continue to use the methods sporadically between unwanted pregnancies, then the media program will have little long-term effect on fertility.

Two program limitations contribute to the low contraceptive effectiveness in the area. First, the available methods are not permanent and their use requires discipline and persistence. The motivation required for successful use of the condom is well known. Women accepting the pill or IUD will also have difficulty in avoiding unwanted births. For example, consider the typical family planning acceptor in Isfahan: 32 years old with five living children and not wanting any additional children. To use the pill successfully under present arrangements, she must return to the clinic up to 169 times over the next 13 years paying US$26-53 and consuming about 3,500 pills. According to the 1970 follow-up survey, two-thirds of pill acceptors discontinue within a year; the April 1971 postsurvey of Isfahan reported that 93 of 135 women who claimed to have been using the pill became pregnant. Sixty to 70 percent of IUD acceptors drop out in less than three years; each year, 1 to 3 percent of those using the device have a pregnancy. Like the pill, the IUD often has uncomfortable side effects. Sterilization is not officially part of the Iranian family planning program, and medically safe abortions are not available for the women who fail in use of methods given them.

Secondly, contraceptive services in Isfahan Ostan were and remain limited to urban areas, and the IUD is only available in the city of Isfahan. Thus, many pill acceptors are unable to follow recommended usage because of irregularities in the flow of resupplies. A change in brand of pills offered by a clinic may cause nausea, headache, and even breakthrough bleeding in acceptors. The IUD is often hard to obtain on a regular basis. Acceptability of the program by the public depends in part on the quality of services, including waiting periods, treatment at clinics, and supply of contraceptives, and, particularly in rural areas, these have not always been adequate. Many of the couples responding to the program will later discontinue method use because of side effects or the inability to obtain resupplies readily. It may be more difficult later to gain the response of these women when readily available, effective, and easy to use methods without side effects may exist.

A final caution on the interpretation of pill acceptance rates is appropriate here. Users who stop for three to four months and then start again are treated as new pill acceptors. This procedure results in an artificially high rate of new acceptors and low continuation rates. Notwithstanding, the mass media campaign increased not only the number of first time acceptors but also the number of old acceptors who returned.

V. The Functionary and Intensive Projects

The functionary project attempted to identify and mobilize those people who are held in respect in the community. Functionaries would include people with an identifying title and organization such as school teachers, village leaders, agricultural extension agents, and health staff. The definition could include anyone who delivers births or uses a contraceptive, as well as registrars, mailmen, taxi and bus drivers, and security officers.

Using functionaries has been part of the strategy of the Iranian National Family Planning Program since its inception. In the words of Dr. Zahedi, a Director-General in the Population and Family Planning Division, Ministry of Health, Iran is attempting to "add family planning training to the curriculum of all classes of society such as home economists, rural teachers, those who frame the curriculum of our public schools and universities, religious leaders, and the famous Iranian corps [Literacy, Health, and Development Corps], field workers, the staff in cooperatives, and personnel in various private agencies" (1970). Although some progress has been made in attaining this desirable goal, recognition of the need for broadly-based family planning education did not in itself constitute a family planning communications strategy for rural areas. The aim of the national program was to use an existing infrastructure of personnel

TABLE 19 **Characteristics of functionaries, by type and sex, Isfahan Ostan, May 1970 functionary survey**

