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FAMILY PLANNING ACTIVITIES IN PARAGUAY

A Program Evaluation



AMERICAN TECHNICAL ASSISTANCE CORPORATION

1725 Eye Street, N.W.

Washington, D.C. 20006

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**FAMILY PLANNING ACTIVITIES
IN PARAGUAY**

A Program Evaluation

Prepared for
Agency for International Development
Contract No. AID/csd-3376, Work Order 2
Project No. 526-15-580-085.1



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INTRODUCTION

This evaluation of Project 526-15-580-085/Population and Nutrition was conducted by American Technical Assistance Corporation under Task Order No. 3 of Contract No. AID/csd-3376.

The Population and Nutrition Project was initiated with the Ministry of Public Health and Social Welfare in FY 1969 as a two-phase effort. The first, or "preparatory" phase (1969-72), consisted of a series of research, training and operational activities in the demographic and family protection fields. These activities were carried out by public and private Paraguayan agencies under agreement with the Ministry of Public Health, the Technical Planning Secretariat and the National University. In effect, the satisfactory completion of these activities would provide a basis of information and experience which could facilitate planning and implementation of the second or "operations" phase.

This evaluation was conducted near the end of the preparatory phase, focusing on intermediate outputs, to assess the progress which had been made and to suggest desirable changes in program operations preparatory to reprogramming U.S. AID Mission activities. Field work was conducted in Paraguay from June 4 to June 23, 1972 by an evaluation team which included Joseph Cavanaugh, demographer; Eugene Baird, population training and manpower specialist; and Albert L. Brown, team leader.

The team wishes to express its appreciation for the exceptional assistance and cooperation extended by all persons with whom different aspects of the program were discussed. Particular gratitude is due Dr. Sidney Clark, USAID Population Officer, and his staff and associates for

their very effective support and many courtesies extended during this study. Contributions of information and insights from all persons contacted were essential to the preparation of this report and are gratefully acknowledged. The report and its conclusions and recommendations are, of course, the sole responsibility of the American Technical Assistance Corporation.

SUMMARY

A. GENERAL FINDING AND RECOMMENDATIONS

1. Planning and execution of work in the Preparatory Phase was good. Shortfalls in output occurred in some areas, with some overages in others, as might be expected. However, the overall impact of the first phase of the program is very good indeed. There is a reasonable basis of data and experience which can be used to modify Phase II targets and directions.

2. It is evident that the social and economic effects of high rates of growth are better understood and that family planning is not as sensitive a subject as it was three years ago. Nevertheless, a cautious approach in program development and implementation is still warranted. Among other things, this requires that direct action by official national and international agencies must continue to be conducted within the context of MCH clinics, and that these programs should be managed in such a way as to avoid conflict with doctrinal beliefs and between public and private programs. It also requires continued support of research to develop greater understanding and effective use of the information generated to help everyone to understand the problem as a basis for his informed decisions.

3. The operational phase of the program can continue as programmed with two significant modifications:

a. Population and nutrition components should be segregated into separate projects, since their relationship is tenuous at best.

b. The number of acceptors required to avert 35,000 births by 1980 should be raised to 175,000, and the program extended beyond the MPH/MCH clinics. The family planning effect of the MCH approach is circumscribed by the number of clients of those clinics. Since the total attendance of women at all MPH/MCH clinics is only about 15% of the fecund female population, it is evident that the potential clientele of 45 integrated clinics would be far short of the number of acceptors required unless clientele was expanded enormously. Even with accelerated growth in MCH

clientele, we believe that the major increase in acceptors must come from growth in the number of couples who decide to follow their own personal programs. This, in turn, will require greater emphasis on broadly diffused informational/motivational programs, preferably conducted by private Paraguayan institutions.

4. At the same time that we recommend continuing into the operational phase as planned, there are several elements which we would like to see added to Phase II, possibly as new projects:

a. Other Approaches to Reduced Fertility. Family planning is still considered to be the most likely mechanism for lowering fertility, although the effect of traditional family planning techniques and methods administered through public health channels on reducing population growth rates has never been fully documented. Until proof of LDC acceptance is obtained, it is important that complete reliance not be placed on it. It is recommended that AID investigate other approaches as a complement to family planning. These approaches focus primarily on information, motivation and incentives, and are, to some extent, an extension and intensification of the preparatory phase.

Such activities might include population education in schools, together with media and other information programs which could gradually change attitudes and perceived values of young people about ideal family size. Family protection programs should be encouraged to shift their emphasis from the mere provision of contraceptive services and information in MCH facilities to designs which encourage and convince parents that smaller families are to their own advantage as well as to the country's benefit. Policies which maximize benefits for lower fertility and discourage high fertility might be adopted to provide an incentive for fertility limitation. Studies directed at accurately determining the tremendous capital and social costs of migration, population relocation on virgin lands, or other commonly used valves for releasing population pressure might be helpful in stimulating action on population policy.

b. Non-Fertility Population Problems. A country's population problems are most often related to several other demographic dimensions in addition to high fertility levels and rapid overall population increase. These are internal and external migration, rapid urbanization, manpower development and utilization arising from too few schools and too little investment relative to the increasing number of young people entering the labor force, and problems connected with dependency loads in the family itself.

Although the fertility dimension, leading to the rapid increase in Paraguay's population, is the most important single demographic problem, it is recommended that AID's assistance in this field also include measures that will assist the Paraguayan Government to solve problems stemming from migration, urbanization and a growing imbalance between size, age and spatial distribution of the population and its existing or potential resources.

c. Population Policy. Population planning is an important element in planning the socio-economic development of the country. It should be guided by a coherent population policy, formulated from accurate economic, social and demographic data. It is less important that the policy be officially proclaimed and widely publicized than that those people who are responsible for national planning and deciding the issues which will govern the nation's progress understand the population dimension and take it into account. A population policy should include measures for optimizing population growth rates relative to other resources, encouraging optimum spatial distribution, reducing unemployment, increasing manpower development and adjusting migration.

It is recommended that AID continue to seek understanding by the GOP of the importance of a coherent population policy. To that end, AID should continue to support research by public and private Paraguayan institutions and provide expert assistance to planning agencies in the development of policies and implementation plans that include all population-related elements.

B. EVALUATION SUMMARY AND SPECIFIC RECOMMENDATIONS

This evaluation is conducted near the end of the first, or preparatory phase of a two-phased program. The evaluation is therefore focused on the intermediate outputs which were designed to prepare the basis for an effective operational program. The broad purpose of the evaluation was to determine whether this basis was established, to summarize the information developed in this first period, and to recommend any reformulation of program structure required by the additional data and experience obtained in the preparatory phase. The evaluation concentrated on the five complementary thrusts of the preparatory phase: research, trial clinics, nutrition, personnel selection and training, and public opinion.

1. Research

Paraguay is on the threshold of obtaining basic population related data for the development of a viable population policy. Considerable progress has been made in providing some basic data and important information on population issues through a number of research projects and studies. USAID is to be commended on their selection and support of these projects.

More basic population data from the national census and other sources will soon become available. The Government of Paraguay should be encouraged to tabulate promptly and analyze the various relationships of the census enumeration. If necessary, AID should continue its assistance to the census for this purpose, since an untabulated and uninterpreted census enumeration is valueless. A related need is the establishment of vital statistics sampling to measure changes in growth rates and keep population information current. Future research and studies should increasingly utilize techniques for improving the reliability and validity of response on those types of research using survey methodology. More refinement in data presentation and analysis techniques should be incorporated in the research. It is recommended that AID make a provision in future contractual research projects for appropriate expert technical assistance. This assistance can be provided by an international agency or various U.S. organizations.

It is also recommended that further research by public and private Paraguayan institutions be supported in the following substantive population areas:

- a. Descriptive Demography. Design and implement a vital statistics collection system which incorporates a dual registration technique from a representative sample of Paraguay's population. This activity would be independent of Paraguay's official vital registration system and would be for the express purpose of estimating currently and accurately births and deaths and conditions surrounding them. Paraguay does not now have these data.
- b. Determinants of Fertility. Except in a very general sense, little scientific knowledge is available on which factors are responsible, and to what extent, for high fertility in Paraguay. Are traditional values and customs important? Under what conditions are children an economic asset? Do educated couples in Paraguay have fewer children and, if so, what is there about education that produces smaller families? These and a host of other determinants need to be studied.
- c. Population Policy Research. Population policy explicitly treats the population growth rate as a variable to be dealt with, controlled and modified in economic development plans and in resource allocation decisions. Population policy research seeks to learn more about that variable and its determinants and about how they interact and affect other features of the economy and the budget. The IDIA and CEPADES studies were first cuts at this kind of information. However, for the most part they assembled existing information in an interesting new format. What is needed now are a number of studies in depth on the economic and social costs and benefits associated with different ways of dealing with the rapid population growth rate and the tradeoffs with other investments.
- d. Operations Research. An important need in Paraguay is to investigate more thoroughly the family planning efforts now in effect. One

important gap is a measure of contraceptive continuance by clinic acceptors and its actual effect on total fertility. Another area is a study of the efficiency and utilization of differing models for delivering family planning services.

e. Socio-Psychological Aspects. More information on Paraguayan values and attitudes on reproduction, fertility control, contraception, migration, etc., is absolutely essential to planning motivation and incentive programs. A well structured KAP survey could provide the needed information.

f. Family (Household) Economics. Fertility levels are determined to some extent by the perceived value that children have for parents. Research is needed to determine the real and perceived values and costs of children relative to the family's overall economic configuration.

2. Clinics

As of December 31, 1971, there were 35 family planning clinics in Paraguay (23 CEPEP, 12 MPH) with 13,800 acceptors. Net increase in number of acceptors was averaging 25 per clinic per month.

Family planning in Paraguay is treated in the context of responsible parenthood and family protection. Family planning clinics are normally located in a maternal and child health clinic or a hospital. The only significant difference between public and private family planning operations is the fact that the Ministry's MCH clinics provide maternity services and CEPEP's do not, although such services may be provided by the hospital or health center in which CEPEP's clinics are located. MCH and family planning services are thorough and of good quality. Principal contraceptives are the IUD and the pill, but other methods are available if needed. No fees are charged for family planning services.

Clients tend to be women in the upper end of the child-bearing age groups (25 to 39 years) who have already had five or six children. A special motivational effort will be required to reach the vulnerable 15 to 25 year age group with a child spacing program if the family planning

program is to have a significant population impact. Since the MCH-based family planning program is limited by the size of the MCH clinic's clientele, a considerably enlarged public education and motivation program will be required to expand clientele if program goals for birth aversion are to be met.

