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RESULTS OF THE PRODEF/TULANE SURVEY IN BAS ZAIRE

Part I. Population Characteristics, Reproductive Ideals, and Fertility Control

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I. BACKGROUND AND PURPOSE OF THE STUDY

A. The Tulane Operations Research Project

On 30 September 1980, Tulane University signed a contract with the United States Agency for International Development (Contract No. 932-0632) to carry out an operations research (OR) project for family planning (FP) in the region of Bas Zaire, Republic of Zaire. The purpose of this project is to increase the availability and acceptability of modern contraceptive methods as part of an integrated maternal and child health (MCH) program. Locally, it is known as PRODEF, for "Programme d'Education Familiale."

In an effort to meet the varied MCH needs of the target population and to enhance the acceptability of introducing modern contraceptive methods, the project also provides medication (at nominal cost) for three prevalent conditions in young children: malaria, intestinal worms and dehydration due to diarrhea.

The project is being implemented in the urban area of Matadi (estimated population 150,000 - 200,000) and in a neighboring rural zone of Songololo (estimated population 36,000);¹ see map in Figure 1.

This is a service project, in that project funds have been used to create and/or strengthen a system for the delivery of contraceptives, along with the other products for children.² At the same time, it is a research project, in that it aims at documenting the degree of change which occurs in knowledge, attitude and practice of family planning as a result of the introduction of the service program.

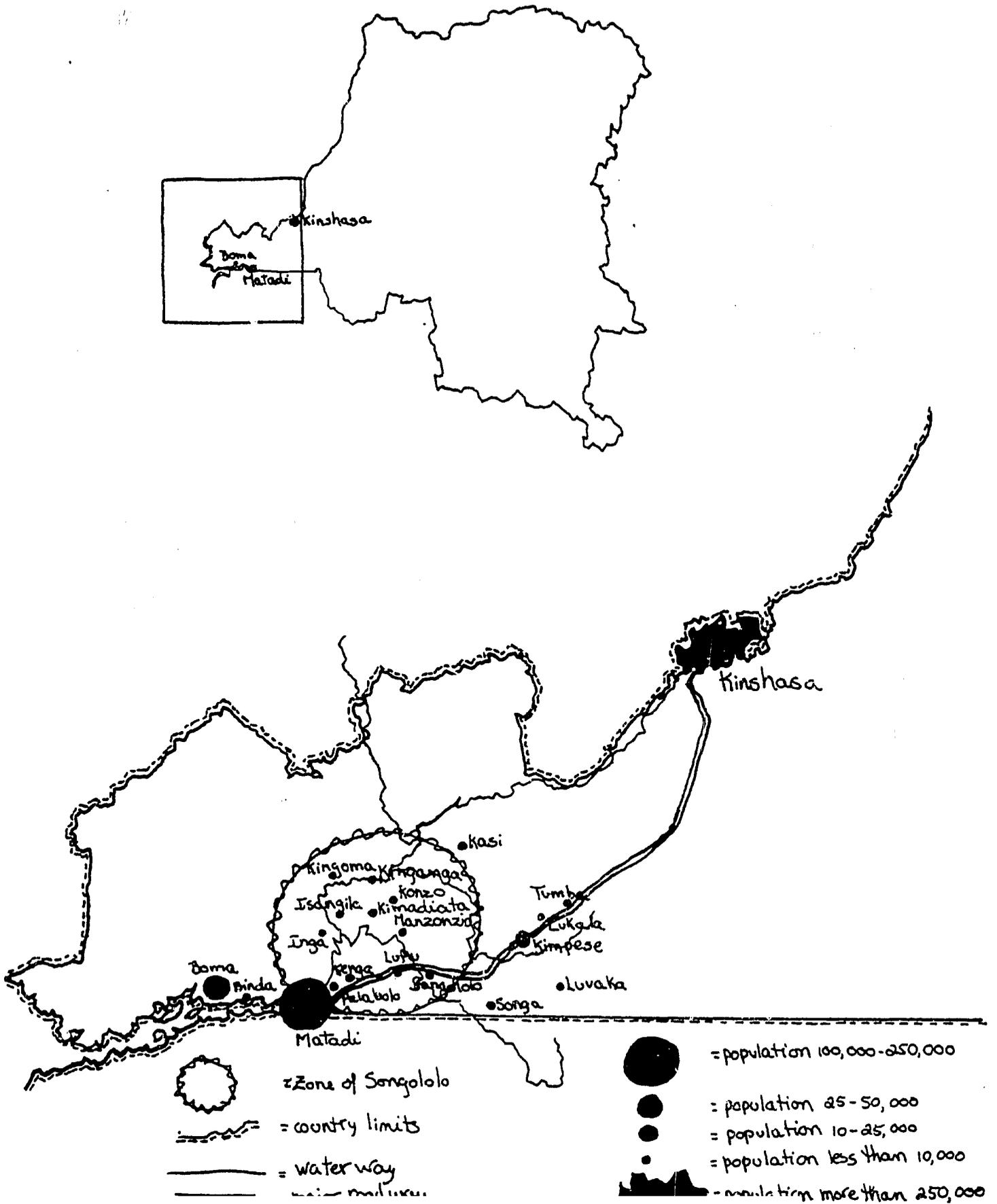
¹ However, the target populations selected for the project are somewhat smaller: approximately 133,000 in Matadi and 25,000 in the zone of Songololo.

² In the rural area, the service program includes both contraceptives and the drugs for young children. In the urban area, it was necessary to change the design to include only the family aspect for two reasons: (1) the logistics involved in controlling the sale of these products to such a large population, and (2) resistance to the sale of such products by local individuals who felt their own economic interests would be threatened.

Figure 1.

1a

Zaire



Moreover, the project is designed to test two alternative strategies to the delivery of FP services:

- (a) Treatment A: Stocking of existing dispensaries with contraceptives and other products, as well as an extensive outreach program consisting of group meetings, home visiting, and the household distribution of contraceptives; and
- (b) Treatment B: Stocking of existing dispensaries only, with no outreach activity.

An important part of the comparison of these two strategies will be the cost-effectiveness of each.

The specific objectives of the project, as stated in the project proposal, are the following:

1. To increase knowledge of modern contraceptives among women of reproductive age in the target population.
2. To promote a more favorable attitude toward family planning.
3. To increase the usage of modern contraceptives in the target population.
4. To decrease the desired number of births among women of reproductive age.
5. To determine the relative effectiveness of two different approaches to service delivery in increasing contraceptive usage.
6. To evaluate the two different approaches to service delivery of contraceptives in terms of cost-effectiveness.
7. To increase the percentage of children under five in the target population that receive treatment for malaria.
8. To increase the percentage of children under five in the target population that receive oral rehydration for diarrhea.

9. To increase the percentage of children under five in the target population that receive anti-helminthic drugs.

The Tulane OR project is being carried out in collaboration with the Communauté Baptiste du Bas Zaïre (CBZO). The counterpart director is Dr. Nlandu Mangani, Director of the Hopital Evangelique de Nsona Mpangu, which serves as the headquarters of the project. The Deputy Director is Citoyenne (Ms.) Matondo Mansilu, who has played a major role in all aspects of the project. Citoyenne Butuena Mavambu served as supervisor for the baseline survey, and has subsequently assumed the position of Urban Coordinator. She has been assisted in both positions by Citoyenne Nlandu Diasivi.

B. The Baseline Survey

The project design consists of three major components: a baseline survey, implementation of the service program for a period of 18 months, and a follow-up survey. The current report describes the results of the first of the three components.

The baseline survey among the target population serves four important purposes:

- (1) It describes the situation of the population prior to the service delivery and as such provides a basis for comparison (with results from the follow-up study) with which to determine whether the objectives of the project have been achieved.
- (2) It provides the project directors with important data on existing levels of knowledge and prevalent attitudes toward FP, which should be taken into account in the delivery of FP services;
- (3) It provides a basis for determining the comparability of the treatment groups (A and B) prior to the initiation of service

delivery, such that any differences between treatment groups found in the follow-up survey can be attributed to the program (and not to pre-existing differences).

- (4) It represents one of the few sources of fertility and family planning data from a probabilistic (random) sample of the population in a sub-Saharan Francophone country.

As noted in the title of this report, this represents Part I of the findings from the baseline survey, with specific focus on population characteristics, reproductive ideals and fertility control. Part II (forthcoming) will concentrate on the health and nutritional status of children under five in this population.

The current report is descriptive in nature and is intended to give an overview of the type of information available from the survey. Second, it is intended to establish the comparability between Treatment Groups A and B in both the urban and rural surveys. Third, it includes a detailed description of the survey methodology, which will probably appear in abbreviated form in subsequent publications. And, fourth, it gives an overview of the target population with reference to family planning and related issues.

Subsequent reports or publications on this data set will be more analytic in nature, focusing on interrelationships between family size, nutritional status of the children, demographic characteristics, socio-economic factors, contraceptive use, and so forth.

II. METHODOLOGY

A. The Survey Instrument

The questionnaire used in this survey was developed in French by the Tulane Principal Investigator (PI) and the PRODEF Director and Deputy Director.

Fertility/family planning questionnaires from previous surveys were reviewed prior to designing this questionnaire. Of prime importance were those items which would allow us to determine (by means of the follow-up survey) whether the objectives of the project had been achieved in terms of knowledge, attitude and practice of family planning.

The main areas covered by the survey were:

- o Demographic and socio-economic characteristics of the population.
- o Pregnancy history of the population
- o Data on the respondent's children under five in regard to malaria, intestinal worms, dehydration
- o Anthropological measurements of all children under five
- o Reproductive ideals and attitudes towards FP
- o Knowledge and use of FP methods
- o Exposure to messages about FP via mass and interpersonal channels

The survey instrument was translated to Kikongo by the PRODEF staff and pretested in the village of Viasa in Bas Zaire (near to but not located in the project area) in January 1981. Slight modifications were made in the wording of several items, but otherwise the questionnaire appeared to be functional.

The questionnaire was then translated from Kikongo back to French by a teacher at the local school who had not previously seen the questionnaire. This translation indicated that the meaning of all questions had been preserved in the translation to Kikongo.

B. Interviewer Recruitment and Training

Recruitment of interviewers began in late 1980 and included a test which was intended to reflect the level of education of the interviewer. Seven

candidates were selected. All were female and had completed (or were close to completing) secondary school. They ranged in age from 18 to 25 years old. None had ever held a paying job before, reflecting the low level of remunerated female participation in the labor force in Zaire.

Interviewer training was conducted in Nsona Mpangu in February 1981 for approximately ten days including the field practices. The trainers were the Tulane PI and the PRODEF Director and Deputy Director.