Characteristic	School teachers: Secondary		School teachers: Primary		Literacy Corps		Health Corps	Field Workers	Agricultural Agents	Village Leaders	Religious Leaders	Midwives	Doctors Health Corps
	M	F	M	F	M	F	F	F	M	M	M	F	M
Number	26	6	63	50	50	30	44	11	15	41	18	60	18
							Average						
Age	35	29	35	31	22	21	21	29	23	47	56	51	28
Number of living children	2.0	2.5	2.5	2.0	2.0	0.0				6.5	4.6	4.0	
Ideal family size	2.4	3.0	3.0	3.0	3.2	3.2	3.5	3.3		4.4	3.2		2.8
							Percent						
Married	100	50	95	88	2	3			23	95	100	84	
Education													
B.A.	100	100									78[a]		100[b]
H. S. diploma			94	70	98	93	100		73				
Other								9[c]				4[d]	
Family planning training	19	50	18	22	86	90	100[e]	100				5	
Population Awareness													
Believe growth excess	32	83	52	50	34	63	27	45		55			88
Believe Islam approves of FP	15	67	68	50	68	57	75	36				53	72
Contraceptives known													
Pill	38	33	51	52	32	97						58	
IUD	8	33	27	12	10	23						7	
Condom	23	17	22	16	6	20						13	
Withdrawal	8	17	11	16	6	7						8	
Sterilization				4	4	3							
Present Family Planning Activities													
Help Health Corps	46	33	41	22	22	63			100	46	61		
Advise on FP currently	69	50	63	68	32	68					67	26	94
Distribute posters	11	17	16	10	6	13						4	
Distribute pamphlets	4	17	2	10		13							
Willing to do following FP activities in future													
Take training	92	67	76	76	98	97				93	67		89
Make home visits	46	67	54	46	80	87				85		55	
Make group visits	58	33	44	58	24	23	100	100		39			
Distribute pills	62	50	68	64	86	83			73			65	
Distribute condoms	88	33	62	90	76	53						35	
Media Behavior													
Listens to radio	100	67	98	98	100	97	95	54	100	95	56	60	94
Reads newspaper	92	83	87	72	70	90	80	36	73	44	44	18	83
Reads magazines	85	92	68	90	88	100	89	42	87	27	50	5	88

M = Male. F = Female. FP = Family planning.

[a] Religious training. [b] All recent M.D.s. [c] 72 percent, primary school only; 9 percent, nine years. [d] A few years of schooling.

[e] 61 percent had more than 100 hours of family planning training.

Note: Blanks signify that the class of functionaries was not asked a specific question or the response was not applicable.

fertility motives—they stressed fear of child mortality as a reason for large families and called for more health care. They suggested their yearly conferences include a family planning section. Knowledge of contraception and its use and effect was generally poor. All but five of the secondary school teachers believed family planning should be added to their curriculum. Generally, all the teachers wanted additional family planning educational materials such as flip charts, posters, and pamphlets.

Literacy Corps. A total of 50 boys and 30 girls were interviewed. The Literacy Corps are conscripted high school graduates who teach reading and writing to classes of 20–50 children or 15–25 adults. The Literacy Corps members interviewed were able to answer most of the questions on contraceptives and population correctly, but they were not aware that the population was doubling every 23 years. Most had received family planning training, but they were not actively recruiting new acceptors.

Their response to questions pertaining to their potential contribution to the family planning program was very favorable. Most Literacy Corps members said they could make about ten home visits a month and believed they could recruit new pill and IUD acceptors each month.

Women's Health Corps. Forty-four Health Corpswomen were interviewed. All of them had been trained in family planning, with most having received 100–200 hours of instruction. The entire Women's Health Corps is assigned exclusively to family planning. Most women spend four to six hours on family planning during the working day, divided roughly equally between home visits and clinic work. All of the Corpswomen had held group meetings with women. The number of houses they visited per day varied, since visits lasted 20–50 minutes. The Corpswomen go in pairs to visit homes, and the feeling was unanimous that this is necessary. The group was evenly split on advocating IUDs and pills. They made follow-up visits to women who previously accepted a method of family planning, but the number of visits per month varied considerably.

Family planning field workers. The 11 field workers interviewed held group

for family planning in the countryside. But it was not known who would be the most effective spokesmen and what their precise tasks would be.

The General Functionary Project

The first stage of the general functionary project, which took place during June through July 1970, was to identify functionaries and to clarify their working roles in the community, their media exposure, their work experience, and their knowledge of and potential contribution to family planning. In the second stage of the project, during August through October, training programs for functionaries in two shahrestans were developed. In the final stage, commencing in October 1970 an action program was implemented in these shahrestans, involving distribution of leaflets and directives to functionaries, supervision of their activities, and evaluation of their impact.