Clinic program costs to date are on the order of \$94 per acceptor, with commodities amortized over a five year period and all central administrative costs included. Costs per acceptor will probably drop slowly over the next few years because the incremental costs of establishing new clinics will tend to offset the effect of acquiring additional acceptors. However, once a clinic is established, the direct clinic operating cost per net new acceptor declines significantly. Clinic salary costs per net new acceptor have averaged only \$7 over the last four months.

Experience gained to date suggests the feasibility of continued rapid extension of family planning services throughout the Ministry's extensive MCH clinic network. This network provides a natural advantage for public over private clinical programs. CEPEP should continue to operate existing family planning clinics. We would not limit CEPEP expansion, but we would urge CEPEP to emphasize its public information, education, orientation and motivation roles, slowing the expansion of its operating program in deference to the managerial and budgetary requirements of that emphasis.

3. Nutrition

Paraguay's nutrition situation is characterized by a generally adequate nutrient intake (with some specific deficiencies of riboflavin, vitamin A, and calcium). Primary malnutrition appears to be rare, but secondary malnutrition results from parasitism and pre- and postnatal childhood diseases which limit the effective metabolism of ingested nutrients.

There appears to be little relationship between population and nutrition except the common institutional location of these operations,

i.e., the Mother-Child Health Clinic. Their inclusion in the same project tends to obscure the unique importance of each. We recommend that the nutrition component of the joint project be separated and dealt with separately.

We agree with the Mission's assignment of its highest feeding priority to pregnant and lactating mothers and their pre-school age children. The maternal and child health clinic is the preferred context for such feeding programs from the point of view of reaching a segregated target group which can receive the required complementary nutritional and medicinal cures of secondary malnutrition.

Our calculations indicate that the originally proposed feeding target in 1980 of 180,000 mothers and 360,000 children will not be met through MCH clinics, and we recommend a reduction of the overall feeding target in MCH clinics to about 150,000. This should be accompanied by an increase in the unit ration and its qualitative improvement as recommended in the Robert R. Nathan Associates PL 480 Title II Evaluation.

4. Personnel Identification and Training

There is no shortage of doctors, nurses, auxiliary nurses and social workers suitable for training as staff for family planning clinics. In-country training by CEPEP exceeded planned targets by sixty percent and was generally of good quality. The number of doctors, nurses and social workers attending foreign short-term training programs and conferences was right on target. There was some shortfall in the number of participants sent for long-term specialized training. Only one senior official received an observation grant.

The Ministry of Public Health has just signed an agreement with PAHO for extensive in-country and foreign training and other assistance to strengthen its MCH operation. MPH is initiating its first training program for family planning workers. This training was formerly provided by CEPEP. The effects of these moves on the requirements for AID-sponsored

training must still be sorted out. Until the impact of these events is clear, we suggest that AID take an approach consisting of the following elements:

- (a) Maintain an active interest in the development of these other programs, including a willingness to help resolve problems of coordination but encouraging local and multinational agencies to assume this responsibility.
- (b) Limit the number of participants sent to general family planning training courses and seminars. Increase the effort to get multilateral agencies to assume responsibility for developing and supporting this kind of training.
- (c) Concentrate AID grants for academic training on those specialized population related areas (demography, anthropology, urbanology etc.) which may not be adequately covered by multilateral programs.

5. Public Opinion

The six national and regional seminars sponsored by CEPEP, and their extensive presentations to schools, associations and clubs, have undoubtedly had an impact on the number of women attending MCH clinics and initiating personal programs, as well as on the attitudes of opinion leaders.

The research sponsored by AID has been particularly useful in providing some insights into the social and economic implications of different population growth rates. Some limited work on attitudes and practices has been very useful in establishing the fact that family planning is widespread and considered acceptable by over 80% of urban leaders and almost half of rural leaders, and that the use of contraceptive techniques is much more common than formerly believed. These studies also revealed the strongly held ideal of the large family, as well as the existence of strong doctrinal anti-contraception and anti-family planning beliefs in a sizeable minority of the population. It is unfortunate that a KAP study

was not completed to provide a sounder basis for assessing these behavioral and attitudinal features. Our tentative conclusions:

a. A cautious approach to operational programs and to officially sponsored public debate is still required to avoid unproductive confrontation. At the same time, a much broader informational and motivational program is needed to expand the number of potential acceptors, both in MCH clinics and private practice. A KAP study is urgently needed to guide such a program and provide insights on the nature of the large family ideal (see section on Research).

b. High priority should also be given to studies of the attitudes towards family planning of midwives and pharmacists and to the role which they might play in providing accurate assistance on responsible parenthood to their clients.

C. REVISION OF 1969 PROP

The preparatory phase has fulfilled its purpose by providing a basis of experience for entering the operations phase. Some conditions have changed since the original PROP was changed and a great deal of new information has been and is being generated. AID's emphasis on assistance in population matters has intensified, and more funds have become available under more liberal conditions.

It is recommended that a new PROP be prepared which reflects these changes, including new and additional directions, emphases and loci. The operational clinic program should be continued with these changes:

- (1) Remove the nutrition component and treat it separately.
- (2) Increase the targeted number of acceptors to 175,000, including both clinical and personal program acceptors.
- (3) Expand the informational and motivational program to increase

clinic participation and to encourage individuals to follow personal programs.

We also recommend that AID include several additional elements in the new PROP besides the operational clinic program:

- (1) An innovative program of alternative approaches to fertility reduction, including school, media and extension information and education programs; incentives for smaller families, etc.
- (2) Expanded treatment of non-fertility population problems, such as migration, urbanization, spatial distribution and family economics.
- (3) Continued encouragement towards adoption of a de facto population policy in program planning and implementation.

Judging from the preparatory phase, we believe that research and research-demonstration activities are effective approaches, particularly when the results of this research receive widespread dissemination in the media.

I. POPULATION SITUATION IN PARAGUAY

A. DEMOGRAPHIC ASPECTS

The scope of a country population and family planning program depends in large measure on how population problems are conceptualized, viewed and defined. Obviously, the measures taken to solve these problems will also depend on how broad or narrow the problem is perceived.

For example, if the population problem in Paraguay is thought of as one of too high fertility rates which in turn produces comparatively high growth rates, program needs under this conceptualization could be largely restricted to how and to whom information and contraceptive services should be provided.

On the other hand, program needs and techniques for solution become broader as other population problems are identified and defined more generically. The basic population problem in Paraguay consists of a growing imbalance between the size, distribution and characteristics (such as spatial concentration, migration, and age distribution) of a population and the present or potentially available future resources at its disposal for improving socio-economic conditions. From the viewpoint of this definition, Paraguay's population problems consist of more than simply accelerating rates of excessive growth, and solutions to the problems may involve more than merely reducing the growth rate from 3.6% to 2.5% per annum. A comprehensive program must take into account over-urbanization, rural to urban migration that overtaxes public facilities, international migration and the brain drain, high dependency rates with proportionally small skilled manpower pools and low educational attainment. In some cases, these problems are caused by or related to excessive growth and in others there would seem to be little direct relationship.

Even though demographic statistics in Paraguay are incomplete and not very reliable, some estimates and figures from various sources give an idea of the parameters and manifestations of population problems in Paraguay.

Data for the following discussion comes from publications issued by CELADE, Department of Biostatistics in the Ministry of Health, the Dirección General de Estadísticas y Censos and several special purpose studies. Fortunately, a much clearer, more reliable and up-to-date description of Paraguay's demographic structure will be available from the census to be taken in July 1972. Technical and some financial support has been given this important project by AID.

1. Past, Present and Future Total Population Estimates

In spite of wars and migration, the population of Paraguay has grown rapidly during the last 100 years. In the census taken in 1886 the total population was estimated at 263,000, of which less than 10% (24,838) lived in the capital. Less than 100 years later in 1970, Paraguay's population was estimated to be 2,400,000 with almost 20% living in the capital. If these figures can be believed, the total population has increased about nine times in less than five generations.

Of more significance is the rate and absolute increase of population since 1950 (slightly more than one generation) in which the total population has more than doubled. Obviously, population pressure can build up and socio-economic conditions deteriorate unless public and private resources keep pace or exceed population increase. The problem is one of expanding these resources fast enough not only to provide the same per capita facilities as previously but also to increase them over what they have been. Paraguay may have difficulty providing these facilities in the future because of an expected rapidly increasing population over a comparatively short period of time. At the moment external migration seems to be a safety valve. But it too may pose a problem. We don't know enough about who migrates, but at least in some cases migration represents loss of a considerable investment in the individual's sustenance and education over twenty years.

As is often standard procedure used in the U.S. and elsewhere, CELADE has estimated future population projections based on three hypotheses about levels of future fertility. Hypothesis I is an

assumption of a very slow decrease in fertility rates from present high rates; hypothesis II is an assumption of a moderate decrease, and hypothesis III assumes a rather fast future decrease. None of the projections takes into account the effects of out-migration, about which not too much is known. An unexpected rapid decrease in fertility due to population control techniques including family planning is not taken into account either, except that projections under hypothesis III allow for a rather rapid decrease over the long run, i.e., until year 2000. The following table illustrates population projections by CELADE for selected years according to the three hypotheses mentioned above. The table also presents estimates made by the U.S. Bureau of Census and estimates prepared for and used by the Instituto de Desarrollo Integral y Armónico (IDIA) in their study on economic and social implications of population growth in Paraguay.

From the accompanying chart (Fig. 1) it can readily be seen that the population can triple in 30 years (less than two generations) if present fertility rates persist or are reduced slightly. Even if there is a considerable gradual decrease in future fertility rates, the total population may still increase two and one-half times in 30 years.¹

1 Assuming that Paraguay's population increases at present levels, i.e., about 3.3% per year, it will double itself every 21 years which is slightly over one generation. Also assuming little or no out-migration and a present (1970) population of 2,500,000, Paraguay would approach 80,000,000 population in slightly over 100 years. It is doubtful that present land resources can support this population. In the long run, continued growth of Paraguay's population would first be intolerable and then physically impossible.

Moreover, even if the population would tomorrow become stationary, i.e., births equal deaths, the total population would still continue to grow rather rapidly and probably would not stop growing in absolute numbers for at least 80 to 100 years assuming little migration. This is because of the large number of females presently in the population that will continue to reproduce but at a lower level. Although an exact calculation has not been made, Paraguay's population would stabilize, i.e., no longer grow, at a much higher total population figure than at present.