Topics covered in the interviewer training included the purpose of the questionnaire, the meaning of every question, the skip sequence involved (when certain items were not applicable), the correct manner of filling out the form; techniques of interviewing (including the use of probes, handling of sensitive items, clarifying discrepant answers, etc.); sampling techniques, including the technique of mapping out each village; techniques for taking anthropometric measurements for the children under five; and general instructions related to the logistics of carrying out the survey. There was considerable use of role playing and practice sessions during the training, as well as supervised practice sessions in households not included in the survey.

C. Sampling

Sampling in the urban and rural areas had one aspect in common. In neither case were there reliable estimates of population size, nor were there any maps sufficiently detailed to show the number and location of households. However, the magnitude of the sampling problem was far greater in the urban than in the rural area.

The Urban Area

Matadi is a city which has grown up on the sides of a large mass of rock. The main roads curve up and down the hilly terrain,

conforming to the topography of each location. Numerous side roads jut off the main roads, and paths and alleys extend from these. In the areas of project activity in Matadi (the zones of Nzanza and Mvuzi), the housing density is very great. This, combined with the hilly terrain, makes it very difficult to distinguish by observation alone where one household ends and another begins.

In short, the sampling problem in Matadi stemmed from the fact that there were no detailed maps or reliable estimates of population for subdivisions (such as census tracts) of the city; there was nothing resembling a grid pattern to the city; and it would have been impossible to enumerate households from an aerial photo.

The one tool available for the sampling task in Matadi was a map of the city (approximately twelve years old), which showed the main streets and landmarks of the city as well as the relative density of population in each area of Matadi (through different degrees of shading).

To approximate a probability sample (in which all women in the target population had an equal probability of being selected for the survey), the following approach was used. On the available map, the zone of Nzanza and Mvuzi were divided into 109 quadrants (carres) of equal size and were classified as to density, based on the shadings of the map and spot-checks in the field (1 = high, 2 = medium, 3 = low density). Uninhabited areas of either zone were excluded from the enumeration. At the first stage of sampling, 60 quadrants were randomly selected, using a random number table.

It was then necessary to "locate" these 60 quadrants on the ground. This was done by the supervisor, the interviewers and a male assistant hired specifically to help with the mapping, who attempted to match up landmarks and streets shown on the map with what could be observed on the ground, taking into account the position of the Zaire River and the road leading to Kinshasa. Each quadrant was approximately 300 meters square.

Once the selected quadrant was delineated, the interviewers mapped every household in the quadrant, indicating landmarks, streets and the street number of the houses (in the few instances were applicable). The households in the quadrant were then numbered on the map.

The second stage of sampling consisted of randomly selecting 30 households, using a table of random numbers. If the selected quadrant did not have 30 houses, an adjacent quadrant of similar (low) density was selected to obtain the necessary number.

An attempt was made to interview all women of reproductive age in a given household. This procedure continued until the interviewer reached her quota of 30 completed interviews per quadrant. At least three call-backs were made to locate women in selected households who were eligible but absent at the time the interviewer arrived.

This method was intended to yield a total of 1,800 interviews in Matadi. However, the actual number obtained was three short of this ($n = 1,797$), due to certain field problems.

The classification of the quadrants by density would allow for weighting of the quadrants in the event that there were significant

differences on key variables between areas of different density. This would be done to arrive at more accurate estimates of certain parameters, by giving greater weight to the more populated areas. The current report, however, does not include this type of weighting.

Sampling in the Rural Area

In comparison to Matadi, the rural area was a sampler's dream. The households in the villages of the target area are individual units, distinctly separate one from another, which generally lie one or two rows deep along the main road through the village.

Although the total population of the zone of Songololo is estimated to be 36,000, the villages to be covered by the program (53 in total) were estimated to have approximately 25,000 inhabitants. This estimate was based on statistics collected by another health practitioner in the area, and was not considered to be highly reliable.

In view of the fact that it would be useful to have maps of all villages in the project area for the service program as well as the survey, it was decided to interview in all villages rather than to select a sample of them. Estimates were made of the number of women 15 to 49 in the population, and it was calculated that it would be necessary to interview (all women of reproductive age) in every third household to arrive at a total of 1,800 completed interviews for the rural survey.

In preparation for interviewing, each village was divided into sections and one section assigned to each interviewer. The interviewer mapped out her section, and then proceeded to interview

at each selected household. An attempt was made to interview all women 15 to 49 years old, and up to three call-backs were made if an eligible woman was not at home.

The field experience during the first day of interviewing indicated that there were considerably more uninhabited houses or households with no woman 15 to 49 than had been expected. To insure a sufficiently large sample, the sampling interval was changed to every second household.

This sampling procedure yielded a total of 1,751 completed interviews, somewhat short of the desired number but nonetheless sufficient for the purposes of the survey.

Subsequently, 47 cases were excluded when it was decided to exclude certain villages from the service program (and thus it was meaningless to include them in the baseline and follow-up surveys). Exclusions included villages with only two to three houses, as well as the village of Kitomesa which is atypical of the area because of the agricultural station there, which has its own system of health care delivery. Thus, the number of cases reported herein is 1,704.

D. Data Collection and Field Supervision

The data collection for the baseline survey took place from February - May 1981 in the rural area and from September 1981 to January 1982 in the urban area.

During the first few weeks of both surveys, all questionnaires were checked in the field by the supervisor for error, and she would send the interviewers back to the respondents if items were discrepant or left blank. This procedure tended to minimize errors from the start.

In addition, in five percent of the completed interviews, the supervisor would revisit the household to verify the accuracy of certain answers (age, education, number of living children) in an effort to detect any irregularities in interviewing, and thus improve the quality of the data.

E. Coding and Key punching

The task of coding of questionnaires for the rural survey was begun by a Peace Corps volunteer in Nsona Mpangu, Ms. Eileen Drew, with assistance from a local school teacher, Cit. Mombela. Ms. Drew finished her tour before the close of the survey and Cit. Mombela completed the job for the rural survey, as well as overseeing all the coding for the urban survey.

Once the questionnaires were coded, they were transferred to Kinshasa for key punching at the Nutrition Planning Center (CEPLANUT). The key punching for both the urban and rural baseline surveys was completed by May 1982, and the data were transferred to magnetic tape for processing at Tulane University.

F. Editing and Data Processing

The data were edited (cleaned) prior to processing using the computer program Mini-tab.¹ This program identifies out-of-range values and logical inconsistencies in the data. The number of errors encountered was very low, suggesting that both coders and key punchers had done their jobs conscientiously. Errors identified by the mini-tab program were checked against the original questions and corrected to the extent possible.

¹ Elkins, Henry G. 1971. Mini-tab Edit, Min-tab Frequencies and Mini-tab Tables. A Set of Three Interrelated Statistical Programs for Small Computers. (Chicago: University of Chicago, Community and Family Study Center.

III. RESULTS

Before moving directly to the findings with relation to reproductive ideals and fertility control, it is important to first examine the demographic and socio-economic characteristics of the study population, for two reasons:

- (1) to know the nature of the population to be involved in this operations research project, and
- (2) to determine the comparability of the treatment areas prior to the initiation of service delivery.

It is of interest to make two types of comparisons: (1) between the urban and rural populations and (2) between treatment areas within the urban population or within the rural population. The urban/rural differences are highlighted below as a means of describing the two different study areas. It is expected that there will be substantial differences between the two which reflect the different economic possibilities, educational levels, lifestyle, customs, etc., of the two groups.

By contrast, the differences between treatment areas are examined as a means of assessing the comparability of these areas. In this report, Treatment Area A refers to that area which will receive the total program, including stocking of dispensaries and extensive outreach activities. Treatment Area B will have the stocking of dispensaries but no outreach.

Ideally, one would like the treatment areas with the urban (and within the rural) population to be similar on key demographic and socio-economic variables, as well as on factors related to family planning. To the extent that substantial differences exist on these key variables, it is important to consider how these could affect the impact (or bias the evaluation of) the family planning program in these areas.

A. Characteristics of the Study Population and Comparability of the Treatment Areas

The demographic characteristics of the study population are presented in Table 1. On the majority of variables there is strong comparability between the treatment areas, though a number of differences emerge between the urban and rural population, as expected.

Number of persons in the household: The average number of persons per household was 6.7 in Matadi compared to 6.0 in the zone of Songololo. In both treatment areas in the urban and in the rural survey, there were slightly more females than males reported to be living in the household. In the majority of households (70 percent or more) there was only one woman of reproductive age.

Age: The average age of the women in the urban survey was 27 years (in both treatment areas) while it was 28 years in both areas of the rural survey.

Religion: The most frequently mentioned religious affiliation among all groups was Protestant, although the percentage Protestant was higher in the rural area (51 percent) than in the urban (45 percent). The second major religion of the area is Catholicism (42 percent urban; 35 percent rural). A third religion, mentioned by less than 10 percent, is Kimbanguiste. A small percentage in all areas mentioned some other religion or reported to have no religion.

Nationality: In the urban survey 92 percent of the respondents reported to be Zairian, with only slight differences between Treatment Area A (94 percent) and Area B (89 percent) areas.

However, in the rural area there is a marked difference between the two treatment groups on this variable. Sixty (60) percent of the

respondents in Area A compared to 84 percent in Area B are Zairian nationals, the remaining portion of the population being made up of Angolans. The Angolans are largely refugees and tend to have a slightly lower standard of living. Moreover, initial efforts to promote family planning in the Angolan refugee communities indicate that they are less open to the concept of family planning than the Zairian communities. As such, this difference in national origin between the two areas in the rural population represents a factor which could affect the impact of the program (i.e., the effect of the program in Area A, which will have the extensive outreach activities, could be reduced by the higher percentage of Angolan refugees in these villages). This factor will be taken into account in the final analysis of the results from the follow-up survey.

Years in the Community: Given the refugee phenomenon in this part of Bas Zaire, all respondents were asked the number of years they had lived in the community (i.e., in the city of Matadi for the urban survey or in the village of current residence for the rural survey).

In the urban survey, the average number of years in the community was sixteen (16). There was almost no difference between the treatment areas on this variable, but, interestingly enough, the few Angolan respondents in Matadi had a slightly higher average (18 years) than the Zairians.

In the rural survey, the respondents had lived in their present community for an average of ten (10) years, which is lower than for the urban area of Matadi. Years of residence was slightly lower in the experimental area, which can be partially attributed to the higher percentage of refugees. And in the rural survey, the Angolan women had

spent fewer years in their present community of residence than had the Zairian respondents.

Education of the Respondent: As shown in Table 2, the educational level of the urban population is higher than that of the rural. Whereas 78 percent of the Matadi respondents reported to have attended school, this is true of only 59 percent of the rural population. Forty-one percent of the urban population had attended secondary school (or higher), whereas only 17 percent in the rural survey had done so. Thus, it is not surprising that 67 percent of the urban respondents reported that they could read, compared to 44 percent in the rural areas.