The "sources of fertility motives" responses in the media presurvey indicated that couples were interested in linking their fertility to improvements in their standard of living and security. A major research problem related to the mobilization of rural functionaries lies in discovering patterns of benefits and constraints that would be effective and administratively feasible. Those interviewed in the presurvey cited education as the most suitable reward for family size limitation, and there was agreement that mechanical aids and a small but educated family were the best guarantees of work force and old age security. Therefore, we may suppose that those functionaries who bring education and production aids to the village will encounter parents who readily associate such benefits with declining fertility on their part. At the least, such individuals could perform valuable educational services as informal partisans of family planning. With training and proper organization and incentives, functionaries could perform two additional tasks—serve as primary local sources of contraceptives and organize and implement formal schemes for providing benefits to those who limit their fertility. A preliminary task was to compare functionaries by their knowledge and influence and to develop appropriate reward systems.

Functionary Surveys

In June and July 1970, several short surveys of functionary characteristics were carried out in Isfahan Ostan. The functionaries divide naturally into four groups: (1) the traditional figures (headmen, midwives, and religious leaders), (2) the school teachers, (3) the revolutionary corpsmen, and (4) the doctors. A sample of school teachers was chosen by picking the names of teachers registered with the Department of Education. The sample was stratified to represent rural and urban, primary and secondary, and male and female teachers. A similar process was used for the Literacy Corps personnel and private doctors. Small numbers of Health Corpswomen and family planning field workers were interviewed. In several villages in which there were Literacy Corpsmen, all headmen, midwives, and religious leaders were interviewed. Fifteen Health Corpswomen conducted the interviewing following a three-day training program.

The questionnaires consisted of two parts. The first, a standardized form for all functionaries, covered media exposure, attitudes toward family planning, and familiarity with population problems. The second part explored the specific responsibilities of the functionary in the community, his level of knowledge about family planning, and the type of assistance that he could provide. Table 19 presents a comparison between the various types of functionaries by sex on selected family planning, population, background, and media characteristics, as found in the 1970 functionary survey. Table 20 contrasts the ideal family size, media activity, and population and family planning attitudes of teachers, traditional figures, and revolutionary corps, including Health Corps doctors (1970 functionary survey), and of the general population (1970 presurvey).

In the text that follows, we present information on the present activities of each functionary and his potential participation in the family planning program. The information contained in Table 19 is not restated in the text.

Traditional figures. Village leaders and midwives played an integral role in their community. Of the 41 village leaders interviewed, one-third met with villagers at least weekly. Among the most frequently mentioned responsibilities of these men were construction of roads, schools, sanitary baths, and wells, settling disputes, installing pumps, and running a mortuary. The village leaders were willing to participate in a family planning program and attend a one-day training program; half would permit their wives to be trained. They also approved of the Literacy Corps' providing family planning information.

Of the 60 traditional midwives interviewed, nearly one-half were trained by their mothers. Most were approached by women for advice on pre- and postnatal care, use of contraceptives, and treatment of side effects of contraceptives. Common problems encountered during delivery were excessive bleeding, abortions, breechbirths, and a lack of instruments for caesarian delivery. Two midwives admitted that women came to them for abortions. The responses about methods used to terminate pregnancies were many and varied, with lifting heavy objects and consuming certain local herbs and potions the most frequently mentioned. Contact of these traditional figures with modern functionaries is relatively infrequent.

Sixty percent of the midwives would accept family planning training of one day. Over 70 percent indicated that they would take a woman to a doctor for family planning consultation.

Only eight traditional midwives felt their work would be endangered by family planning. Over 80 percent thought that spacing of births increases the mother's health, and nearly the same percentage felt that having more than five children increased the possibility of poor health. More than 80 percent felt that more children survive today than five years ago. Over one-half believed that the pill was the most effective method of spacing births. More than two-thirds indicated that a signed *fetwa** would increase their own support of family planning. Those in favor of family planning mentioned poverty and the mother's health as deciding factors; those opposed stressed that permanent prevention of conception is contrary to the *Koran*.