Table 1

VARIOUS POPULATION PROJECTIONS BY FERTILITY RATE HYPOTHESES
YEAR AND SOURCE OF CALCULATIONS

Year and calculation source	Population According to Hypothesis (000)*			
	I	II	III	IV
1970				
CELADE	2,418	2,418	2,418	
IDIA	2,379	2,379	2,379	
CENSUS	2,295	2,295	2,295	2,295
1980				
CELADE	3,492	3,456	3,404	
IDIA	3,278	3,312	3,246	
CENSUS	3,224	3,224	3,195	3,110
1990				
CELADE	5,068	4,860	4,612	
IDIA	4,518	4,751	4,232	
CENSUS	4,601	4,487	4,215	3,985
2000				
CELADE	7,297	6,619	6,072	
IDIA	6,226	6,817	5,436	
CENSUS	6,584	5,983	5,413	4,983

* Hypotheses are based on varying rates and assumptions concerning life expectancy and age-specific fertility. Migration is treated as constant.

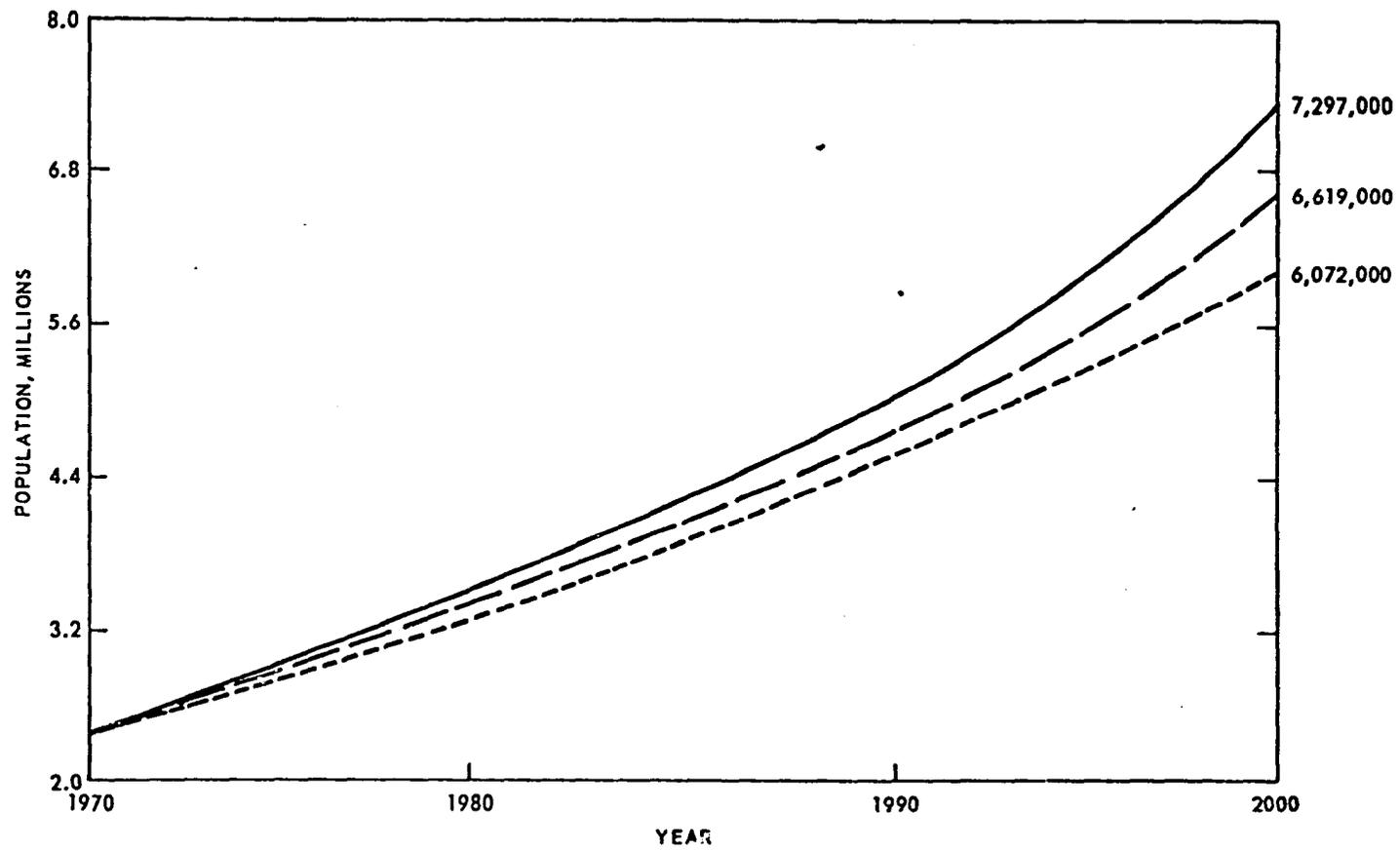


Fig. 1—Population Projections According to Three Fertility Level Hypotheses—Paraguay: 1970–2000

— Hypothesis I, continued high fertility - - - Hypothesis II, medium fertility
- · - · - Hypothesis III, lower fertility

Source: CELADE. Paraguay, Proyección de la Población, por Sexo y Grupos de Edad, 1960–2000. Serie 4, No. 95 Septiembre, 1969

Past, present and future population projections and figures are determined by demographic components. Changes in any or all of these components can affect total future populations as well as the other components. Below is a brief analyses of some of the demographic components in Paraguay taken from different data sources.

2. Fertility

An accurate description of fertility in Paraguay is difficult because of a poor infrastructure for gathering basic data. Present (1972) overall crude birth rates have been estimated as being from as low as 38/1000 to as high as 45/1000. The reasons for the discrepancy are the differing assumptions utilized for estimations. Lacking an accurate vital statistics system, fertility estimates have been based principally on intercensal statistics. Present fertility estimates can be verified with the new 1972 census figures.

The gross reproduction rate is estimated at 3.03 and the net reproduction rate is 2.47. The latter rate indicates that the number of female children being born this generation will reproduce almost two and one-half times their number the next generation.

Total fertility is estimated highest in the 25-29 age group (346/1000 women) and about the same for both the 20-24 and 30-34 age groups (279/1000 and 263/1000 respectively). Of significance for family planning programs, these three female age groups produce a large proportion of the total fertility in Paraguay. The average number of children per woman is about 4.5, with rural areas having a higher average number than urban areas. This rural-urban discrepancy has been explained by different ages of marriage, a higher percentage of single women in urban areas, and a higher average education. As would be expected, the higher the education, generally, the lower the fertility.

Many of the foregoing statements are based on various studies which used 1962 census figures. New census figures will certainly allow up-to-date and more accurate estimates.

3. Mortality

The crude death rate has been estimated at around 10/1000 population, with an infant mortality rate approaching 100/1000 births. Efforts to reduce the general death rate and especially the infant mortality rate are being made through MCH, Nutrition and other preventive health care and sanitation programs supported by considerable international technical and commodity assistance. If these programs are successful, a net result could be a sharp increase in rates of natural increase. In fact, most present projections of future length of life and death rates indicate a lengthening of life in the future and a decrease in death rates, especially infant mortality. Thus MCH-type family planning programs find themselves in a paradoxical position—on the one hand, trying to decrease total fertility, while on the other, keeping people and especially children alive, thus increasing total population by decreasing death rates.

4. Age and Sex Distribution, Dependency

The population pyramid (Figs. 2 and 3) for the total Paraguayan population is low and broad at the base, signifying a great proportion of the population in the younger ages. In fact, almost one-half of the population is found in that part of the total population under 15 years of age. This child dependency feature of the Paraguayan population has implications for socio-economic development. It places a tremendous burden on the provision of school facilities. It places considerable burden on individual families as scarce resources are diverted from savings and socio-economic advancement to care for the dependency load.

It is estimated that about 750,000 children were of school age in 1970, i.e., between the ages of 6 and 17. Somewhat over 65% of these children (490,000) were reported to be in 3600 schools with the great majority (88%) in primary schools. If these figures are correct, this means that as many as 260,000 children were not attending school for one reason or another. Even though the government is opening new schools periodically, the need is apparently great for many schools and the teachers to staff them.