While there are marked urban-rural differences on education, there is strong comparability between the treatment areas in each survey. Likewise, the percentage literate is similar between the two treatment areas in each survey, as shown in Table 2.

Occupation of the Respondent: The occupations reported by respondents in this survey reflect marked differences in the daily activities of women in the urban versus rural area. The majority of Matadi respondents (65 percent) reported to be housewives, while 19 percent were vendors, 6 percent work in the fields, 4 percent are civil servants, and 6 percent have other occupations. These percentages were comparable for the two treatment areas.

By contrast, the vast majority of women in the rural survey (92 percent) reported to work in the fields (which is assumed to be in addition to their domestic duties at home); 3 percent were housewives; 2 percent were vendors; and the remaining 3 percent reported other occupations. Again, there was strong comparability between treatment areas on occupation.

Husband's Education: Since the socio-economic status of the husband is an important factor in the socio-economic status of the wife in many societies, it was considered important to examine this variable as well. The percentages on this variable are based on the total number of women who reported to be married at the time of the interview.

Some 37 percent of the (married) urban respondents and 29 percent of the (married) rural respondents did not know how many years of school the husband had completed. Since it is unknown whether those who gave a specific number of years were representative of the total sample, it is difficult to accurately compare years of schooling for the women and their husbands.

Nonetheless, the data in Table 2 suggest that the husbands had received more education on the average than their wives and, as expected, urban husbands had a higher educational level than the husbands of the rural respondents. The treatment areas were comparable on both surveys.

Husband's Occupation: Data on the occupation of the husbands were more complete. In the urban area the two most frequently mentioned occupations were employee of a private company or civil servant (which could include teachers, nurses, and other service jobs). There was some variation between the treatment areas in the urban survey, but the overall picture which emerges is similar.

In the rural areas, by contrast, working in the fields or hunting in the forest was the most frequently mentioned (52 percent), followed by civil servant (15 percent), employee of a private company (12 percent), vendor (6 percent) and others (15 percent). While the treatment areas were generally comparable, the husbands in Area A were

slightly more likely to be farmers, whereas in Area B they were slightly more likely to be civil servants.

In addition to the above indicators of demographic characteristics and socio-economic status, the baseline survey included a number of items which reflect living conditions and ownership of certain items. These will be used in subsequent analysis of the relationships between socio-economic status, family size, contraceptive use, and other factors. The findings for these additional indicators of socio-economic status are reported in Appendix A.

B. Marital Status of the Population

One shortcoming of this survey concerns the definition of marital status. In the urban survey, a woman who is living in a consensual union is classified as married (as is generally done in the contraceptive prevalence surveys, which report contraceptive use among women of reproductive age, married or living in consensual union).

However, in the rural survey, there was a misunderstanding regarding the classification of women in consensual unions, which was not detected until the end of the rural survey (which was carried out before the urban survey). It is probable that some women in a consensual union may have claimed to be married (and were recorded as such), even if they were not legally married. However (in the rural survey only), if a woman explained that she was not legally married but living with a man in consensual union, she was reported as single. Adjustments for this error will be made in subsequent analyses of contraceptive prevalence and related factors.

Seventy (70) percent of the women in the urban area were married or living in consensual union, while 27 percent had never been married, 2 percent were divorced or separated, and 1 percent were widowed. The treatment areas were similar on this variable; see Table 3.

In the rural area, 62 percent were married, while 30 percent¹ were single, 6 percent were divorced or separated, and 2 percent were widowed. These percentages held for both treatment areas.

In the majority of cases, this represented the first marriage or consensual union for the respondent, although the percentage that had been married previously was higher among rural respondents (22 percent) than urban respondents (6 percent). The treatment areas were similar in both surveys.

In both urban and rural populations, the mean age at marriage was approximately 17 years and this held for both treatment areas in each case. It is of interest that the percentage who married younger than 15 was slightly higher in the rural survey (14 percent) than in the urban survey (10 percent).

In the urban area approximately one in ten of the respondents reported that her husband had more than one wife. By comparison, about one-quarter of the women in the rural area reported that their husbands had at least one other wife, suggesting that the practice of polygamy is more widespread in the latter.

In both the urban and rural areas, approximately 95 percent of the married women reported their husbands to be living at home at the time

¹ This figure includes those women who reported to be living in consensual union rather than to be legally married.

of the survey, which implies a high level of potential exposure to pregnancy. In 3 percent of the cases, the husband was away but had been gone for less than a month. In only 1 percent in the urban survey and 3 percent in the rural survey, had the husband been away for more than one month.

In summary with regard to marital status, there is a high degree of comparability between the treatment areas of both surveys.

C. Pregnancy History

Eighty-five (85) percent of the women in the urban survey had ever been pregnant, in comparison to 92 percent in the rural survey, as shown in Table 4. Differences between the treatment areas in each survey were minimal.

Twelve (12) percent of the women in the urban area reported to be pregnant at the time of the survey, while this was true of 16 percent in the rural area. Again, the treatment areas were comparable in the two surveys.

Given the prevalence of sterility in parts of sub-Saharan Africa caused by venereal disease, it was also of interest to determine the percentage of women who were infertile or subfecund. To this end, all women were asked if they had (or would have) any problem becoming pregnant if they wished to do so. Approximately 10 percent of the women in both the urban and rural surveys reported this to be the case (although further analysis of this variable by age of the respondent is needed, to determine whether many of these women have simply reached menopause).

Data on the total number of pregnancies show a mean of 4.0 in the urban area and 4.6 in the rural. This difference could be partially attributed to the fact that the rural sample is slightly older (one year) than the urban. The treatment areas are similar in both the urban and rural survey.

Close to a quarter of the women in both the urban and rural survey have had an abortion (spontaneous or induced), and at least 7 percent in each survey have had two or more. The treatment areas in each survey were comparable.

Approximately 3 percent of the urban respondents and 7 percent of the rural respondents have had a stillbirth; the occurrence of multiple stillbirths was rare (less than 1 percent). There was little difference between treatment groups in the surveys.

The number of children born alive was slightly lower for urban respondents (3.5) than for the rural respondents (4.1). There was little difference between treatment groups. Section H in Table 4 provides a breakdown on the number of children born alive by the age of the respondent. In both the urban and rural population, the number increases monotonically with age. The number of children born to women 45 to 49 is equivalent to the completed fertility rate, which was 7.7 children for women in both the urban and rural area.

As for infant or child mortality, 31 percent of the urban sample compared to 43 percent of the rural sample have had at least one child die after being born alive. Four percent of the urban respondents and 9 percent of the rural respondents have had at least three children die. The treatment groups were comparable in this respect.

The average number of living children among the urban respondents was 3.0, compared to 3.3 for the rural. Thus, while the rural women had more pregnancies and more live births, the higher pregnancy waste and higher infant/child mortality has tended to narrow the gap in terms of total number of living children. Differences between the treatment areas were minimal.

The sex ratio for living children in both urban and rural areas (and in the different treatment groups) was 1.1.

D. Breastfeeding Status of Children Under Three

As mentioned in the opening section, Part I of the Findings from the Baseline Survey focuses on reproductive behavior and fertility control, whereas Part II will concentrate on the health and nutritional status of children under five in this population, including data on height, weight, arm measurement, presence of edema; occurrence of malaria, intestinal worms or diarrhea in the past two weeks; and visit to a dispensary.

Nonetheless, it is of interest to include data on the breastfeeding status of children under three since this has direct bearing on fertility control. Data from a previous study in Zaire¹ suggest that the motivation for fertility control (by traditional or modern methods) is greatest during the first six months post-partum; it drops off slightly as the nursing child gets older; and it is lowest among those women who have weaned their child.

Bertrand, J.T., W.E. Bertrand and Miatudila Malonga. "The Use of Traditional and Modern Methods of Fertility Control in Kinshasa, Zaire." Population Studies, vol. 37 (in press).

In the current study, 67 percent of urban women and 74 percent of rural women with a child under three were still breastfeeding; see Table 5.

Among those women who had weaned their child under three, the mean age of weaning was 16 months in the urban area, 18 months in the rural area. It is noteworthy that 34 percent in the urban area and 45 percent in the rural area had weaned their baby sometime after 24 months. The data suggest that urban women tend to introduce supplemental foods at an earlier age (4.1 months on the average) than rural women (5.5 months).

Subsequent analyses of these data will focus on the interrelationships between breastfeeding status and fertility control. However, given that there are strong cultural pressures not to become pregnant while breastfeeding a child, it is expected that the widespread practice of breastfeeding (to a fairly high age) will have a direct relationship to the desire for fertility control.

• Reproductive Ideals

It is widely recognized that Zaire, like most other sub-Saharan countries, is strongly pronatalist at the family, community, and national level. The series of questions from this survey which were asked with regard to reproductive ideals reflects a strong pronatalist attitude.

The responses regarding ideal family size summarize this pronatalist viewpoint. When asked how many children they considered to be an ideal number, at least half the women in both the urban and rural

surveys responded, "as many as God gives." An additional 16 percent in the urban survey and 9 percent in the rural survey did not know, suggesting that family size was perhaps something to which they had given relatively little thought. Finally, among those who gave a specific number, the mean number considered to be ideal was 6.2 among both urban and rural respondents; see Table 6.

The majority of women in both the urban and rural surveys expressed a desire to have more children; among those women who had had at least one pregnancy, 64 percent of urban respondents and 72 percent of rural respondents reported to want more children. Among those who wished to have more, approximately 80 percent in both the urban and rural surveys claimed they wanted as many as God gave them. The remaining respondents (who wanted more children and gave a specific number) claimed to want at least three more children on the average.

However, there is a marked difference between the percentage of women who wanted more children at some point and the percentage who actually wanted to become pregnant at that time. In fact, while two-thirds of the women wanted more children at some point, only 10 percent of the urban respondents and 18 percent of the rural respondents desired pregnancy at the time of the interview.

Of particular importance in terms of child-spacing and family planning is the fact that 77 percent of the urban respondents and 65 percent of the rural did not want another pregnancy for the time being. This represents the potential target group for family planning activities, which in this case is a sizable percentage of the population surveyed.

Given the strong pronatalist attitude prevalent in this area, it may seem surprising that 96 percent of urban women and 94 percent of rural women approved of family planning or, specifically, the use of methods to delay or prevent pregnancy. These findings reflect the deeply ingrained value placed on child-spacing in traditional societies of sub-Saharan Africa, not for the purposes of family limitation but rather to improve the survival chances of the children.

Of those who approved of family planning, the most frequent reason given by urban respondents was to insure that the children would be healthy (43 percent), followed by the importance of spacing children (22 percent), the desirability of preventing illegitimate births (15 percent), protection of the health of the mother (12 percent), and other (8 percent). In the rural area, these were also the main reasons given for favoring family planning, although preventing illegitimate births headed the list, followed by the other three.