School teachers. The names of 145 primary and secondary teachers in Isfahan were chosen from the Department of Education list. Most teachers had 40–50 pupils per class. Almost all had been visited by supervisors in the preceding month. The teachers have a fair knowledge of population problems and

* Judicial or religious decision given by a religious authority.

TABLE 20 **Percent of functionaries and of total population with specified characteristics, June 1970 functionary surveys in Shahreza and Najafabad Shahrestans of Isfahan Ostan and May 1970 presurvey, Isfahan Ostan**

Item	*Teachers*	*Traditional figures*	*Revolutionary corps*[a]	*Population*[b]
Number of respondents	145	119	168	1,000
Ideal family size	3.0	4.2	3.0	3.8
			Percent	
Listened to the radio	99	66	95	75
Read a newspaper	83	31	76	24
Receive mail weekly	41	19	59	11
Receive mail monthly	77	52	83	41
Aware of last film shown nearby	38	0	40	27
Believe population is growing too fast	48	54	44	52
Believe Islam approves of family planning	52	51	66	69

[a] Includes Literacy Corps, field workers, agricultural workers, and Health Corps, including Health Corps doctors. Complete characteristics were not available for private doctors. They are not covered in any respect.

[b] Based on marginal totals taken from the May 1970 presurvey of Isfahan City and Ostan.

meetings with women and visited an average of 20 women per day. They usually spent 10–15 minutes per visit. They were between 15 and 40 years of age, with limited education. All had received under 100 hours of training in family planning. Most field workers correctly estimated the total Iranian population, the growth rates, and the time it would take the population to double.

Agricultural extension agents. Most of the 15 agricultural agents interviewed were young and single. In order of the frequency of topics mentioned, agricultural agents work on the following types of projects: pesticides, livestock, poultry, vegetables, sanitation, and fertilizers. They instruct the public in group meetings lasting about two hours. They work with between 25 and 200 farmers. The agents believe the best way to combine agricultural work with family planning is to discuss the subject during group meetings, have a mobile unit show films, distribute literature, and make home visits.

Private Doctors. Forty-six male doctors in Isfahan were interviewed. Over 40 percent had finished their education in the last five to ten years. Over 40 percent had a specialty, usually general surgery, gynecology, or pediatrics. Only 28 percent also worked for a public or private health service.

Over 80 percent of the private doctors questioned said they gave advice on family planning, and 60 percent prescribed between 10 and 20 cycles of orals per month. More than half of the doctors recommending pills said they conducted a pelvic examination before prescribing them. Not a single doctor had ever performed a vasectomy, and only eight out of 46 had performed a tubal ligation in conjunction with another operation. Forty percent said they wanted instruction in vasectomy and tubal ligations.

Health Corps Doctors. Eighteen male doctors doing military service in the Health Corps were interviewed. Each saw between 40 and 80 patients a day and delivered, on an average, two babies a month. Only 11 percent said that they had performed an abortion, but 28 percent said that they had been asked to do one. On an average, each had trained three traditional midwives. Ninety-five percent said they offered unsolicited advice on family planning to women, but nearly all said that women would not permit them to insert the IUD. Before prescribing the pill, only 38 percent performed a pelvic examination. In the event of side effects, 50 percent said that women would not allow them to remove the IUD. Forty percent thought that Health Corpswomen were the best personnel to distribute the pill in the villages. All felt that a monthly visit by a lady doctor to each rural health center and subcenter would increase IUD acceptances. Nearly all were unable to perform either male or female sterilizations.