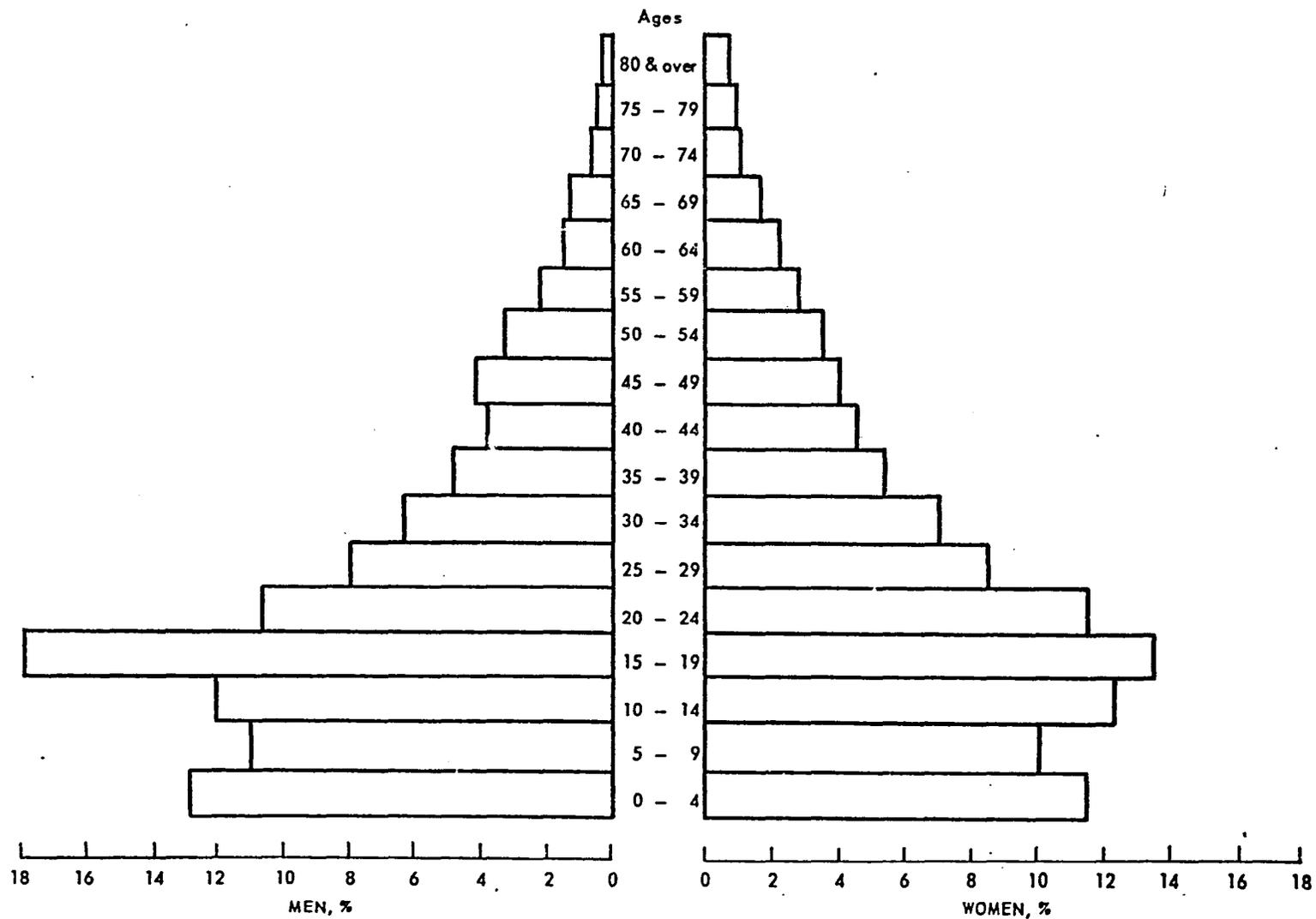


Fig. 3—Percentage Distribution of the Population of Asunción, Paraguay, by Sex and 5-year Age Groups
Estimates for 1970.

Source: Secretaría Técnica de Planificación (Pres. de la República) Dpto. de Bioestadística MSP y BS

Obviously, the need will grow dramatically by the year 2000, which is less than thirty years from now (1972). If fertility rates continue high, the number of children in the 5 to 19 year age bracket² will triple by then.

If schools are made available in the future to serve the same proportion of the school age population as were served in 1970, then the same percentage of the school age population will be in school, and the same not in school. However, the absolute number not in school will vastly increase from about 260,000 in 1970 to about 767,000 in 2000. (35% x 2,300,000.) Even under conditions of much lower fertility by the year 2000, there could still be 500,000 children not in school unless school facilities are increased at a much higher rate than at present.

It was estimated that in 1970 there were about 500,000 women in the child bearing ages—about 20% of the total population. Under conditions of continued high fertility, fecund females are expected to increase to about 1,600,000 by the year 2000. The implications for continued high growth over the longer run are obvious unless total fertility is somehow reduced.

In summary, the age-sex distribution of a country's population is accompanied by certain socio-economic characteristics. For example, large proportions of children in the total age distribution almost always signify a smaller proportion in the work force and a work force that often is largely unskilled. Each succeeding year more and more young people, many untrained, wish to enter the labor-force. Finding employment for these young people is often a problem.

2 CELADE projections were based on four-year age groups. In future projections we have used the 5 to 19 year age groups to represent the potential school age population, recognizing that this will result in some overstatement.

5.. Marriage

Marriage modifies fecundability, i.e., the probability of conception, and hence fertility—the end product of conception. Marriage is a major determinant of population configuration and change. Changes in the structure of the marriage institution will affect both fecundity and fertility and hence modify the demographic configuration.

In Paraguay, legal and formal marriage is not a necessary restraint to fertility as it is in some East Asia countries. In 1970, the National Statistical Office indicated that about 43% of the total births reported were illegitimate, i.e., from unions other than those legalized. This condition contributes to high fertility rates since marriage is no constraint to conception. The probability of conception is higher in Paraguay than it would be in countries that place great importance on reproduction within formalized and legal marriage conditions.

It is possible that marriage customs and laws are less related to fertility in Paraguay than in some countries. Changing the legal age at marriage might affect fertility somewhat in Paraguay, but the effect would probably be minimal since a large percentage of the population have children outside of formal legal marriage. The provision of family planning services to the unmarried, especially younger people, would undoubtedly affect fertility levels outside of marriage since many of these births are unexpected and unwanted.

6. Length of Life

Because accurate mortality tables for the country as a whole are lacking, calculations on length of life at birth and life expectancy at a given age are very tenuous. Obviously, increased length of life at birth (or at any age) contributes to an increasing rate of population increase, all other factors remaining constant.

It is assumed that Paraguay will follow the experience of other countries in that mortality will gradually decrease in the future.

CELADE, in its calculations, has computed a life expectancy at birth that gradually increases to 69.9 for men and 73.3 for women by 1995, from an estimated 59.4 for men and 63.8 for women in 1970.

7. Urban-Rural Differences

Urban-rural differences in demographic parameters have implications for the development and organization of family planning programs in these areas. Unfortunately, not much is known about urban-rural differences in the population.

The census of 1962 indicated that the average number of children per woman is considerably higher in rural areas than urban areas in every age group. It would appear that urban women marry later and stay single longer.

8. Migration

There is considerable speculation about the out-migration problem in Paraguay. However, there seems to be little hard data describing it.

It has been said that population pressure felt especially by the younger males is relieved by migration to neighboring countries. Job opportunities seem to be a principal motivation. The brain-drain of professionally trained individuals referred to previously is especially important.

The coming census will probably show more women than men in the age groups between 20 and 34 with obvious implications for marriage potential. Since illegitimacy is socially sanctioned, it is very possible that this low sex ratio hasn't much effect on total fertility.

9. Important Data Gaps

The most obvious knowledge gap is in basic population statistics. The coming census will provide some important and needed information for one point in time. However, vital statistics are very incomplete so

that refined birth and death rates or even crude rates are impossible to calculate with any degree of certainty. According to a study published under the aegis of the Paraguayan Comité de Estudios de Hechos Vitales (1968), only about one-third of the total births occurring in 1966 were actually recorded. At the present time (1972), the records are not much better. Many events, especially births, are registered in later years than those in which they occur.

Since many individual events are unrecorded or delayed, a yearly description of characteristics of the events are badly biased. This includes such important birth information as age-parity of mother, spacing of births, occupational status of father, etc., and information on deaths such as age, cause of death, occupation, etc. The relative effect of increasing life expectancy on net population growth is all but impossible to calculate.

Manpower and labor force characteristics depend to a great extent on the demographic structure, yet little information is available on labor force characteristics in order to relate them to the demographic variables.

Accurate data on both out-migration and internal migration seem to be almost totally lacking. It is not possible either to describe characteristic migration patterns and magnitudes or to adduce the reasons. These data are needed for developing migration policy as an integral part of overall population policy.

Family statistics coupled with data on family economics are almost totally lacking. Since the family as a unit in Paraguay very probably has a strong influence on marriage and fertility patterns, these data could be important for family planning programs in their search for effective techniques to motivate individuals to reduce their fertility. Moreover, if one accepts the current hypothesis that fertility levels are highly related to a perceived cost-benefit of children to the family, knowledge about patterns of family economics would provide partial

explanations on the determinants in Paraguay. Obviously, without knowing the true "causes" of high fertility, measures taken to reduce fertility must depend on trial and error at best.

The Population Studies Program at Duke University (Durham, N.C.) includes both the Department of Economics and the Department of Sociology. This group would be able to assist with studies on family economics. Dr. Warren Robinson of Pennsylvania State University is also well qualified in this field and could suggest other specialists.

B. I. B. SIGNIFICANCE

As indicated above (Table I-1), several hypotheses about future population growth rates have been calculated in Paraguay. The social and economic consequences of these growth rates were the primary objectives of two separate studies. One, now complete, was performed by the Instituto de Desarrollo Integral y Armónico (IDIA); the other, in draft, is being prepared by the Centro Paraguayo para Estudios de Desarrollo Económico y Social (CEPADES).

Both studies used the same basic growth rate hypotheses:

- . Continuous 3.2%. This is the current rate. It probably won't continue and no more will be said about it.
- . A rate of 3.2% rising to 3.6% by 1985 and remaining at that level. This is the probable trend without an active program of birth aversion, given the high level of young people in the population. It will be referred to as the 3.6% rate.
- . A rate of 3.2% which declines steadily to 2.5% around 1990 and remains there. This is the rate which most closely approximates that in the USAID proposal. It will be called the 2.5% rate.

The IDIA and CEPANES studies used different hypothetical rates of growth for the economy as a whole and different assumptions about the fundamental future characteristics of schools, hospitals, etc., so that

their findings are not directly comparable. In the discussion which follows, we have used the basic data about population and most other Paraguayan features from the IDIA study, supplemented by specific unitary costs from the CEPADES study.

1. Per Capita Income

The IDIA study used the 7.0% economic growth rate projected in the 1970-75 development plan, which is considerably above the recent actual rate. Any shortfall will obviously aggravate the economic and social problems associated with high population growth rates.

At a 7.0% growth rate, the 2.5% hypothesis provides a \$161 (25%) advantage in the year 2000 over the 3.6% rate:

	<u>3.6%</u>	<u>2.5%</u>
1970	237	237
1980	332	344
1990	462	518
2000	633	794

2. Employment

Both IDIA and CEPADES studies included sections on the employment effects of different rates of population growth. However, the studies used different analytical approaches and, in neither case, provided enough data to reproduce their conclusions using alternative calculations. Reliable employment data in Paraguay is scarce, so that any future projections rest almost entirely on the assumptions used in the projection model. Both the model and its assumptions must be explicitly described to provide a basis for judging their validity. In particular, it appears that both studies underestimated severely the delayed impact on employment associated with the broad base, high-youth-dependency population pyramid in Paraguay.

Both IDIA and CEPADES started with a labor force figure that was 34% of the population. This figure, possibly coincidentally, corresponds

precisely to the percentage of the total population in the 15-49 year age bracket and which, in the absence of better employment data, might be considered as a measurable substitute for the potential labor force. According to IDIA projections, by 2000 A.D. this age group will constitute 44.6% and 43.5% of the population projected at the 2.5% and 3.6% population growth rates, respectively. Still, IDIA continued to project the labor force at 34% of the population in 2000, while CEPADES used 30%, 34% and 37% alternatives.