In terms of reasons why respondents believed family planning was bad, it should be underscored that the percentages given in Table 6 are based on the number who believed it was bad, which was very small. The two main reasons given were that it is a sin and that it is risky (potentially harmful to health). Other answers were given by only a handful of respondents.

As in the other sections, it is important to consider the comparability between the treatment areas in both surveys regarding reproductive ideals. While the two are generally comparable on variables in Table 6, there are slight differences which may result from the fact that there are more Angolans in Area A than Area B in the rural survey. As such, one would predict slightly stronger pronatalist

attitudes among the respondents in Area A than in Area B in the rural area. Indeed, ideal family size in Area A was slightly higher, as was the percentage desiring more children; also, this group was slightly less likely to approve of family planning. However, the differences are minimal and can be controlled for statistically in further analysis.

F. Knowledge and Use of Family Planning Methods

Data from this section of the survey reflect the widespread practice of traditional methods of fertility control, while there is a growing awareness but little use of modern contraceptive methods.

As shown in Table 7, approximately two-thirds of the respondents in both the urban and rural surveys reported that they knew some means of spacing or preventing pregnancy. However, this percentage rose when respondents were asked about specific methods, suggesting a certain shyness or reserve on the part of these respondents to volunteer their knowledge of family planning methods.

In the urban area, the three mostly widely known methods of fertility control were abstinence, withdrawal and a traditional belt; over 65 percent of the respondents knew these methods. These three traditional methods were followed by three modern methods: the oral pill (62 percent), the injection (62 percent) and female sterilization (59 percent). Half of the respondents had heard of rhythm. Condoms, IUDs and vaginal barrier methods were not mentioned frequently. It will be of interest to compare data from the baseline and follow-up survey to determine whether knowledge of these methods increases as a result of project activity.

Among rural respondents, the most widely known method was again abstinence (83 percent), and among a larger percentage of respondents than in the urban area. Surprisingly, the second most frequently mentioned method was female sterilization (66 percent). This can probably be explained by the fact that the method became available approximately two years ago after Dr. Nlandu took the course at Johns Hopkins, and some 50 women in the zone of Songololo have had the procedure since then. Two doctors from Matadi have subsequently been to the JHPIEGO course in Tunisia, but not before the baseline survey was taken there.

Following abstinence and female sterilization, the next most widely known methods among rural respondents were withdrawal (63 percent) and the traditional belt (58 percent). Just over half of the rural respondents had heard of the pill and the injection, while less than half had heard of the IUD (41 percent), condoms, rhythm (37 percent each), vaginal barrier methods (15 percent) or the diaphragm (11 percent).

It is of note that the percentage who had heard of abstinence, female sterilization, the IUD, condoms, vaginal methods and the diaphragm was higher among rural than urban respondents. This may be due to the fact that Dr. Nlandu had included the topic of family planning in a number of his public health activities in the rural area, prior to this survey (and in fact to his contact with Tulane University).

Overall, 85 percent of the urban respondents and 77 percent of the rural respondents had heard of at least one modern method; 95 percent in

both surveys had heard of a traditional method. This gave a total of 97 percent of the urban respondents and 96 percent of the rural respondents who had ever heard of any means of fertility control.

(Note: These percentages are not shown in Table 7.)

As regards previous and current use of family planning methods, the percentages reported below are based on women 15 to 49, married or living in consensual union (the denominator frequently used in reporting contraceptive prevalence).

The findings in Table 7 separate the modern and traditional methods, in order to emphasize that there has been considerable use of traditional methods, in contrast to very limited experimentation with modern methods.

Among the urban respondents, 10 percent had ever used any of the modern contraceptive methods listed in Table 7, the most frequently mentioned being the pill, followed by a considerably smaller number that had used the condom, injection, female sterilization, the IUD, or the barrier methods.

By contrast, 80 percent of the urban respondents had used at least one of the traditional methods listed in Table 7, withdrawal being the most frequently mentioned, followed by abstinence and rhythm, and an insignificant percentage that had ever used the vaginal douche or traditional belt. For both the modern and traditional methods, previous use was fairly comparable between treatment groups in the urban survey.

A similar pattern is found among rural respondents. A very small percentage (7 percent) had ever used a modern method, compared to 81 percent that had ever practiced a traditional means of fertility

control. The treatment groups were roughly comparable, although the most widely ever-used method was abstinence in Area A, while it was withdrawal in Area B.

Current contraceptive use shows the same pattern as previous (ever) use. The percentage of respondents using a modern contraceptive method at the time of the interview was 4 percent among both the urban rural respondents (15 to 59 married or living in union). The most widely used method among urban women (though only by 2 percent) was the pill, whereas the most widely used method among rural respondents (though only by 3 percent) was female sterilization.

By contrast, at least one-half of the respondents in both areas were currently using a traditional means of fertility control, the most widely used method being abstinence. Among urban respondents, this method was mentioned much more frequently than any of the other traditional methods. In the rural area, by contrast, withdrawal and rhythm also emerged as important methods of fertility control.

While there were differences among the treatment groups in terms of the percentages using each of the modern and traditional method, there was no consistent trend that would suggest higher use among one treatment group over another.

4. Source of Family Planning Methods Among Current Users of Modern Contraceptives

As the column headings in Table 8 suggest, the number of women using a modern contraceptive (at the time of the interview) was small. Thus, the percentages in this section should be interpreted with

caution. Nonetheless, it is of interest to know where these women were getting their supplies prior to the service delivery program and at what cost.

In the urban survey, the most commonly mentioned source for contraceptives was the hospital, followed by the state dispensaries, pharmacies, private doctor, and home visit. In the case of rural users, three-quarters obtained their supplies from the hospital (meaning in most cases the hospital in Nsona Mpangu).

About two-thirds of users in the urban area were able to walk to their source of contraceptive supplies, while a quarter used public transportation. In the rural area, the number of users that walked versus took public transportation was about equal.

The average time required to get to the source of contraceptives was 45 minutes for users in the urban area, compared to double that amount (99 minutes) among users in the rural area. This reflects the fact that the great majority of rural users relied on the hospital, which was not close-by for many. Indeed, 26 of 90 (29 percent) of the users in the urban survey compared to 24 of 55 (44 percent) of users in the rural survey reported that it was difficult for them to get to the source.

Because many walked to the source, over half the users reported no cost for transportation. Among the few urban users who did pay for transportation, the cost varied from \$0.50 (US)¹ to \$4.00.

¹ The conversion to US dollars was based on the exchange rate at the time of the survey: 5.5 zaires = \$1.00 US.

In the urban area, almost all users had to pay for their methods, the average cost being \$2.86 (US). In the rural area, close to half the users obtained their method free. This is very plausible, since female sterilizations were done free of charge when they were first offered, and this is the most frequently mentioned method. In any event, the mean cost of the contraceptives was lower in the rural than urban area.

H. Attitudes and Knowledge of Sources of Family Planning Methods Among Non-Users (of Any Method)

Among those women who were not using any contraceptive method, the reasons given were similar for both the urban and rural survey. As shown in Table 9, one-fifth of the women had no children yet and/or wanted another child. This was followed by a substantial number (20 percent urban, 16 percent rural) who did not have sufficient knowledge about the methods for preventing pregnancy. At least 10 percent of the non-users in both urban and rural surveys gave the reasons that they were currently pregnant, not interested, or did not need protection. Additional reasons mentioned by at least 5 percent each were being celibate or subfecund. Other reasons given by only a few respondents are listed in Table 9.

Among the non-users, 50 percent in the urban area and 43 percent in the rural expressed interest in using a method to prevent pregnancy. The percentages were comparable between treatment groups.

Of those non-users interested in using a method, almost half in the urban area did not know where they would go to get one. A third named the hospital, and only 5 percent mentioned the state dispensary as a

possible source. Among the non-users interested in a method in the rural survey, approximately half correctly named the hospital, 9 percent mentioned the private/religious dispensaries, while 22 percent did not know a source.

The type of transportation to be used to arrive at the source mentioned by the "interested non-users" was similar to that given by current users. In the urban area about two-thirds would walk, whereas 29 percent would take public transport. Among the rural respondents, over half would need to use public transport, compared to 39 percent that would walk. The treatment groups were fairly comparable in this sense.

The average time which it would take the interested non-users to reach the source was very similar among treatment groups: 31 minutes in the urban area, 128 minutes (2 hours) in the rural. It is unclear why the estimated time to the source was higher among current users (45 minutes) than interested non-users (31 minutes) in the urban area, while it is lower for current users (99 minutes) than interested non-users (128 minutes) in the rural survey.

Since many could walk to the source, 70 percent of the urban respondents (interested non-users) and 50 percent of rural respondents said that it would cost them nothing to get to the source. The estimated average cost of transportation given by the interested non-users was much lower than the cost given by current users in both the urban and rural surveys. However, it should be emphasized that the number of cases is small, and the findings in this section should be taken as suggestive, not conclusive.

I. Exposure to Family Planning Communication

Because of the outreach activities to be carried out in connection with service delivery, it was of interest to establish a baseline regarding previous exposure to family planning messages via mass and interpersonal channels.

The percentages in Table 10 suggest that there has been some diffusion of family planning messages in the past. Approximately half of the urban respondents and 30 percent of the rural respondents had ever heard something about family planning on the radio, which was the most frequently mentioned channel of mass communication.

At least 10 percent in both urban and rural areas reported to have seen something about family planning in brochures. In both surveys, these were followed by mention of television, posters, and newspapers.

The fact that more rural respondents than urban respondents mentioned seeing something about family planning on television raises doubts about the validity of the answers to this question, given that only 2 percent of the rural respondents have electricity, much less television. Although they might have seen television while visiting an urban area, it is unlikely that they would have a higher level of exposure to family planning messages via television than their urban counterparts. However, if these answers were totally arbitrary, it is unlikely that there would be such comparability between the treatment areas on this set of questions.

Interpersonal communication channels have been more effective than the mass media in reaching the target population with messages about family planning, according to Table 10. Among urban respondents, close to 80 percent reported having heard about family planning in a group

meeting, whereas just over half the rural respondents had attended a group meeting where it was discussed. About one-quarter in each survey and treatment area had discussed family planning with a doctor or nurse. And 3 percent of urban respondents versus 11 percent of rural respondents claimed to have received a home visit in which family planning was discussed.

While the percentages exposed to family planning messages via these different sources seemed somewhat high for a region where promotion of family planning has been limited, there is reasonable comparability between treatment areas in terms of the rank order of the channels and actual percentages exposed to each. This would tend to argue against the possibility of totally arbitrary answers to these items regarding communication channels. It will be necessary to explore these findings with local counterparts in search of a better explanation to the results on exposure to family planning messages via different channels.