Training, Implementation, and Evaluation

The functionary project was conducted in the shahrestans of Shahreza and Najafabad, each with populations of roughly 100,000. Najafabad has 135 villages (centers of less than 5,000 population) and is 42 percent rural; Shahreza, with 138 villages, is 53 percent rural. Contraceptive services were limited to a Health Corps team in each shahrestan and one family planning clinic in Shahreza and two in Najafabad—one in the city of Najafabad and one in Tiran, a town of 5,193 people.

Orientation and training of functionaries was completed in October 1970. The midwives received a special five-day course on dispensing the pill. The other functionaries attended one-day sessions in which the socioeconomic aspects of population growth, the benefits of family planning, the Isfahan Project, contraceptive methods, and the expected roles of functionaries were discussed. The numbers of each type of functionary trained were:

	Number trained	
Functionary	*Najafabad*	*Shahreza*
Teachers	152	154
Literacy Corps	38	35
Village leaders	60	0
Midwives	5	6
Religious leaders	18	28
Agricultural agents	2	1
Health Corps Teams	1	1

On completing the training course, each functionary received color- and number-coded leaflets. Color designated type of functionary; numbers referred to location. Each received 20 pill and 10 IUD leaflets. The Health Department sent each of them a letter containing the functionary survey results, additional leaflets, and encouragement to participate in the family planning program. The following passage is taken from the suggested activities outlined in the training materials issued:

> You can help. During meetings with parents, discuss family life planning. If each parent could make a decision on how many children he thinks is ideal, this would be very valuable. After couples make a decision on how many children they want, inform them about the oral pill and IUD. If out of every ten parents you talk with, two or three go to clinics, this will be very encouraging. Teachers can volunteer to distribute condoms so that some contraceptive supplies are available. You do not have to provide contraceptives, but this would be useful.

Supervision forms were prepared for the supervisors of the functionaries. These contained a description of the supervisor's duties, instructions on how to fill out the form, a checklist of questions to ask the functionaries, and simple monthly record forms.*

Because of inadequate family planning services, acceptances before the functionary project were at a very low level in both shahrestans—Najafabad had about 60 a month and Shahreza about 100. Acceptances rose 115 percent during the six-month campaign (October 1970–April 1971) to 125 and 210 a month in Najafabad and Shahreza, respectively. Women returning for supplies increased in Najafabad from 340 before the project to 1,100 a year later, and in Shahreza during the same period they increased from 200 to 550. By April 1972, an estimated 9 percent of the couples in the reproductive age group were using contraceptives in each shahrestan. About a half of the new acceptors cited friends, and then radio, as their prime information source (see Figure 4). About one-third of new acceptors in these counties during the six months brought to the clinics coupons they had received from functionaries. The two Health Corps teams recruited about 71 new pill acceptors in the six clinics they served. There were no mobile units available, but midwives resupplied pills and out-performed other personnel in recruiting new acceptors. Each midwife had an average caseload of 43 women during a year's period with few dropouts. The midwives distributed pills to 11 percent of the women and condoms to 4 percent of the couples in the reproductive age group. The estimated continuous use rate for the year was 75 percent. The midwives charged and retained $0.13 per cycle resupplied when women had obtained the first cycle at a family planning clinic or from a nurse-supervisor.

None of the other functionaries was rewarded for recruiting new acceptors, and the results reflected this. On the average, school teachers referred 2.3 persons, village leaders 2.9, and agricultural agents and Literacy Corps members 1.0 during seven months.

* These forms, directives, special radio spots, and other materials and details on survey results can be obtained by writing to the Health Department, Box 11-1758, Tehran, Iran.

The Intensive Project

In addition to the general functionary project, which showed that opinion leaders could be identified and involved in recruiting acceptors, a small-scale intensive project was carried out in which the functionary strategy was integrated with the intense media campaign, use of field workers, and readily available contraceptive services. In this project, the objective was to determine what a concentrated promotional effort could achieve in changing family planning knowledge, attitudes, and practice. For this effort, two areas were chosen: a depressed section of Isfahan City (population, 9,400) and a rural area of 49 villages (population 8,500) 20 kilometers from Isfahan City. There were 2,597 households in each area. Each family was to be contacted and interviewed at least four times over the period of one year. Fifteen Health Corpswomen, using 1966 census maps to identify households, performed the interviewing. Each interviewer was responsible for 200 households.