In reality, over the next fifteen years and regardless of the population growth rate during those fifteen years, the potential labor force (15-49 year age bracket) will more than double as the 1,080,000 under-fifteens (less mortality) are added to the 809,000 people currently in the labor force. We may assume that one million of these under-fifteens will reach the 15-49 year age bracket in the next fifteen years, and that only 20% of the women may enter the labor force. CEPADES has estimated the capital:labor ratio at \$1605 per worker. At that ratio something over \$1 billion must be added to the capital stock during the next fifteen years to provide employment for new workers whose presence in the labor force is already assured, regardless of population policy. Whether the same kind of problem exists in 1985 depends on what happens to the birth rate during these same fifteen years.

3. Education

The CEPADES study presents an incomplete but disaggregated look at the effects on education of different growth rates:

Primary Pupils (000):

	<u>3.6%</u>	<u>2.5%</u>
1970	428.5	428.5
1980	597.0	585.0
1990	856.5	762.5
2000	1,228.8	979.8

These numbers get converted into operating costs. For example:

Teachers and Their Salaries (at \$540/year):

	3.6%		2.5%	
	Nos.(000)	\$(mill.)	Nos.(000)	\$(mill.)
1970	14.7	7.94	14.7	7.94
1980	20.6	11.12	20.2	10.91
1990	29.5	15.93	26.3	14.20
2000	42.4	22.90	33.8	18.25

They also require investment capital:

New Classrooms (at \$2380):

	3.6%		2.5%	
	Nos.(000)	\$(mill.)	Nos.(000)	\$(mill.)
1970	-	-	-	-
1980	4.0	9.52	3.7	8.81
1990	6.2	14.76	4.3	10.23
2000	8.8	20.94	5.1	12.14

By 2000 A.D. the difference in annual costs at current prices required by just these two education components under the two growth hypotheses would be:

Teacher Salaries	\$4,650,000
Classroom Construction	<u>8,800,000</u>
	\$13,450,000

As a comparison the entire budget of the Ministerio de Educación y Culto for 1972 is \$14,980,000. This budget also has to cover the capital cost of teacher training and the operating costs of supervision, retraining and maintenance for the primary schools and, of course, all public sector costs of the secondary and university systems.

4. Public Health

A similar situation exists in the health sector. Population increases are reflected in proportionately increased need for doctors, nurses, paramedical personnel, and hospital beds, involving both investment and capital costs. A rough idea of the magnitudes required can be obtained by multiplying the 1970 unitary costs of public health services (\$2.85) by the population:

Public Health Costs (\$ million)

	<u>3.6%</u>	<u>2.5%</u>
1970	6.8	6.8
1980	9.4	9.3
1990	13.5	12.1
2000	19.4	15.5

5. Distribution

The gross magnitudes of changes in indicators like per capita GDP, education, health, housing, etc., caused by high population growth rates (and even 2.5% is high) become ever more alarming in 1990, 2000 and beyond. This impact is even more painful because of its uneven distribution.

An IDIA survey gives some idea of the distribution of family income among geographic regions. The median monthly income (50% of families have less) is:

		<u>Guaranies</u>	<u>\$</u>
Asunción	under	18,000	143
Remaining Urban	"	9,000	71
Rural Small Farm Area	"	3,000	24
Rural Large Farm Area	"	3,000	24
Old Colonization	"	3,000	24
New Colonization	"	3,000	24

From the same source, it is possible to construct a tentative indicator of vertical income distribution in Asunción:

	<u>% of People</u>	<u>% of Income</u>
1000/2900 G	6.9	0.6
3000/5900	11.7	2.8
6000/8900	15.6	6.5
9000/11900	15.3	8.8
	<hr/> M	
12000/17900	17.4	14.3
18000/23900	11.3	13.1
		<hr/> M
24000/35900	11.4	18.7
36000/49900	4.7	11.0
50000/75000	3.5	12.1
75100/99980	2.1	10.0
100,000	0.4	2.7

It is evident that the impact of problems caused by rapid increases in population will fall heaviest on the poorer parts of the population, i.e., the urban poor, the small farmer, farm laborer, and the colonists. Unemployment has its most immediate impact on the uneducated, and there is a close correlation between economic status and educational attainment. The poorest people are those most heavily dependent on government-provided services, because they lack alternative means to obtain these services privately. Therefore, any reduction in per capita provision of such services weighs most heavily on them. At the same time, the increased government services required by population growth will demand increasing revenues for investment and operating costs. Without a strongly progressive tax system, the burden of tax revenues will weigh heavily on the poor, relative to their lower income levels.

The relatively favorable man:land ratio has always stood in Paraguay's favor, and it will continue to do so for some time to come, as an escape valve, a means of employment, and source of nutrients. However,

this escape valve is time-limited and is itself a vast consumer of investment capital.

Man:Land Ratios (Acres of arable land/capita):

	<u>3.6%</u>	<u>2.5%</u>
1970	8.2	8.2
1980	5.9	6.0
1990	4.1	4.6
2000	2.9	3.6

Source: Table I, p.9, of Adlai F. Arnold. An Agricultural Policy Statement for Paraguay. Asunción, 1970. Preliminary Draft mimeo. 112p.

The decline in man:land ratios induced by population expansion will require changes in the agricultural system itself as well as incredibly large investments in land development, transportation, marketing and supply services, and all types of public services associated with new settlements and their market towns. The total costs of full agricultural system development have never been calculated, but they far exceed the direct cost of family resettlement on new land.

II. POPULATION PROGRAMS

A. PARAGUAYAN INSTITUTIONS

There are three main focal points within the GOP for dealing with population matters:

1. The Secretaría Técnica de Planificación is a planning organization attached to the Presidency. Its concern with population matters is largely limited to the impact of population growth on economic and social conditions. The Secretaría itself published four demographic papers (now out of print) which served as the basis for early projections of population growth. With AID support, the Secretaría supervised the work of two Paraguayan economic research centers (IDIA and CEPADES) in the analysis of the impact of population growth on economic and social progress.
2. The Ministry of Public Health and Social Welfare operates maternal and child health clinics in 87 Centros de Salud and 127 Puestos Sanitarios. Responsible parenthood information and assistance is currently provided in 13 of these clinics. A central Department of Family Protection was recently established in the Ministry of Public Health to provide full guidance and coordination on MCH, nutrition and responsible parenthood. The number of fully integrated clinics is expected to rise from 13 to 19 by the end of this calendar year. AID has obligated over \$500,000 since 1969 to support this program.
3. The Faculty of Medical Sciences of the National University has provided family planning assistance in its obstetrics and gynecology clinics at the university hospital for some time. AID has assisted the Faculty to initiate an Institute for Study of Human Reproduction. This Institute is expected to conduct research in reproductive biology and medicine; provide postgraduate training; provide clinical services in cervical cancer, contraception and sterility; and eventually introduce sex education, medical demography and responsible parenthood into the curriculum of the Faculty. However, no timetable for initiation of these activities has yet been developed.

In the private sector, only one institution stands out. The Centro Paraguayo de Estudios de Población (CEPEP) conducts family planning activities in 23 clinics throughout Paraguay. Some of these clinics are organized directly by CEPEP with contract personnel; others are managed by existing hospitals or health centers with CEPEP assistance. CEPEP also conducts training of family planning staff for its own affiliates and for other programs. It provides information on family planning and conducts national seminars on the subject. It also conducts research into the nature of the population problem and its solution, including analysis of data from its own extensive operations.

A number of individual public and private hospitals provide some form of family planning assistance in affiliation with CEPEP or MPH. However, there are no major formal programs totally independent of these two institutions.

B. INTERNATIONAL ORGANIZATIONS

AID is the only major donor with an in-country operating program in family planning (see below). The Pan American Health Organization (PAHO) maintains a technical staff in Asunción. As of our visit, PAHO was providing no family planning assistance to Paraguay. However, an agreement was signed with the Ministry of Public Health and the National University before the Evaluation Team left, to carry out a wide-ranging program to improve maternal-child health.

The objectives of this ambitious program are (1) to reduce the probability of sickness among mothers and children, particularly in high risk groups, and (2) to improve the operational capacity of maternal-child health services. To reach these objectives, an 8-point program was advanced:

1. A census of human and institutional resources for gynecology, obstetrics and pediatry;

2. Formulation and execution of a national maternal-child health program including both public and private agencies;
3. Elaboration of technical and administrative norms for effective functioning of service and training programs;
4. Training, through short courses and seminars, of MCH program personnel at all levels;
5. Training of physicians in pediatrics and gynecology-obstetrics through hospital residence, including rural practice;
6. Provision of personnel, equipment and materials to the services selected for training purposes;
7. Revision and improvement of the educational program at pre-graduate and specialization levels, following basic training;
8. Detailed investigation of health problems of mothers and children by geographic areas and economic strata.

The extent to which this program will affect the birth rate remains to be seen. However, it should bring about improvement of MCH services. The program is financed largely with Foreign Assistance Act Title X funds.

The United Nations has a Representative and other staff in Paraguay but no operating population program. A UN Regional Population Program Officer located in Chile has responsibility for Paraguay along with the rest of South America. A UN-affiliated center (CELADE), also located in Chile, has provided invaluable technical assistance in demographic studies. UNICEF co-sponsored a Congreso Nacional on Familia, Infancia y Juventud with the Consejo Nacional de Progreso Social. Neither IBRD nor IDB is involved in population programs in Paraguay.

International Planned Parenthood Foundation provides funds, technical assistance and contraceptive materials to its local affiliate (CEPEP). The Population Council provided some limited assistance towards the conduct of the abandoned KAP study.

C. AID

The U.S. AID Mission in Paraguay embarked in FY 1969 on an ambitious, two-phased, multiyear Population and Nutrition program (526-11-580-085) with the Ministry of Public Health. As planned in the PROP, this program included:

Phase I - Preparation (1969-72) consisted of a series of research, training and operational activities, including the opening of 6 family planning clinics in MCH clinics of the Ministry of Public Health. These activities were designed to provide a base of data, experience, personnel and attitudes from which to enter the second phase. The short range targets of Phase I are outlined in Table 2.

Phase II - Operations (1973-79) provides for rapidly expanding the number of fully integrated MCH, family planning and nutrition clinics of the Ministry of Public Health to 45. By 1980, this was expected to provide a clientele of 180,000 mothers and 360,000 pre-school children, of whom 140,000 mothers would be family planning acceptors. This program was targeted to have the following population effects:

	<u>1969</u> current	<u>1979</u> projected targeted (w/o program) (w/program)	
Annual Population Growth Rate	3.2%	3.6%	2.5%*
Annual Crude Birth Rate		44/1000	33-34/1000
Births		143,000	104-108,000
Mortality Rate	10/1000	8-9/1000	8-9/1000

* At a 5% real annual economic growth rate, this population growth rate would yield the 2.5% per capita growth rate set at Punta del Este.