IV. IMPLICATIONS OF THE RESULTS FOR THE ACCEPTANCE OF FAMILY PLANNING

While the baseline survey contains a substantial amount of information on topics other than fertility control, this report focuses on the family planning component of the survey. There are a number of findings which would seem to mitigate against the acceptance of modern contraceptive techniques among this population; there are other results which would suggest a potential receptivity to family planning methods. These can be summarized as follows:

A. Findings Which Would Tend to Mitigate Against the Acceptance of Family Planning

1. Forty-two percent of urban respondents and 35 percent of rural respondents are Roman Catholic. However, there is considerable

tolerance on the part of the church in Zaire regarding family planning, as such the percentage of Catholics may not be of great importance.

2. Close to 30 percent of the women in the rural area are from Angola, and field experience to date in this region of Bas Zaire indicates that the Angolans are more resistant to family planning than the Zairians.
3. The educational level of the population is relatively low: 22 percent of the urban and 40 percent of the rural respondents have never attended school. While this is not an insurmountable barrier to the acceptance of family planning, it is nonetheless a factor to be recognized.
4. Infant and child mortality is high: 31 percent of the urban respondents and 43 percent of rural respondents have had at least one child die. These women may feel the need to have a number of children to insure that at least a few survive to support them in their old age.
5. Reproductive ideals are either vaguely defined or high. At least half the women in both the urban and rural survey wanted "as many children as God gives," and among those who indicated a specific number, the mean number of children considered ideal was 6.2.
6. There are a number of women in the target population (15 percent, urban; 23 percent, rural) who have never heard of any modern contraceptive method, an important prerequisite to eventual use.
7. Women who desire a means of fertility control have relied almost entirely on traditional methods to date. While this may well

change with increased availability of modern contraceptives, traditional methods are more familiar, more widely used, and accepted at the present time.

8. Contraceptive methods are not perceived as being available from a convenient source. Even among current users (who presumably have overcome the obstacle of inconvenience), 29 percent in the urban survey and 44 percent in the rural survey reported that getting to the source was "difficult," taking an average of 45 minutes (urban) to 1½ hours (rural).
9. Among those women not using any method of fertility control but interested in doing so, half in the urban survey and one-fifth in the rural survey did not know where they would go to get a family planning method.
10. Previous and current levels of use of modern contraceptives are low, despite the fact that the majority of respondents in both the urban and rural survey report that they have been exposed to messages about family planning via one or more mass or interpersonal channels of communication.

B. Factors Which Suggest a Potential for Family Planning Acceptance in this Population

1. The traditional practice of polygamy is disappearing, especially in the urban area. As such, abstinence from sexual relations as a means of childspacing may become increasingly difficult to practice, and couples may seek alternative methods of child spacing.

2. A surprising 77 percent of urban respondents and 65 percent of rural respondents do not want to become pregnant for the time being. While this probably reflects an interest in childspacing rather than family size limitation in most cases, it nonetheless points to the sizable portion of the target population interested in a means of controlling fertility.
3. Attitudes toward family planning (i.e., means of delaying or preventing pregnancy) are very positive; 96 percent of urban respondents and 94 percent of rural respondents approve.
4. There is a deeply ingrained understanding of the benefits of childspacing, especially in regard to the child(ren), and to a lesser extent in regard to the mother.
5. Over two-thirds of the women with a child less than 36 months are still breastfeeding. Previous research suggests that this group is particularly motivated to avoid pregnancy.
6. For a society in which there has been relatively limited access to modern contraceptives, the percentage that have heard of at least one modern method is reasonably high (85 percent, urban; 77 percent, rural).
7. In the urban area, withdrawal is by far the most frequently mentioned method as regards previous use (ever), and in the rural area it is a close second to abstinence. This suggests that the traditional taboo on post-partum relations may be eroding, and that couples have begun to seek alternative methods of fertility control. In the absence of modern contraceptives, withdrawal is an obvious choice. Were modern contraceptives available, it is

possible they would be accepted as an alternative to abstinence and/or withdrawal.

8. Although female sterilization is low in both urban and rural areas, it is in fact the most widely used method among current acceptors in the rural area. This would suggest that there is at least a small group of women in the target population that are interested in family size limitation, and in fact this percentage might increase with ready accessibility to modern methods.
9. Among non-users of (any) contraceptive method, 50 percent in the urban survey and 43 percent in the rural survey expressed interest in using some means of family planning. This combined with the number of women using traditional methods suggests a sizable group interested or currently attempting some means of fertility control.
10. The promotional activities to be carried out as part of the service delivery program will not be entirely new to this population; the majority of respondents have previously seen or heard family planning messages via at least one (mass or interpersonal) communication channel.

The results of this survey provide the basis against which the effectiveness of the service delivery program will be judged. At the same time, they demonstrate the comparability of the treatment areas within the urban population and within the rural population. As such, differences between treatment groups found in the follow-up survey will be attributable to program activities rather than pre-existing differences.

The PRODEF service program was initiated in October 1981 in the rural zone of Songololo and in June 1982 in the urban area of Matadi. Each program will be allowed to run for 18 months before the follow-up survey is conducted (tentatively scheduled for April 1983 in the rural area and December 1983 in the urban area).

The results of this operations research project promise to provide useful insight into the question of the acceptance of modern contraceptive methods when they are readily accessible to a population, in both an urban and a rural setting of Zaire, a Francophone sub-Saharan country.

Table 1

Demographic Characteristics of the Study Population

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Total Number of Persons</u>						
1-2	5.2	5.2	5.2	7.2	6.5	7.9
3-4	21.8	23.5	20.0	27.9	28.2	27.6
5-6	25.8	26.6	24.9	25.9	25.9	26.0
7-8	21.0	20.5	21.5	22.2	22.6	21.8
9-18	25.7	23.9	27.6	16.7	16.8	16.7
19-23	0.6	0.3	0.8	----	----	----
Mean	6.7	6.5	6.9	6.0	6.0	6.0
B. <u>Total Males</u>						
Mean	3.2	3.1	3.3	2.7	2.7	2.7
C. <u>Total Females</u>						
Mean	3.5	3.4	3.6	3.3	3.3	3.2
D. <u>Number Women</u>						
<u>15-49 years</u>						
1	69.9	71.3	68.4	76.7	75.3	78.1
2	22.3	20.3	24.4	19.4	19.8	18.8
3	6.2	7.0	5.3	4.1	4.9	3.1
4	1.2	0.9	1.6	----	----	----
5	0.4	0.5	0.2	----	----	----
E. <u>Age of Respondent</u>						
15-19	21.5	19.7	23.4	16.6	15.4	17.9
20-24	28.1	29.0	27.3	23.0	24.7	20.9
25-29	19.0	18.8	19.2	20.9	21.7	19.9
30-34	11.1	12.3	9.8	14.8	13.3	16.7
35-39	9.2	10.0	8.4	11.2	11.4	10.9
40-44	6.4	5.8	7.0	9.3	9.3	9.3
45-49	4.7	4.5	4.9	4.2	4.1	4.4
Mean	26.8	27.0	26.6	28.3	28.2	28.4
F. <u>Religion</u>						
Protestant	44.5	44.9	44.0	50.6	52.5	48.4
Catholic	42.3	44.8	39.7	35.2	37.3	32.6
Kinbanguiste	6.7	5.8	7.6	8.2	6.2	10.5
Muslim	0.2	0.2	0.1	0.1	----	0.1
Other	5.9	3.8	8.2	4.3	3.7	5.0
No religion	0.4	0.4	0.5	1.6	0.2	3.3
Don't know	----	----	----	0.1	0.1	----

Table 1, cont'd

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
<u>G. Nationality</u>						
Zaire	91.9	94.2	89.4	70.8	59.5	83.8
Angola	8.1	5.8	10.6	29.3	40.5	16.0
Other	-----	-----	-----	0.1	-----	0.1
<u>H. Years in the Community</u>						
Mean	15.9	15.8	16.0	10.3	9.6	11.3
Mean Number of Years in Community by Nationality:						
Zaire	15.6	15.6	15.6	11.5	11.4	11.7
Angola	18.5	17.9	18.9	7.5	7.0	9.4
Other	-----	-----	-----	4.0	-----	4.0

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Table 2

Educational and Occupational Status of the Population

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Respondent's Education</u>						
None	22.0	20.7	23.5	40.4	39.9	41.0
1-3 years primary	14.0	14.8	13.1	19.6	22.8	15.9
4-6 years primary	21.0	21.9	20.1	21.9	20.4	23.7
Homemaker school	2.2	3.2	1.0	1.4	1.0	1.9
1-3 years secondary	28.9	26.7	31.2	14.4	13.9	15.1
4-6 years secondary	9.8	10.3	9.2	1.4	1.5	1.2
Professional school	1.9	2.4	1.4	0.5	0.1	0.9
Beyond secondary	0.1	----	0.2	0.1	----	0.1
Don't know	0.1	----	0.2	0.4	0.5	0.1
B. <u>Literacy</u>						
Yes	66.9	68.3	65.4	43.5	42.7	44.5
No	33.1	31.7	34.6	56.5	57.3	55.5
C. <u>Repondent's Occupation</u>						
Housewife	65.3	64.4	66.2	2.9	2.4	3.5
Work in fields	5.8	6.0	5.5	91.8	92.6	90.8
Vendor	19.0	19.3	18.6	2.3	2.4	2.3
Civil Servant	3.6	3.2	3.9	0.9	1.0	0.8
Private employee	0.5	0.4	0.6	0.1	0.1	0.1
Self-employed	1.1	1.4	0.7	0.5	0.4	0.6
Domestic	0.3	0.4	0.2	0.6	0.2	1.0
Other	4.5	4.7	4.3	0.9	0.9	0.9
D. <u>Husband's Education</u> *						
None 2.5	2.1	3.0	8.6	9.2	7.8	
1-3 years primary	4.3	4.0	4.7	5.7	7.0	4.1
4-6 years primary	11.4	9.9	13.0	20.3	20.8	19.7
1-3 years secondary	10.7	10.7	10.6	10.9	11.0	10.9
4-6 years secondary	23.0	25.2	20.6	18.2	16.9	19.7
Professional school	9.4	8.9	10.0	7.1	5.8	8.6
Beyond secondary	1.7	2.1	1.2	0.6	0.3	0.8
Don't know - no response	37.0	37.0	37.0	28.7	29.0	28.5
E. <u>Husband's Occupation</u> *						
Unemployed	5.2	3.7	6.8	0.8	0.7	1.0
Farmer	0.4	0.2	0.7	52.0	56.1	47.1
Vendor	6.5	7.2	5.8	5.9	6.5	5.3
Civil servant	35.5	39.1	31.6	14.9	12.2	18.0
Private employee	35.7	33.8	37.9	11.5	11.5	11.5
Professional	2.3	2.8	1.8	1.0	0.9	1.2
Other	14.2	13.3	15.1	13.7	11.9	15.8
Don't know	0.2	----	0.3	0.1	0.2	----

* Percentages based on number of respondents who are married.