At the first visit (which occurred in October or November of 1970), the interviewer was to record baseline data on a home interview form, using an abbreviated KAP questionnaire that included age of the wife, pregnancy history, number of living children by sex, current practice of contraception, attitudes toward family planning, stated ideal family size, and exposure to family planning. At later visits, the interviewer collected indices of attitudes toward and practice of family planning, exposure to family planning information through mass media and through functionaries, and results of the home visits, including any positive or negative reaction to the interviewer and to the program as a whole.

The available media in the project areas were the sound truck, posters, banners, exhibits, and leaflets. All the functionaries and other respected individuals were invited for a one-day orientation program at the Health Department. These respected individuals included grandparents, young couples desiring a small family, satisfied contraceptive users, and the local gossips. The Health Corpswomen and functionaries were to direct women to the nearest Health Corps stations or clinics for pills and condoms and to provide transportation for those accepting the IUD or sterilization.

For the home visits, there were problems in finding the houses, in locating women working in the fields, and in identifying people by family name. Many women objected to young unmarried girls asking personal questions. Many women feared they would become very ill using the pill or IUD, and a rumor that the pill caused cancer was common. Many women in the rural areas said they wanted family planning but they could not get into the city to get the contraceptives.

Of those reached in the baseline survey, 43 percent of the rural women and 54 percent of the urban women had heard the family planning messages on the radio. Nine percent of the city women and 5 percent of the rural women were using pills. About 10 percent of women refused to answer the questions. Physical and logistic complications combined with rumors and barriers, both social and cultural, to the acceptability of the program.

The second visit occurred two months after the baseline survey (during February or March 1971). Some respondents expressed annoyance at being asked the same questions so soon after the first round. The Health Corps supervisors started seeing some of the husbands who objected to the questions being asked. Between the second and third visits, which were two or three months apart, a hostile reaction to the project in general and the workers in particular developed in the area.

On the third visit (during March or April 1971), both men and women said they would prefer other government services such as city water, a health clinic or a school, rather than family planning. At least 23 percent of the villagers and 11 percent of city dwellers said the number of children they have is up to God. Others said they wanted children to help them with their work and support them in old age. In spite of growing opposition, the third round of visits was completed.

For the fourth visit, six months after the third (during November or December 1971), a short interview schedule was developed. The following introduction was used:

> Please accept my apologies for bothering you. As you know we are conducting a program so that couples can have children only when they are wanted. We know you have been asked many questions before but we

would like your attention for four more minutes. In addition, we may be able to give you special help today.

A nurse-midwife accompanied the Health Corps member on this visit and dispensed pills and condoms to the women who wanted them. The apology and the doorstep service program quieted opposition to repeated questioning.

The Results

The mass media program was already under way at the time of the baseline survey of the intensive project. The awareness of the posters, banners, newspaper advertisements, and sound truck gradually increased during the second and third visits. By the third visit, 80 percent of the rural and 84 percent of the urban women had heard the family planning messages on the radio. By the fourth visit, the slogan was known by 95 percent of all women. In addition to the radio spots, most people were aware of the sound truck and banners.

Because special literacy classes for adults covered population, family size, and contraceptive education, the Literacy Corps were the most effective functionaries.* The corps provided two weeks of programs for the men and four weeks for the women. The village leaders talked with about 14 percent of the women. The school teachers and midwives were very effective in the rural areas: 33 percent of the respondents had discussed family planning with them. Almost all the women interviewed mentioned talking to someone about family planning during the year.

Respondents in the urban area desired an average of three children. In the villages there was a slight decline from 4.1 at the first home visit to 3.8 at the second one and 3.6 for the last two visits.