A major nutrition program, to be conducted through the maternal and child health clinics of the Ministry, was expected to reach some 540,000 women and children per year. The objectives of this program would be to reduce the prevalence of anemia, goiter and secondary malnutrition.

This combined Population and Nutrition program would include improvement and expansion of the management capabilities of the MPH Divisions of Maternal and Child Health and Nutrition. Phase II would also see the establishment of an Institute for the Study of Human Reproduction in the Faculty of Medical Sciences of National University.

Table 2

526-11-580-085/POPULATION AND NUTRITION

SHORT RANGE TARGETS

	<u>Research</u>		
	<u>Agency</u>	<u>Techn.Assist.</u>	<u>Due</u>
1. Socio-Economic Impact	IDIA		6/71
2. Demography	STP		6/71
3. Knowledge, Attitudes and Practices	CPES	Population Council	12/70
4. Abortion	IERH	CELADE	12/70
5. Nutrition studies	NNC		6/71
Factors responsible for malnutrition			
Feasibility of compulsory enrichment			
Prevention and treatment of anemia			

Training

1. Family Planning: academic and specialized training for 4 M.D.'s, 1 vital statistics, 1 nurse, 3 demographers
2. Family Planning: short-term training for 103 doctors, nurses and social workers in U.S. and other L.A.
3. Family Planning: short-term local training by CEPEP for 120 doctors, nurses and social workers.
4. Population: observation and international conferences in U.S. and other L.A. for 14 officials of MPH, Social Security Institute, Faculty of Medicine and private professional organizations.

Operations

1. Establishment of six family planning clinics in six MPH maternal and child care clinics.

IDIA - Instituto de Desarrollo Integral y Armónico
 STP - Secretaría Técnica de Planificación
 CPES - Centro Paraguayo de Estudios Sociológicos
 IERH - Instituto para Estudios de la Reproducción Humana
 NNC - National Nutrition Council
 CELADE - Centro Latino Americano de Demografía

III. EVALUATION OF PREPARATORY PROGRAM

A. RESEARCH

1. Appraisal of AID-Sponsored Research

An important aspect of the original AID PROP (1969) is a provision for assisting in the funding of projects which provide basic data and research information upon which population policy and family planning program implementation might be built. The following discussion describes, in summary form, progress being made on AID-supported research-type projects and wherever possible evaluates the findings.

a. Title: National Abortion Survey

Project No. 526-11-580-085 - No. 4 (FY'70)
526-15-580-085.1 - No. 23 (FY'71)

Funding Data: FY 70 Obligation \$ 20,000
FY 71 Obligation \$ 8,000
PL 480 (FY 71) \$
FY 72 Projection \$
Total Support thru FY 71 \$ 28,000

Principal Investigator(s): Dr. Julio M. Morales
Dr. Andrés Villalba
Dr. César Sisa

Contractor and Address: Instituto para el Estudio de la
Reproducción Humana
Asunción

Duration: Start - June 1970; end June 1973

Project Summary

(1) Objectives

To conduct a demographic study in Paraguay, including various aspects of fecundity and abortion, which will be comparable to studies already conducted in Panama, Peru, Colombia and Argentina. The original agreement was revised in May 21, 1971 by a new agreement extending by six months the time for completion of the study and authorizing a nationwide study on the importation, manufacture, distribution and sales of contraceptives.

(2) Strategy, Method or Plan to Achieve Objective

The abortion study is based on techniques already developed by CELADE through previous studies in other countries. Although major emphasis was placed on the city of Asunción, two additional cities were included in order to present comparable data about this phenomena in interior cities of Paraguay.

(3) Progress to Date

Approximately 2800 questionnaires were administered by trained interviewers concluding all field work. Coding and card punching has been finished. Machine tabulation and a short analysis is being performed by CELADE but with some delay. Detailed analysis of the data cannot be made until CELADE completes the tabulation.

(4) Evaluation

The sample survey appears to be well executed by well-trained interviewers according to competent design. CELADE furnished technical assistance and will perform the computer tabulation of the tables.

The schedule that was administered for the survey was divided into several parts. Considerable personal background information was gathered on the sample respondent such as age, places of residence, education, occupational status, etc. The second part is a very detailed pregnancy history with a part of the schedule devoted to a summary. The schedule contains information about the marital (or conveniente) union for both the husband and wife. The final section requests detailed information about the knowledge and use of contraceptives.

The survey has been carried out in close cooperation and coordination with CELADE. In fact, CELADE has served as a "subcontractor" to furnish technical assistance and tabulation services with some analysis under the USAID contract. CELADE has a standard program for tabular presentation on many of the schedule items that has been prepared for other abortion-type surveys in other Latin countries. Some difficulty

is being encountered because CELADE is very late (six months) in tabulating the data.

CELADE has already furnished some preliminary analysis. For example, the average number of children per woman is slightly less than in the 1962 Paraguayan census. The fertility rates computed from the survey are much lower than those estimated for 1970 which would lead one to believe that the sample data probably doesn't represent the same samples on which rates were computed in 1970 by CELADE.

Considerable data about abortion which will be useful to family planning programs and for overall population planning will be produced from this survey. A final report is expected to be available by January 1973.

b. Title: Demographic Study of Paraguay

Project No. 526-11-580-085 - No. 7

<u>Funding Data:</u>	FY 70 Obligation	\$ 36,000
	FY 71 Obligation	\$
	PL 480 (FY 70)	\$
	FY 72 Projection	\$
	Total Support thru FY 71	\$ 36,000
	PL 480 (Total)	\$

Contractor and Address: Secretaria Técnica de Planificación
Iturbe 175, Asunción

Duration: Start June 1970

This study was intended to provide, on a 1000 household sample in eight areas, information on sex and age distribution, vital statistics, socio-economic information and migration. However, the principal investigator moved to another country with an international organization before the study was started and the funds were deobligated. Some of the data will be provided by the National Paraguayan Census and by household surveys to be performed in 1972 and 1973 by the National Statistical Office following the census.

c. Title: Migration Survey

Project No. 526-15-580-085.1 - No. 27 (FY'71)

<u>Funding Data:</u> FY 71 Obligation	\$ 47,000
PL 480 (FY 71)	\$
FY 72 Projection	\$
Total Support thru FY 71	\$ 47,000
PL 480 (Total)	\$

Principal Investigator: Dr. Domingo M. Rivarola

Contractor and Address: Centro Paraguayo de Estudios Sociológicos
Eligio Ayala 973, Asunción

Duration: Start - May 1971; End - January 1973

Project Summary

(1) Objectives

To obtain data on factors affecting population movement from rural to urban centers so as to better understand the problems encountered in the planning and execution of a national population program.

(2) Strategy, Method or Plan to Achieve Objective

Two thousand or more household interviews will be conducted in metropolitan Asunción and the surrounding area. The information will include:

- (a) Size and characteristics, age, sex, marriage status, fertility, education, occupation, etc., of the native and immigrant population family units.
- (b) Establish the difference in characteristics between the native and immigrant population to evaluate the demographic and social composition of the two groups.
- (c) Determine the direction and intensity of the migratory movement.
- (d) Establish the migration process for Greater Asunción.

- (e) Determine the factors causing the migration movement.
- (f) Study the impact of the immigrant population on the socio-demographic factors of the metropolitan area of Asunción.
- (g) Study the assimilation of the immigrant population into the socio-economic and cultural patterns of the city.

(3) Progress Made and Evaluation

Data on migration taken from the 1962 census of Paraguay have been related to other census data and analyzed. The results of this analysis have been published. This work was done for the Contractor by Berta López while she was studying at CELADE and is entitled "Estudio de la Migración Interna Paraguaya." It was based on a sample of the 1962 census composed of 88,360 persons which covered Asunción and other urban areas and rural areas. Although the data is ten years old and somewhat outdated, the analysis will be excellent for studying trends resulting from a comparison between these data and those which are to be collected during this study on 2000 households.

The sample for the 1972 survey has been selected and the survey instruments printed. Interviewing will be started in late June or early July. Tabulations will probably be made by CELADE or a local computer facility. "Dummy tables" for the tabulations have been started.

The present study will gather a great amount of detail concerning internal migration and its relationship with a variety of variables. These include a description of the physical aspects of housing, composition of the family, age, circumstances about migration including place of birth, residence in 1967, date of arrival in Asunción, details of educational attainment, work activity, fertility, civil state and reasons for migrating.

In addition to the principal schedule, there are two more. One is for the purpose of obtaining much more detailed information on migrants

into Asunción and the conditions under which they migrated. The other questionnaire is to obtain occupational and employment data.

A pre-test of the schedules has been made, but there are still certain minor defects in the principal schedule. For example, the question on fertility will be difficult because only the question - "How many children do you have?" - will be asked. Does this mean children presently living or all children, dead or alive? Also, several questions are not entirely mutually exclusive. For example, a migrant could be both "retired" and an "investor" even though only one answer is to be given.

The forms, questionnaires, etc., are quite long and detailed; it is very possible that some reliability of response may be sacrificed because of the length and volume of questions to be asked. Another weakness is the relatively small amount of information that will be obtained on fertility, reproductive patterns and family planning attitudes of migrants.

The evaluator has been quite impressed with Dr. Rivarola and his "Centro Paraguayo de Estudios Sociológicos." This Center seems very professionally oriented and has been working on a variety of research projects, including several in the field of population. In addition the Center conducts seminars and training courses and disseminates publications. It is a private organization supported by contracts from public and private national and international organizations. A catalog of the program's research projects, courses and publications has been published by the Center.

In summary, it is felt that this survey is being well administered and is technically sound. The information to be obtained will fit in well with one of AID's objectives of obtaining base-line population data which will gradually lead to the development of a population policy in Paraguay.

d. Title: Socio-Economic and Attitude Study

Project No. 526-11-580-085 - No. 1 (FY'70)

Funding Data:

FY 70 Obligation	\$ 53,000
FY 71 Obligation	\$
PL 480 (FY 71)	\$
FY 72 Projection	\$
Total Support thru FY 71	\$ 53,000
PL 480 (Total)	\$

Contractor and Address: Instituto de Desarrollo Integral y
Armónico (IDIA)
Icuna Saty - Asunción

Principal Investigator(s): Enrique Ibarra
Julian Chilavert
Gerardo Fogel

Duration: Start - April 1970; End - Finished

Project Summary

(1) Objectives

(a) Investigate the social and economic implications of different rates of population growth and effect on total country resources in six different social-economic regions in Paraguay and formulate appropriate policies for each of the regions.