Table 3
Marital Status and Related Variables

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Marital Status</u>						
Married	69.9	70.5	69.4	62.3	62.0	62.6
Separated	0.1	0.1	----	1.1	1.4	0.6
Divorced	2.4	3.1	1.6	4.6	4.4	4.7
Widow	0.9	1.0	0.9	1.9	1.8	1.9
Single	26.7	25.3	28.1	30.2	30.3	30.0
B. <u>First Marriage</u> *						
First marriage	94.0	94.8	93.2	78.0	79.2	76.6
Second marriage	6.0	5.2	6.8	22.0	20.8	23.4
C. <u>Age at Marriage</u> *						
10-14	9.9	9.3	10.6	13.5	12.4	14.8
15-19	70.8	68.0	73.7	69.7	70.5	68.7
20-24	17.4	19.8	14.2	14.3	14.2	14.3
25-29	1.8	2.2	1.4	2.3	2.6	2.0
30-34	0.1	0.2	----	0.2	0.2	0.2
Mean	17.5	17.7	17.3	17.0	17.0	17.0
D. <u>Number of Wives Husband Has</u> *						
1	91.2	90.4	92.2	74.6	73.8	75.6
2	8.2	8.7	7.6	21.1	21.0	21.3
3	0.5	0.8	0.2	3.8	4.5	2.9
4 or more	0.1	0.2	----	0.5	0.7	0.2
E. <u>Husband at Home</u> *						
At home	96.3	95.0	97.7	94.7	94.2	95.3
Away less than one month	2.8	3.8	1.7	2.7	3.0	2.5
Away more than one month	1.0	1.2	0.7	2.5	2.8	2.3

* Percentages are based on number of respondents who are married.

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Table 4

Pregnancy History

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Ever Pregnant</u>						
Yes	84.5	85.3	83.5	92.3	93.6	90.7
No	15.5	14.7	16.5	7.7	6.4	9.3
B. <u>Currently Pregnant</u>						
Yes	11.9	11.2	12.7	16.0	16.7	15.1
No	87.8	88.6	86.9	84.0	83.3	84.7
Don't know - no response	0.3	0.2	0.5	0.1	----	0.1
C. <u>Problems Getting Pregnant</u>						
Yes	10.5	10.1	10.8	10.3	9.8	10.9
No	69.6	71.1	68.0	69.3	69.3	69.2
Not applicable (currently pregnant)	11.9	11.2	12.7	16.0	16.7	15.1
Don't know - no response	8.0	7.6	8.5	4.3	4.0	4.7
D. <u>Total Number of Pregnancies</u>						
0	15.5	14.7	16.5	7.7	6.4	9.2
1-2	27.0	25.2	29.0	24.9	25.1	24.5
3-4	20.2	21.8	18.5	21.8	23.3	20.0
5-6	13.6	13.8	13.3	17.0	17.4	16.4
7-8	10.0	9.2	10.9	14.0	13.5	14.5
9-10	9.0	10.5	7.4	9.4	9.5	9.2
11 or more	4.7	5.0	4.4	5.3	4.7	6.0
Mean	4.0	4.1	3.8	4.6	4.6	4.6
E. <u>Total Number Abortions (spontaneous or induced)</u>						
0	75.5	75.8	79.3	73.7	72.2	75.6
1	15.3	16.4	14.0	18.4	19.8	16.8
2	5.2	5.7	4.7	5.1	5.5	4.5
3 or more	2.0	2.0	2.0	2.8	2.5	3.1
Mean	0.3	0.4	0.3	0.4	0.4	0.4
F. <u>Total Number of Stillbirths</u>						
0	96.6	96.6	96.7	93.4	93.6	93.2
1	2.9	3.2	2.6	5.8	5.6	5.9
2	0.4	0.2	0.6	0.7	0.8	0.6
3 or more	0.1	----	0.1	0.1	----	0.3

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Table 4, cont'd

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
<u>G. Total Number of Children Born Alive</u>						
0	18.2	17.6	18.9	10.8	10.3	11.3
1-2	29.6	27.5	31.9	27.5	27.7	27.2
3-4	19.8	21.2	18.2	21.3	21.8	20.8
5-6	12.0	13.0	10.8	17.1	17.2	16.9
7-8	11.0	10.3	11.6	13.1	13.3	12.8
9-10	7.8	8.4	7.1	7.9	7.5	8.3
11-12	1.6	1.8	1.3	1.8	1.6	1.9
13 or more	0.2	0.1	0.2	0.6	0.5	0.6
Mean	3.5	3.7	3.4	4.1	4.0	4.1
<u>H. Mean Number of Children Born Alive by Age Group</u>						
15-19	0.4	0.4	0.4	0.7	0.7	0.7
20-24	1.8	1.9	1.7	2.1	2.1	2.0
25-29	3.6	3.8	3.5	3.6	3.7	3.6
30-34	5.6	5.5	5.7	5.7	4.0	5.5
35-39	7.1	7.0	7.1	6.6	6.5	6.7
40-44	7.9	8.3	7.5	7.7	7.7	7.8
45-49	7.7	8.0	7.5	7.7	7.3	8.2
<u>I. Number of Children Died After Birth *</u>						
0	68.8	68.0	69.8	57.0	57.4	56.5
1-2	27.0	28.3	25.7	34.1	33.2	35.2
3-4	3.3	2.9	3.8	6.8	7.4	6.0
5 or more	0.8	0.8	0.8	2.2	2.1	2.3
Mean	0.5	0.5	0.5	0.8	0.8	0.8
<u>J. Total Number Living Children</u>						
0	19.8	18.9	20.8	12.4	11.7	13.2
1-2	32.9	31.3	34.6	34.1	34.6	33.5
3-4	19.6	20.7	18.4	22.9	23.7	22.0
5-6	13.3	14.9	11.6	18.9	19.3	18.4
7-8	10.1	9.2	11.2	8.6	7.5	9.9
9-10	3.9	4.6	3.1	3.1	3.1	3.0
11 or more	0.4	0.5	0.2	0.1	0.1	0.1
Mean	3.0	3.2	2.9	3.3	3.3	3.3
<u>K. Total Number of Sons</u>						
Mean	1.5	1.6	1.4	1.6	1.6	1.7
<u>L. Total Number of Daughters</u>						
Mean	1.5	1.6	1.5	1.6	1.7	1.6

* Percentages are based on number of women who had children born alive.

Table 5

Breastfeeding Status of Children Under Three

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1029	<u>Area A</u> n=579	<u>Area B</u> n=450	<u>Total</u> n=1037	<u>Area A</u> n=547	<u>Area B</u> n=490
A. <u>Child is still breastfeeding</u> *						
Yes	66.8	67.8	65.7	74.0	75.0	72.7
No	33.2	32.2	34.3	26.0	25.0	27.3
B. <u>Age weaned (in months)</u> **						
0-3	0.9	1.2	0.6	3.5	4.3	2.5
4-6	3.6	5.8	1.3	1.2	2.1	-----
7-9	7.2	7.5	6.9	3.1	5.0	0.8
10-12	9.6	13.9	5.0	7.8	6.4	9.3
13-15	16.3	13.9	18.9	12.8	15.7	9.3
16-18	28.6	27.2	30.2	26.7	20.7	33.9
19-24	31.9	30.1	34.0	36.0	37.1	34.7
25-36	1.8	0.6	3.1	8.9	8.6	9.3
37+	-----	-----	-----	-----	-----	-----
Mean	16.4	15.7	17.2	17.9	17.5	18.5
C. <u>Age first solid food (in months)</u> *						
0-2	4.7	4.1	5.3	1.0	1.1	0.9
3-4	69.1	68.0	70.6	28.2	27.2	29.5
5-6	22.3	23.5	20.9	53.6	54.2	52.8
7-8	2.9	3.3	2.4	13.7	13.4	14.0
9-10	0.1	0.2	-----	1.6	2.0	1.1
11-12	0.5	0.4	0.5	1.0	1.3	0.6
13+	0.4	0.4	0.3	0.9	0.7	1.1
Mean	4.1	4.1	4.0	5.5	5.5	5.4

* Percentages are based on those women who have a child less than 3 years old.

** Percentages are based on those women who have a child less than 3 years old who has been weaned.

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Table 6

Reproductive Ideals

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Ideal Family Size</u>						
1-2	0.4	0.3	0.5	0.7	0.3	1.2
3-4	5.9	7.0	4.7	4.8	4.0	5.8
5-6	14.6	18.7	10.3	16.0	13.7	18.7
7-8	7.4	7.2	7.5	8.2	6.7	10.0
9-10	4.1	4.9	3.3	3.5	3.8	3.1
11-12	0.4	0.5	0.3	0.3	0.3	0.3
13 or more	0.2	0.1	0.3	0.2	0.3	----
As many as God gives	51.4	46.0	57.3	57.5	62.1	52.1
Don't know	15.5	15.2	15.8	8.7	8.7	8.9
Mean	6.2	6.1	6.3	6.2	6.4	6.0
B. <u>Desires more children</u>						
Yes	64.4	62.7	66.2	72.2	75.7	68.1
No	16.4	19.1	13.5	17.1	14.1	20.8
Not applicable (never pregnant)	15.6	14.6	16.7	7.7	6.4	9.3
Don't know - no response	3.6	3.6	3.6	2.9	3.8	1.8
C. <u>How many more children? *</u>						
1-2	6.2	8.5	3.6	9.4	9.2	9.6
3-4	5.8	5.9	5.7	6.8	5.6	8.4
5-6	3.1	4.0	2.1	4.6	4.1	5.3
7-8	1.1	1.4	0.8	0.9	1.1	0.7
9-10	0.4	0.2	0.5	0.4	0.4	0.5
11 or more	0.1	0.2	----	0.1	0.2	----
As many as God gives	83.4	79.7	87.4	77.7	79.4	75.5
Mean	3.6	3.5	3.7	3.4	3.5	3.4
D. <u>Desires pregnancy now</u>						
Yes	9.9	10.5	9.3	17.7	15.6	20.3
No	76.9	77.1	76.6	64.5	66.0	62.8
Not applicable	11.9	11.2	12.7	16.0	16.7	15.1
Don't know - no response	1.3	1.2	1.4	1.8	1.7	1.8
E. <u>Attitude toward family planning</u>						
Good	96.3	96.3	96.3	93.8	91.5	96.3
Bad	2.2	2.6	1.7	3.7	5.2	1.8
Don't know	1.5	1.1	2.0	2.6	3.2	1.9

* Percentages are based on the number of women whose attitude about family planning is good.