The major change in contraceptive practice came by bringing the services to the doors of the women. In the villages, the women using pills increased from 5.3 percent to 11.4 percent of the target population after the first year. The use of withdrawal increased from 4.4 percent of the couples to 5.6 percent. Only two rural women used the IUD at the beginning of the project compared with 54 afterward. Twenty-three women were sterilized at the university hospital during the drive. Only 32 couples were using the condom.

In the urban area, contraceptive practice did not change much. The use of withdrawal increased from 24 percent of the couples to 30 percent. Urban couples showed no tendency to switch from withdrawal to the pill or the IUD.

* Under the Work Orient Adult Literacy Project, jointly sponsored by the Iran Ministry of Education and UNESCO, a population text was developed for adult literacy classes. In Isfahan Ostan, over 18,000 men received two weeks of instruction and 12,000 women received four weeks of instruction on population, family size, and contraception.

VI. Project Accomplishments and Future Plans

Accomplishments

The Isfahan Communications Project tried to avoid the shortcomings of previous family planning communications programs. Earlier programs were characterized by all or some of the following limitations: inadequate evaluation of the available media; failure to pretest slogans, symbols or themes; failure to develop a strategy for reaching opinion leaders and functionaries; lack of support for field-worker activities; failure to give full and accurate information on the methods of fertility control; absence of message reinforcement through a multimedia program; failure to evaluate the cost-effectiveness of media chosen; and insufficient evaluation of responses of acceptors and of the general public. In addressing itself to these problems, the Isfahan Project pioneered in many areas and made a major contribution to the field of population communication.

In some respects, however, the achievements of the ICP were unsatisfactory, and shortcomings of earlier programs were duplicated. The project did not consider leadership structures as target audiences or as participants in planning and execution phases. (In this respect, the Ernakulam vasectomy camp broke new ground in its mobilization of these groups in all stages of operation [Krishnakumar, 1972]). The Isfahan Project had to rely on the voluntary participation of functionaries since there was no provision for incentives. Again, the extensive use of incentives for motivation of part-time field workers has been successfully employed in other programs. Finally, the effectiveness of the Isfahan Project was hampered by a contraceptive delivery system that was inadequate in rural and poor urban areas and by the need to promote contraceptives that require a high degree of commitment on the part of the user (the pill and the condom). In the absence of abortion and sterilization, the project could not offer couples the opportunity to have children when they want them. The number of clinics in the province was too small to provide adequate coverage for the population, and no provision was made for contracting public and private doctors and paramedical personnel to provide contraceptives on a fee basis per client. The implication here is that communications programs must insure that distribution systems, like the media messages, are pretested on target women so as to be consistent with their needs and characteristics. No program should offer services that are beyond the scope of the existing distribution system and no program should motivate the public toward a goal (such as a small family) that it cannot provide the means to achieve.

The identification of these limitations of the ICP was in itself a major achievement, in that it pointed out those areas in which future programs should be modified. Beyond these limitations, the major contributions of the Isfahan Communication Project can be summarized as follows:

- The ICP demonstrated that a properly developed multimedia campaign can raise new acceptance rates and increase continuous use and can be expanded at a reasonable cost.

- The program pioneered in developing procedures for creating message content relevant to the local population and in developing methods of evaluating results of media campaigns.

- Five target groups for education and communications were identified: (1) the government and political elite; (2) family planning administrators; (3) the medical profession and family planning clinic staff; (4) functionaries

and opinion leaders: and (5) the general public.

- Mass media programs were integrated with promotion of family planning by field workers and functionaries.
- The ICP started to explore the types of reward systems that would be most acceptable to persuade couples to want and achieve replacement size families.

Application of ICP Findings in Iran

The Isfahan Communications Project provided a model that could be applied elsewhere in Iran and suggested the course for future family planning activities in Isfahan. To further both these goals, three objectives were established for 1972 and 1973:

1. To expand the family planning communications campaign developed in Isfahan in 1971 to six other ostans.
2. To develop model family planning projects in Najafabad and Shahreza (two shahrestans in Isfahan), with a target of doubling the eligible couples using contraception from 9 percent to 18 percent after one year.
3. To train elite groups such as senior religious leaders and government officials in population and family planning and send them monthly mailings on the population problem.