(b) Investigate attitudes of community leaders towards various aspects of population.

(2) Strategy, Method or Plan to Achieve Objective

(a) Interview approximately 2000 family units in Asunción, other urban centers, long-established settlements characterized by very small land-holding units; colonization areas eight or more years old; and new colonization areas. This part of the study will determine the economically active population, occupations, employment, underemployment, and income. It also investigates the effects on education, health, housing requirements, and the economic and social implications of three different rates of population growth, i.e., 2.5% and 3.6% and the "actual" rate (3.2%).

Finally, it should propose policies and necessary measures to define and implement population policies that will make possible the maximum national development within each of the six regions.

(b) Determine the attitudes of leader groups (political, military, religious, communication media, professional and business leaders, medical and social workers, labor, student leaders and teachers) towards population programs and policies, population growth, attitudes and practices with regard to family planning for population control. Approximately 700 interviews were conducted.

(3) Progress to Date and Evaluation

This project has been finished and two reports have been published. The short account below evaluates the reports themselves and indicates how the information fits into AID objectives in their population assistance program. The first report, entitled "Implicancias Económicas y Sociales del Crecimiento Poblacional Paraguayo," is a very interesting and exhaustive report on a variety of factors in the culture of Paraguay that relate to population increase. Included are chapters on conceptual considerations and problems surrounding rapid population increase and their implications for socio-economic development; survey and study methodology; relationships among many population variables gathered from a survey of 2000 households; economic and social development conditions under three different rates of population increase; and a final chapter on conclusions and recommendations. It is felt that the general population orientation of the project directors was good. The most important contribution of this AID-supported study is its rather detailed review of the impact that continued high population increase will have in Paraguay. This gathering of data and facts on which to base future AID-supported activities in population was an important objective of the PROP. Already, selected parts and conclusions from the study are being published periodically in the Asunción newspaper "ABC." The latest article,

published June 18, 1972, was an analysis and a description of the economic implications of Paraguay's high child dependency rate. These articles will undoubtedly reach and influence a great number of people or at least call their attention to such serious population problems as age and spatial distribution and their relationship to socio-economic progress.

Several methodological deficiencies were noted. The bibliography listed at the end of the publication is incomplete; the more important publications of the total population and demographic literature are not mentioned at all. The lack of a specification of the reliability and validity of the survey figures is a serious flaw. What measures were taken to get accurate and valid responses on such subjective questions as knowledge of contraceptives, desired size of family, income of family head, etc.? How much can one generalize about the data presented?

Many of the tables have not incorporated effective approaches to tabular presentation. In the survey probably too much data in too much detail was acquired. In the cross tabulations some of the variables were classified in too many categories so that many of the tabular cells included only one or two cases or even none at all. Percentages sometimes were calculated horizontally instead of vertically or vice versa, so that a recalculation was required to determine the real significance of the information. In at least one case percentages in the table were calculated as a proportion of a percentage figure that did not total 100%, making the table difficult to understand.

This study has been made under rather difficult conditions. There exist very few reliable basic demographic or any other kind of statistics. Many estimates had to be made by the authors themselves, thus increasing greatly the work to be performed. Unfortunately, the assumptions on which these estimates were based were not always adequately explicated.

The recommendations at the end of the report are good as far as they go. But, perhaps, because of limited knowledge of the population

field, other important recommendations have been omitted, especially about the determinants of fertility in Paraguay and techniques for its control which the authors strongly imply are needed. Both the conduct of the research and its presentation might have been enhanced by continuing expert technical assistance from the outset.

A "Survey of Leaders" was also a part of this overall research project. The objectives were to detect the opinions about population matters of influential leaders, observe the degree of perception of the associated problems exhibited by these leaders, determine their information channels and suggest methods for sensitizing leaders to population problems in relation to adopting policies in a national development context.

Accordingly, 710 persons were interviewed. Of these, 499 were urban-type influential leaders and members of political parties, churches, military and police, professional groups, etc., and 211 belonged to rural-type "grupos de aceptación." The whole survey consisted of a sort of KAP survey of leaders in urban areas and others in rural areas. Heavier emphasis was placed on knowledge and attitudes than on practice.

This survey produced some very interesting opinions and impressions. There was a considerable difference between urban and rural leaders on such attitudes as family size, knowledge of family planning and the most important problems facing the Paraguayan family. The former expressed a desire for smaller families (but still large enough to increase the total population rapidly); had greater knowledge about family planning methods; and considered that solving economic problems has the greatest priority for the Paraguayan family. The rural respondents want to continue producing large families, do not know too much about contraception, and worry about having employment. One is left with a distinct impression from the study that neither group recognizes nor understands the dimensions of the "population problem." However, the urban group shows a tendency to think that fewer children could be beneficial to the family and seems to be in favor of a national program of family planning. This

group also seems to be concerned about urbanization—50% felt that urban concentration "is an obstacle for a developing equilibrium of the country."

This survey, like the other IDIA study, lacks some technical refinements but these do not, by any means, negate its value. The main weakness of any attitude or KAP-type of survey is always a question as to whether the responses are reliable and valid. In other words, if a respondent was reinterviewed in a different way, would he give the same response? There were apparently no reliability or validity checks made. Outside technical assistance in survey methodology might have helped to increase one's confidence in the distribution of responses.

e. Title: Socio-Economic Effects of Different Rates of Population Growth

Project No. 526-11-580-085 - No. 5 (FY'70)

<u>Funding Data:</u> FY 70 Obligation]	\$ 9,000
FY 71 Obligation	\$
PL 480 (FY 71)	\$
FY 72 Projection	\$
Total Support thru FY 71	\$ 9,000
PL 480 (Total)	\$

Principal Investigator: Dr. Virgilio Paredes

Contractor and Address: Centro Paraguayo para el Estudio de
Desarrollo Económico y Social (CEPADES)

Duration: Start - June 1970; End - 1972

Project Summary

(1) Objectives

The purpose of this project is to investigate the effects of different population growth rates on Paraguay's economic and social development through the year 2000.

(2) Strategy, Method or Plan to Achieve Objectives

The techniques employed will be similar to those employed by General Electric's Center for Advance Studies, TEMPO, for Guatemala.

The study will assume three different rates of population growth—3.2% (approximately the present rate), 3.6% (representing significantly decreasing mortality rates), and 2.5% (representing significantly reduced fertility rates)—and examine the effects of such factors as the following:

- . Total population
- . Total GNP and GNP per capita
- . Urban and rural population
- . Primary school-age population
- . Ratio of non-working population to working population
- . Total labor force
- . Unemployment rate
- . Ratio of labor force to population
- . Capital stock per employed worker
- . Ratio of domestic savings to GNP

(3) Progress to Date

In January 1972 a preliminary report consisting of over 100 pages was received by USAID. This report was reviewed and several suggestions were made as to how it could be improved. CEPADES is now working to incorporate these suggestions and generally improve the report. Meanwhile, this publication is still in its preliminary version.

(4) Evaluation

This study was intended to be a study of Paraguay patterned on the GE/TEMPO study done in Guatemala and other countries. It is somewhat like a part of the IDIA study, mentioned previously, but is based on more realistic assumptions of economic growth. The original project director, Dr. Fernando Digalo, has left the country, so responsibility now rests with other CEPADES personnel who worked on parts of the preliminary version.

The study report is divided into three parts. The first consists of an analysis of the spatial distribution by regions and age groups for the year 2000 under growth patterns of 2.5, 3.2 and 3.6%. The second part

analyzes what happens to the Gross Domestic Product (GDP) under various population growth assumptions, showing, of course, that the per capita GDP is a function of the relative growth rates of GDP and population. Relationships between population increase and size of labor force are reviewed. The third part of the report is devoted to an analysis of relationships between various rates of population increase and social variables, i.e., education, health, housing, etc. A concluding statement and possible alternatives for development completes the report.

This type of exercise is extremely worthwhile. Effectively done, it demonstrates the population situation in a way which can motivate government officials to include population, demographic and family planning aspects in GOP socio-economic planning and may eventually lead to an overall national population policy. At this point the study is far from finished, although many of the major calculations have been done. The presentation needs to be improved considerably. Many of the tables should be reworked to conform with standard tabular presentation for easier reading and understanding by busy executives. Interest and impact would be improved by extensive use of graphic presentations.

The last part of the study, having to do with alternative proposals, general considerations and policy suggestions has not been drafted. In some ways this could be the most important part. It should include a summary of what the data mean, what should be done, and what will happen if it is not done.

The contractor should be encouraged to finish this project in the shortest possible time. In addition, wide publicity might be given aspects of this study in the press in the same manner as that being given the IDIA research project.

f. Title: Census and Household Survey

An additional activity that is greatly assisting in providing population data is the census project. AID is giving some material and monetary assistance to the GOP for executing and analyzing the national census which will be taken in July 1972.

The maps for all enumeration districts have been prepared and the census forms are being mailed now (June 1972) to the municipalities. Successful conclusion of this project should greatly enhance potential research capability for overall socio-economic planning.

A post enumeration survey will also be conducted to determine errors and under-enumeration. In addition, one sample household survey will be administered in 1973.

g. Title: La Regulación de la Natalidad y la Humanae Vitae

Institution: Centro ARA-ANDU, Asunción, Paraguay

This study attempted to determine if the Papal Encyclical had effected a change in birth control practice of Catholics in Paraguay. It was concluded that it had made an appreciable negative impact, i.e., contraceptive use had decreased. Unfortunately, this conclusion was based on responses from less than one-half of the total number of questionnaires, leaving open the possibility of inaccuracies or bias.

2. Suggestions for Future Research and Related Activities

Obviously, USAID - Paraguay cannot support an infinite number of needed research activities in the field of family planning and population. There are, however, several areas that might be considered if funds become available. They are as follows:

a. Demography: Descriptive

Paraguay is going far in providing descriptive data on their population with the taking of a census. What is and will be lacking are vital statistics on a continuing basis to show fertility and mortality trends after the census is taken.