Table 6, cont'd

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
F. <u>Reasons family planning is good *</u>						
So children will be healthy	43.4	46.7	39.8	24.8	26.3	23.1
Spacing of children	22.2	23.0	21.3	30.3	28.1	32.8
To prevent illegitimate births	15.2	12.0	18.7	33.5	33.9	33.1
To protect health of mother	11.6	10.3	12.9	7.5	7.6	7.5
Not ready for another child	5.1	4.5	5.7	0.8	0.7	0.8
Vague response	1.4	2.1	0.7	0.7	0.7	0.7
Life is expensive	1.1	1.3	0.8	2.0	2.3	1.7
Has all the children she wants	----	----	----	0.1	0.1	0.1
God knows how many children to give	----	----	----	0.1	0.1	----
Contradictory answer	----	----	----	0.1	0.1	----
Don't know	----	----	----	0.1	0.1	0.1
G. <u>Reasons family planning is bad **</u>						
It's a sin	66.7	68.2	64.3	36.2	28.9	61.5
Too many risks	25.0	18.2	35.7	24.1	26.7	15.4
Not married	2.8	4.5	----	1.7	----	7.7
Bad use of methods	2.8	4.5	----	----	----	----
Doesn't want to diminish family size	2.8	4.5	----	17.2	20.0	7.7
No interest	----	----	----	8.6	11.1	----
Don't know	----	----	----	1.7	----	7.7
Methods are expensive	----	----	----	1.7	2.2	----
Wants more children	----	----	----	5.2	6.7	----
Vague response	----	----	----	3.4	4.4	----

* Percentages are based on the number of women whose attitude about family planning is good.

** Percentages are based on the number of women whose attitude about family planning is bad.

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Table 7

Family Planning Methods

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Knows that there are methods to space or prevent pregnancies</u>						
Yes	67.4	67.3	67.5	67.5	65.9	69.5
No	32.6	32.7	32.5	32.5	34.1	30.5
B. <u>Knowledge of family planning methods</u> ¹						
Abstinence	72.1	70.8	73.5	83.0	82.0	84.2
Withdrawal	71.1	72.1	70.1	63.1	57.1	70.1
Belt	65.8	64.8	67.0	57.7	56.2	59.6
Oral pill	62.4	63.6	61.1	53.6	55.2	51.7
Injection	61.6	64.4	58.6	52.6	53.6	51.5
Female sterilization	58.9	58.1	59.7	66.2	65.8	66.7
Rhythm	50.6	51.2	49.9	36.8	36.1	37.6
Condom	29.0	31.6	26.1	37.0	41.8	31.3
IUD	21.0	24.0	19.7	41.3	42.7	39.6
Vaginal douche	9.8	11.4	8.1	22.5	23.9	20.9
Vaginal methods	7.0	8.0	5.9	15.3	18.9	10.9
Diaphragm	2.9	3.6	1.6	11.3	14.9	6.9
Mean number of methods known	5.1	5.2	5.0	5.4	5.5	5.3
C. <u>Previous use of a family planning method</u> *						
Percent who use a modern method:						
Oral pill	5.2	5.8	4.5	1.9	2.1	1.4
Condom	2.3	3.2	1.3	2.5	2.6	2.3
Injection	1.5	1.4	1.7	0.3	0.3	0.2
Female sterilization	1.5	0.7	2.3	2.5	3.7	1.0
IUD	0.7	0.8	0.7	0.7	1.2	0.2
Vaginal methods	0.3	0.6	----	0.9	----	0.2
Diaphragm	----	----	----	----	----	----
Has used a modern method (any of the above)	10.0	10.2	9.8	6.6	7.9	6.6

¹ These include all women who spontaneously mentioned the method, recognized it when prompted, and/or have ever used it.

* Percentages are based on the number of respondents who are married or living in consensual union.

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Table 7, cont'd

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
Percent who used traditional method:						
Withdrawal	59.1	59.0	59.1	47.1	41.2	54.1
Abstinence	32.6	30.2	35.2	46.7	51.3	41.4
Rhythm	11.7	10.7	12.8	7.7	7.7	7.8
Vaginal douche	1.4	2.0	0.8	3.1	4.7	1.2
Belt	0.3	0.3	0.3	1.5	1.0	2.0
Has ever used a traditional method	79.5	77.8	81.2	81.3	80.5	82.4
Has ever used any method	82.9	81.2	84.7	83.3	83.1	83.6
D. <u>Current use of a family planning method</u> *						
Percent using modern method:						
Oral pill	1.8	2.5	1.0	0.4	0.5	0.2
Female sterilization	1.4	0.8	2.2	2.5	3.7	1.0
Condom	0.6	0.6	0.5	0.3	0.3	0.2
Injection	0.6	0.5	0.8	0.2	0.2	0.2
IUD	----	----	----	0.3	0.5	----
Vaginal method	----	----	----	----	----	----
Diaphragm	----	----	----	----	----	----
Percent using a traditional method:						
Abstinence	33.2	35.7	30.4	27.6	20.9	35.5
Rhythm	7.3	6.6	8.1	12.2	14.7	9.2
Withdrawal	6.7	5.8	7.6	12.6	13.6	11.5
Vaginal douche	2.9	2.9	2.8	1.6	1.6	1.6
2 or more traditional methods	2.1	2.8	1.3	6.8	7.5	5.9
Other	0.5	0.5	0.5	0.6	0.5	0.6
Belt	0.1	0.2	----	0.5	0.7	0.2
Percent using no method	42.9	41.3	44.7	34.6	35.3	33.8

* Percentages are based on the number of respondents who are married or living in consensual union.

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Table 8

Source of Family Planning Methods Among Current Users
of Modern Methods

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songolojo</u>		
	<u>Total</u> n=90	<u>Area A</u> n=51	<u>Area B</u> n=39	<u>Total</u> n=55	<u>Area A</u> n=40	<u>Area B</u> n=15
<u>A. Source of family planning method</u>						
Hospital	37.1	31.4	44.7	76.4	82.5	60.0
State dispensary	20.2	19.6	21.1	7.3	5.0	13.3
Pharmacy	11.2	15.7	5.3	3.6	5.0	-----
Private doctor	10.1	9.8	10.5	1.8	-----	6.7
Home visit	9.0	13.7	2.6	-----	-----	-----
Other	5.6	3.9	7.9	-----	-----	-----
Private dispensary/ religious dispensary	2.2	2.0	2.6	5.5	2.5	13.3
Don't know - no response	4.5	3.9	5.3	3.6	5.0	-----
<u>B. Transport to source</u>						
Walk	64.0	66.7	60.5	43.6	42.5	46.7
Public transport	23.3	18.8	28.9	47.3	50.0	40.0
Private transport	1.2	2.1	-----	3.6	2.5	6.7
Other	3.5	4.2	2.6	3.6	2.5	6.7
Don't know - no response	8.1	8.3	7.9	1.8	2.5	-----
<u>C. Time to source</u>						
1 - 30 minutes	65.9	80.8	44.4	22.2	21.4	25.0
½ hour - 1 hour	25.0	11.5	44.4	33.3	28.6	50.0
1 hour - 1½ hours	-----	-----	-----	5.6	7.1	-----
1½ hours - 2 hours	2.3	-----	5.6	16.7	21.4	-----
2 - 3 hours	4.5	7.7	-----	11.1	14.3	-----
3 - 4 hours	-----	-----	-----	5.6	7.1	-----
4 - 5 hours	-----	-----	-----	-----	-----	-----
5 - 6 hours	2.3	-----	5.6	5.6	-----	25.0
Mean (in minutes)	45.1	36.4	57.8	98.8	95.6	127.5
<u>D. Convenience of source</u>						
Easy	61.9	70.8	50.0	54.5	50.0	66.7
Difficult	28.6	16.7	44.4	43.6	47.5	33.3
Don't know	9.5	12.5	5.6	1.8	2.5	-----
<u>E. Cost of transportation</u>						
\$0.00	73.8	73.5	74.2	60.0	59.4	61.5
0.01 - 0.49	-----	-----	-----	2.3	3.1	-----
0.50 - 0.99	3.1	-----	6.5	6.7	6.3	7.7
1.00 - 1.50	7.7	14.7	-----	8.9	9.4	7.7
1.51 - 2.00	7.7	5.9	9.7	13.3	12.5	15.4
2.01 - 3.00	1.5	2.9	-----	6.7	6.3	7.7
3.01 - 4.00	-----	-----	-----	2.2	3.1	-----
4.01 - 5.00	-----	-----	-----	-----	-----	-----
5.01+	6.2	2.9	9.7	-----	-----	-----
Mean (in US dollars)	\$1.08	\$0.61	\$0.99	\$0.74	\$0.77	\$0.68

Table 8, cont'd

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songolo</u>		
	<u>Total</u> n=90	<u>Area A</u> n=51	<u>Area B</u> n=39	<u>Total</u> n=55	<u>Area A</u> n=40	<u>Area B</u> n=15
F. <u>Cost of method</u>						
\$0.00	12.5	5.1	24.0	48.0	50.0	42.9
0.01 - 0.49	7.8	7.7	8.0	16.0	13.9	21.4
0.50 - 0.99	14.1	15.4	12.0	16.0	13.9	21.4
1.00 - 1.50	3.1	2.6	4.0	----	----	----
1.51 - 2.00	18.8	17.9	20.0	----	----	----
2.01 - 3.00	25.0	30.8	16.0	2.0	2.8	----
3.01 - 4.00	6.3	7.7	4.0	2.0	2.8	----
4.01 - 5.00	----	----	----	2.0	----	7.1
5.01 - 6.00	3.1	2.6	4.0	----	----	----
6.01 - 7.00	3.1	5.1	----	4.0	2.8	7.1
7.01 - 8.00	1.6	----	4.0	2.0	2.8	----
8.01 - 9.00	----	----	----	2.0	2.8	----
9.01 - 10.00	----	----	----	4.0	5.6	----
10.01+	4.7	5.1	4.0	2.0	2.8	----
Mean (in US dollars)	\$2.86	\$3.02	\$2.30	\$1.73	\$1.58	\$1.05