Ongoing activities in these areas will be summarized briefly here.

Expansion of Mass Media Campaign

During the last half of 1972 and in 1973, the mass media and functionary project was exposed to six ostans with a total of 12 million people. The campaigns lasted four months. The media used were radio programming, film clips for cinema houses, mailings to women with a recent birth, banners, and newspaper and magazine inserts. All the materials, including the printing of the local clinic addresses, were prepared in Isfahan. Details on developing the campaigns were worked out in each ostan with the respective Ostan Director General of Health, the Family Planning Director, the local Director of Radio with his scriptwriters, the Director of Culture and Arts, the newspaper and magazine distributors, and the Vital Events Registrar. In addition, a program was developed to give a one-day orientation class to various functionaries such as health department personnel, school teachers, Literacy and Health Corps, village leaders, the birth registrars, agriculture extension agents, and others in each ostan. The individuals attending the classes were given number-coded leaflets to hand out to men and women. The analysis of the effect of the campaigns is not complete, but acceptances in most of the ostans increased about 25 to 35 percent. The cost per ostan to expand the project was just over US$2,000. The estimated cost per new acceptor ranged from $0.85 to $1.65 per ostan. The successful expansion of the campaign varied considerably with the ability of the ostan family planning staff to use effectively the materials supplied and to organize the one-day training program for functionaries.

Model Family Planning Program in Two Shahrestans

The main objective of the model program is to employ and evaluate procedures for increasing the number of couples accepting contraceptives and continuously using them. The program, underway in Najafabad and Shahreza, is attempting to coordinate other agencies with the family planning facilities. Family planning and maternal and child health education and services are combined. Tubectomy and vasectomy are offered in the hospitals by qualified physicians. Mobile units are used to develop IUD and oral contraceptive services in the rural areas, and condoms are distributed in commercial channels and by depot holders. The public is being informed about the contraceptives by a mass media program, launched in August 1972, by full-time family planning workers, and by such functionaries as school teachers, village leaders, Literacy Corps, social workers, agriculture extension agents, granny midwives, religious leaders, and others respected within the community. A system of providing incentives to those who recruit acceptors has been established.

To achieve these overall goals, the government has (1) assigned the Deputy Director of Health as Project Director to integrate family planning in all health channels; (2) used all medical and paramedical personnel to provide sterilization and the IUD within the limits of their capabilities or qualifications after training; (3) set up carefully supervised depot distribution of oral pills and condoms in public and/or private sectors; (4) improved the training, working procedures, and supervision of all field workers and persons paid fees to recruit new acceptors; (5) conducted a continuing mass media communications program with special emphasis during four months of the year directed at both the public and opinion leaders; (6) developed special information and education programs for various groups in contact with the rural and urban population, such as school teachers, agriculture extension agents, village leaders, midwives, Health Corps, religious leaders and Literacy Corps; (7) expanded the services and program coverage through the use of mobile units; and (8) developed Najafabad and Shahreza shahrestans as a training base and model for other shahrestans.*

Education of Elite Groups

Under this project, scheduled for 1973, senior government and religious teachers are to be invited to Isfahan for a special training program. The course covers the results of the KAP surveys, which show strong public support and need for a family planning program; a film on the Communications Project; and discussions of the social, economic, and health reasons for limiting population growth and family size. The final session will deal with ways those attending the course can support and participate in the population program. Most of the training is to be conducted by the staff working on the Communication and Model Projects at the University of Isfahan.

In addition, monthly mailings to over 300 top government, professional, business, and religious leaders are being prepared on such subjects as statements by leaders on the population problem, the findings from KAP surveys showing the need for family planning, the projected school age population and educational needs, and other subjects related to population problems.

Although these programs are ongoing, and final results will not be available for some time, their activities are evidence of the continuing impact

* A similar program is under way in Khuzestan.