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Table 9

Attitudes and Knowledge of Sources
of Family Planning Methods Among Non-Users

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=839	<u>Area A</u> n=420	<u>Area B</u> n=419	<u>Total</u> n=648	<u>Area A</u> n=349	<u>Area B</u> n=299
A. Reason for not using family planning method						
No children yet/wants children	20.0	21.2	18.9	22.8	24.4	20.9
Don't know method	19.8	24.3	15.3	15.6	12.8	18.9
Pregnant	17.6	16.4	18.9	10.6	11.6	9.5
Not interested	12.8	12.7	12.9	13.9	13.1	14.9
No need of protection	11.1	8.8	13.4	12.2	11.6	12.8
Celibate	5.6	4.8	6.4	9.2	9.3	9.1
Difficulty conceiving	4.6	5.0	4.3	8.0	7.6	8.4
Natural spacing	2.9	1.9	3.8	1.6	1.7	1.4
Don't know where to find method	1.9	1.0	2.9	0.5	0.3	0.7
Vague response	0.8	1.0	0.7	1.7	2.6	0.7
Side effects	0.7	0.7	0.7	0.6	0.3	1.0
Husband opposed	0.5	0.7	0.2	0.8	1.5	----
Is going to deliver	0.4	0.2	0.5	0.2	0.3	----
Don't know - no response	0.4	0.5	0.2	0.6	0.6	0.7
It is a sin	0.2	0.2	0.2	----	----	----
Little money	0.2	----	0.5	0.8	0.9	0.7
God gives what He wants	0.2	0.5	----	0.6	0.9	0.3
She controls spacing	0.1	----	0.2	0.2	0.3	----
Other family member opposed	0.1	0.2	----	0.2	0.3	----
B. Would like to use method						
Yes	50.4	49.8	51.1	42.9	43.0	42.8
No	48.1	48.8	47.3	55.6	55.3	55.9
Don't know	1.5	1.5	1.5	1.5	1.7	1.3
C. If interested, where would go *						
State dispensary	5.2	6.0	4.3	1.5	0.6	2.7
Private dispensary/ religious dispensary	1.9	2.2	1.7	8.5	7.4	9.7
Pharmacy	1.0	0.7	1.2	0.3	0.6	----
Private doctor	3.9	4.3	3.4	0.5	0.9	----
Hospital	33.1	37.2	29.0	52.6	55.3	49.5
Home visits	0.7	0.2	1.2	----	----	----
Other	5.8	3.1	8.5	15.1	13.7	16.7
Don't know - no response	48.5	46.3	50.7	21.5	21.7	21.4
D. Type of transport						
Walk	69.1	70.9	66.9	39.0	45.9	30.5
Public transport	29.1	26.3	32.6	56.9	49.8	65.8
Private transport	0.5	0.9	----	1.4	1.7	1.1
Don't know - no response	1.3	1.9	0.6	2.6	2.6	2.7

* Percentages based on the number of non-users who would like to use a method.

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Table 9, cont'd

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=839	<u>Area A</u> n=420	<u>Area B</u> n=419	<u>Total</u> n=648	<u>Area A</u> n=349	<u>Area B</u> n=299
E. <u>Time to source</u>						
1 - 30 minutes	71.9	78.1	65.7	27.6	26.2	29.2
½ hour - 1 hour	25.2	19.0	31.4	8.3	8.7	7.9
1 hour - 1½ hours	-----	-----	-----	1.0	1.9	-----
1½ hours - 2 hours	1.9	1.0	2.9	19.8	19.4	20.2
2 - 3 hours	1.0	1.9	-----	27.1	31.1	22.5
3 - 4 hours	-----	-----	-----	8.3	6.8	10.1
4 - 5 hours	-----	-----	-----	0.5	1.0	-----
5 - 6 hours	-----	-----	-----	6.3	4.9	7.9
6 - 7 hours	-----	-----	-----	1.0	-----	2.2
Mean (in minutes)	31.2	31.3	31.2	127.9	126.4	133.2
F. <u>Transport Cost</u>						
\$0.00	69.7	70.9	68.3	50.2	54.2	44.2
0.01 - 0.49	0.6	0.6	0.6	1.6	2.6	-----
0.50 - 0.99	1.2	1.1	1.2	6.6	8.5	3.8
1.00 - 1.50	6.9	12.3	1.2	17.9	21.6	12.5
1.51 - 2.00	11.0	8.9	13.2	11.3	7.2	17.3
2.01 - 3.00	7.8	4.5	11.4	5.8	0.7	13.5
3.01 - 4.00	1.7	-----	3.6	5.4	4.6	6.7
4.01 - 5.00	-----	-----	-----	-----	-----	-----
5.01+	1.2	1.7	0.6	1.2	0.7	1.9
Mean (in US dollars)	\$0.71	\$0.61	\$0.80	\$1.00	\$0.81	\$1.36

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Table 10

Exposure to Family Planning Communications

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. <u>Mass media</u>						
Percentage who report to have seen or heard a message about family planning:						
Radio	49.2	48.9	49.5	29.6	30.1	29.1
Brochures	10.6	11.4	9.8	12.6	14.0	10.9
Television	5.6	6.6	4.5	11.0	11.1	10.9
Posters	4.9	5.8	3.9	8.5	10.4	6.3
Newspaper	4.7	6.5	2.9	4.4	4.9	3.9
B. <u>Interpersonal communication</u>						
Percentage who have discussed family planning:						
in a group meeting	79.2	75.3	83.3	54.0	49.2	59.6
with a doctor or nurse	24.8	22.3	27.5	24.1	24.8	23.3
in a home visit	3.4	3.9	2.9	10.8	11.4	10.1

Appendix A

Additional Indicators of Socio-Economic Status

Since socio-economic status (SES) is known to have a direct relationship with the acceptance of family planning, it was important to measure as many aspects of SES as possible to determine the comparability of the experimental and control areas. Generally, the three primary SES indicators are education, occupation and income. Since income is not an appropriate indicator of SES in a subsistence economy (if in fact one can obtain accurate responses, which is questionable), the income question was replaced by a series of items which reflect living conditions and ownership of certain items.

One indicator of living conditions was the number of rooms in the household. In the urban area, there were 3.2 rooms per household, compared to 3.4 in the rural area. Since the average number per household was slightly higher in the urban (6.7) than rural survey (6.0), this indicates the more crowded living conditions one would expect in the urban area. The number of rooms per household was comparable between treatment areas in each survey.

With regard to toilet facilities, a miniscule percentage in either urban or rural survey had indoor facilities. In the urban area, 63 percent reported to have a WC outdoors, whereas 36 percent reported to have no access to a WC. In comparison, in the rural population, 86 percent had a WC outdoors, while 13 percent reported no WC.

The water source was different for the urban and rural area. Again, a very small percentage in either survey had an indoor tap. In the urban area the majority (71 percent) took water from a public tap (shared by a number of households), while 26 percent reported having an outside tap of their own. Respondents in Area A were more likely to have their own outdoor tap than those in Area B, who were more likely to use a public tap.

Appendix A

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In the rural areas, the main source of water was a well or cistern (57 percent), followed by water from a stream, pond, or river (43 percent). The treatment areas in the rural areas were fairly comparable in this respect.

Electricity in the household was a luxury item in the urban area (only 10 percent had it), and it was almost non-existent in the rural areas (2 percent had it). In the urban area, a slightly higher percentage in the experimental area (13 percent) reported having electricity than in the control (7 percent). The treatment areas were comparable in the rural survey.

The housing materials also differed between Matadi and the zone of Songololo. In the urban area the roof of the vast majority of houses was made of sheet iron (97 percent), while the remaining were made of tile (3 percent) or straw (1 percent); the treatment areas were comparable in this respect.

In contrast, most of the roofs in the rural survey were made of straw (68 percent), while 32 percent of the respondents had roofs made of sheet iron. Again, the treatment areas were comparable.

The flooring materials also differ in the two populations. The majority of urban respondents (97 percent) have houses with cement floors, whereas the majority of rural respondents (74 percent) have dirt floors. The treatment areas were comparable in both surveys.

Finally, the respondents were asked about ownership of two items: a radio and a refrigerator. Not surprisingly, a higher percentage of urban respondents than rural respondents had these items. In the urban survey, 47 percent reported to have a working radio and another 6 percent to have a radio that did not work. By comparison, only 27 percent of the rural respondents had a working radio, and

Appendix A

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another 8 percent had one that did not work. The treatment areas were comparable in both surveys.

In terms of a refrigerator, only 9 percent of urban respondents had a working appliance and another 3 percent had one that did not work. Among rural respondents only 2 percent had a working refrigerator and another 1 percent had one that did not work.

In summary, this list of indicators of housing conditions and consumer items suggests a strong degree of comparability between the treatment areas in the urban and in the rural survey. In the urban survey, the different items show a slight but consistent tendency for Area A to be better off than Area B; however, the magnitude of these differences is small, and they are not expected to have any meaningful effect on the impact of the program.

In the rural area, there are slight variations between the treatment areas, but there is no consistent tendency. As such, with the exception of differences in terms of national origin, the two treatment groups in the rural area can be considered comparable.

Socio-Economic Indicators

	<u>Urban Zone: Matadi</u>			<u>Rural Zone: Songololo</u>		
	<u>Total</u> n=1797	<u>Area A</u> n=928	<u>Area B</u> n=869	<u>Total</u> n=1704	<u>Area A</u> n=924	<u>Area B</u> n=780
A. Number of rooms:						
1-2	38.6	40.4	36.7	29.0	31.4	26.2
3-4	46.6	43.9	49.5	47.7	47.1	48.3
5 or more	14.7	15.7	13.6	23.0	20.9	25.4
Don't know	0.1	----	0.2	0.3	0.5	----
Mean	3.2	3.2	3.2	3.4	3.4	3.6
B. Toilet:						
No	35.7	40.7	30.3	13.4	10.4	16.9
Outdoor facilities	62.8	57.1	68.9	86.3	89.3	82.8
Indoor facilities	1.5	2.2	0.8	0.3	0.3	0.3
C. Water Source:						
Stream, pond, river	0.1	0.1	0.1	42.9	44.9	40.5
Well, cistern	0.7	0.1	1.4	56.5	54.2	59.2
Public	71.0	64.0	78.4	0.2	0.3	----
Outdoor tap	25.8	33.4	17.8	0.4	0.4	0.3
Indoor tap	1.8	2.4	1.3	0.1	0.1	----
Other	0.5	----	1.0	----	----	----
D. Electricity:						
Yes	10.4	13.3	7.3	2.3	1.4	3.3
No	89.6	86.7	92.7	97.7	98.6	96.7
E. Roof:						
Straw	0.2	0.2	0.1	67.5	71.3	69.2
Sheet iron	97.4	96.3	98.5	32.2	28.7	36.3
Tile	2.5	3.5	1.4	0.4	----	0.8
F. Floor:						
Dirt	2.7	2.3	3.1	74.4	76.9	71.3
Cement	97.1	97.6	96.5	25.0	23.0	28.5
Other	0.2	0.1	0.3	0.1	0.1	0.1
G. Radio:						
No	46.7	44.9	48.7	65.4	62.9	68.4
Yes, but doesn't work	5.6	5.2	6.0	7.6	7.9	7.3
Yes, works	47.7	49.9	45.3	27.0	29.2	24.3
H. Refrigerator:						
No	88.3	88.4	88.2	97.0	96.9	97.2
Yes, but doesn't work	3.1	2.6	3.7	1.1	1.2	1.0
Yes, works	8.6	9.1	8.1	1.9	1.9	1.8