AID/W is supporting a Population Laboratory project. Experimentation with vital statistics systems in Colombia, Morocco and the Philippines is now taking place. The results of this experimentation might be applied to Paraguay on a nation-wide basis.

b. Demography: Determinants of Population Change

Population changes result from changes in the demographic elements. These elements include marriage, births, deaths, migration, age structure, etc. Recently, more interest has centered on fertility as a major determinant in population change. However, we are handicapped because not enough is known about the determinants of fertility and how changes can best be brought about.

It is therefore suggested that a modest study be made which would attempt to determine the "causes" of high fertility in Paraguay and how fertility rates can best be reduced. What legal, social, psychological and economic factors influence couples towards high family fertility? How might changes in these factors influence fertility? How could such changes be effected?

c. Policy Research

It is as important for a country to recognize the need for and have a population policy (even though it is not necessarily formalized) as it is to have an economic policy. With more and more accurate data becoming available in Paraguay, consideration might now be given to assisting the government to formulate an overall population policy. This would require a systematic study of the demographic variables and their impact on each other and on significant national socio-economic characteristics. This study would go beyond the IDIA and CEPADES studies in two important respects: (1) It would include a more detailed examination of such population features as internal and external migration and dependency trends. (2) It would examine the desirability of existing tendencies, the possibilities of modifying these tendencies, and the cost effectiveness of such modification relative to more traditional approaches. The intended eventual result of such a study would be the program and budget decisions which they engendered. These decisions would constitute a de facto population policy because of their explicit consideration of the population variable.

d. Operations Research

Action-oriented research on Paraguay's family planning programs is needed. One issue centers around the most appropriate and efficient family planning model or models. How can family planning in Paraguay be best administered? Is an isolated contraceptive dispensing clinic more efficient than one which is coordinated with other health services? What techniques other than family planning can be used for reducing fertility in Paraguay? What is the present efficiency of the family planning programs? What should be the target population for an intensified family planning program? How can existing services be better utilized?

Operations research based on the information being generated by the CEPEP and MPH programs can provide some answers to these and other questions. For example, it would be useful to know:

- The characteristics of acceptors in terms of age, number of children, literacy, economic status, etc.
- The effect of hours of operation of clinics on number and characteristics of clients
- The factors which induce a clinic client to accept or reject family planning
- The cost effectiveness of the different aspects of clinic programs, from information through practice to follow-up
- Optimum proportions of professional and subprofessional personnel in different operations

e. Socio-Psychological Research

In order to convince families that they should limit their fertility in Paraguay, more needs to be known about values and attitudes of the various societal segments which support high fertility and serve as constraints to lower fertility.

It is therefore suggested that a modified KAP-type survey be carried out along with an investigation and analysis of all factors supporting high fertility and those that would support lower fertility.

A KAP (Knowledges-Attitudes-Practices) study provides detailed information on the population's understanding of and attitude towards human reproduction, birth control, ideal family size, and the moral issues surrounding them. It also provides information on the extent of actual practice and methods of contraception.

Since these types of studies are difficult from the standpoint of validity and reliability, it is suggested that expert technical assistance be employed to assist local Paraguayan investigators.

f. Economic and Manpower Research

It is suggested that further, more penetrating research be done on the relationships among demographic variables and economic variables such as per capita income, family microeconomics, investment, savings, capital formation, etc. Special attention might be paid to manpower and labor force relationships. In particular, the effect on population pressure of international migration should be studied in depth to determine its extent, characteristics, causes and costs.

g. Concluding Remarks

Considerable progress has been made in the acquisition of fundamental data on basic population issues through research and analysis which AID has supported under the original PROP. USAID should be congratulated for their selection and support of these worthwhile activities. It is recommended that USAID continue to support worthwhile research activities, thus building up a body of information that can take more of the "trial and error" technique out of population program implementation.

Past research efforts by local investigators have lacked refinement in presentation and techniques, but these efforts have helped to establish a data base for more refined future studies. Although the

conceptualization of population issues by the investigators could be improved, it is surprising how well informed they have become. Future research efforts should attempt to improve credibility by utilizing standard techniques to establish validity and reliability. To this end, it is strongly recommended that local investigators utilize appropriate technical assistance to improve the quality of their research.

A wide array of competent sources of technical assistance in population are now available. AID/W has supported a number of U.S. universities operating in the population field, including Johns Hopkins, North Carolina and Michigan, and can provide information about other sources of assistance. There are a number of Latin American and multinational institutions, such as CELADE, which are notably competent in particular areas although they may become overtaxed by burgeoning demands for their talent.

B. TRIAL CLINICS

1. Government Program

The initial USAID-Ministry of Public Health arrangement for family planning clinics was included in a Project Agreement (Maternal-Child Health and Nutrition) signed May 18, 1970. This agreement provided for U.S., third country and local training and the establishment of six clinics in Government hospitals and health centers. It funded equipment and operating costs of the clinics, together with support for the Maternal and Child Health (MCH) and Nutrition Departments of the Ministry and for the USAID Population Office. A second agreement (May 2, 1971) extended the program and added six more clinics.

A third agreement (May 30, 1972) increased the number of clinics to eighteen. This last agreement also led to the establishment of a Department of Family Protection in the Ministry of Public Health, distinct from the MCH Department, with its own director and staff to provide administrative and technical supervision of the program. The main objectives of this Department are:

- . To develop an integrated program to improve family life, to provide guidance on nutrition, mother/infant care and responsible parenthood;
- . To investigate medical-social problems aimed at strengthening the family;
- . To establish patterns and to supervise specific measures at a national level;
- . To coordinate the activities of family protection with other Ministry programs;
- . To develop other activities aimed at improving sanitary habits of family groups through joint action with other Ministry services and other agencies.

a. Operations

Family planning in Paraguay is treated in the context of responsible parenthood and family protection, with emphasis on prevention of morbidity and mortality and improvement of the quality of life rather than on birth control per se. Officially sponsored clinical programs are integrated into existing health services of the Ministry of Public Health (and other official agencies providing health care). In most cases, the Maternal and Child Health Clinics of the MPH Health Centers have provided the institutional infrastructure. Central coordination and guidance was provided by the Departments of Maternal and Child Health and Nutrition until a separate Department of Family Protection was established in June 1972. Clinics were located preferentially in neighborhoods of lower socio-economic levels in Asunción and in several of the provincial cities. During the first two years of the program, twelve family planning clinics were opened in three hospitals and nine health centers, all but one of which provided maternity services.

The Ministry's MCH clinics, in which the family planning clinics are located, provide pediatric, prenatal, partum, postpartum and cancer

detection services. Family planning services are available on referral from within the MCH clinic or from other branches of the hospital or health center. Quality of work is good and thorough. This should pay off not only in better health of the mother and child but in an increased number of acceptors as a fall-out of effective MCH services.

Family planning clinics are normally staffed with a physician, nurse midwife, and social worker. Some clinics include an auxiliary nurse, nutrition educator or, occasionally, a health educator. Most clinic staff members work only part time in the clinic; primary occupation may be other duties with the Ministry or other government or non-government institution, or private practice. Clinics are open for two to four days a week, for a total of six to seventeen hours a week.

The clinical procedure emphasizes the doctor-patient approach. Acceptance is voluntary. A new client registers and is referred to a waiting area where group talks and demonstrations are provided by the social worker. She then proceeds to a private area where the social worker takes personal and family social data and the nurse midwife obtains a clinical history.

In a separate examination room, the physician checks the clinical record, requests additional medical information, conducts a physical examination and takes a cytological smear. No other laboratory examinations are included in the family planning clinic,³ but any evidence of disease or morbidity or any degree of infection of the cervix is first treated before an IUD is recommended. If any signs or symptoms indicative of other diseases or conditions are encountered, the patient is referred to an appropriate clinic in the health center.

3 If the client is a postpartum referral, the MCH Clinic will probably have done a chest X-ray, hemogram and serologic test for syphilis.

If all is in order, the physician prescribes a contraceptive, which is provided, and the client is instructed to return for a routine check, or sooner if adverse symptoms develop.

The principal contraceptives provided are the IUD and the pill. Other methods, e.g., rhythm, diaphragm, foams, jellies and condoms are offered to those who prefer them or who for medical reasons cannot use the IUD or pill. Female sterilization, vasectomies, and abortions are not performed in family planning clinics.

An initial registration fee, based on ability to pay, may be charged by the MCH clinic. Such fees, at maximum, are much below private physician rates. No charge is made for family planning consultation, for the contraceptive, or for IUD insertion.

Special records are kept in the family planning clinic and routinely reported in detail, using the same reporting system developed by IPPF and used by its local affiliate, CEPEP. Follow-up of patients is rigidly maintained.

The family planning program is conducted quietly, without full-time family planning field workers, without incentive payments, without special family planning training centers, and without official targets. The new activities are simply integrated into the work load of MCH clinic services in existing facilities by adding services, personnel, and equipment, extending clinic hours, etc. The public information system is limited to seminars, conferences and talks pointing out the need for limiting population growth because of its negative impact on economic development and the health and welfare of mothers and children. Training aids, pamphlets and individual counseling in clinics are effective in getting the family planning concept across to those who need no motivation.

Motivational programs are largely clinic-based. Talks given by the social worker to prospective acceptors include both informational and motivational elements. The "satisfied customer" is encouraged to

bring in friends and neighbors who want advice. Social workers make house calls, visiting homes in the community to follow up on patients. In the process, they encourage clinic attendance and frequently meet with community groups to organize mothers clubs and other community organizations.

b. Assessment

(1) Administrative. As indicated above, the quality of the medical assistance provided through the MCH clinics is good and thorough, and that of the included family planning clinics follows suit. Records are well and faithfully kept. As with any new program, there have been supervisory and administrative problems due to limited staff, lack of experienced personnel, inadequate salaries, etc. However, the establishment within the Ministry of a Department of Family Protection, with a full staff which is adequately paid and supported, should do much to overcome any deficiencies.

(2) Growth Rates. Table 3 provides pertinent information on growth in the number of acceptors in MPH Family Protection Clinics over the last eight months. Through April 1972, the program had produced 2944 acceptors and acquired an additional 1873 acceptors with transfer of the Misión de Amistad clinic for a total of 4817. Figure 3-A graphs the average growth rates for old and new clinics and for special clientele hospitals. Clinics which have been in operation for more than a year exhibit the same growth trend as those which have been in operation only six to eight months, indicating a continued ready market for the services provided without an intensive information system. Eventually we would expect these curves to flatten out as that ready market is satisfied. Something like this seems to have happened with the special clientele hospitals. Growth was initially very rapid, but although the number of acceptors continues to grow, the rate of growth has slowed. We would speculate that most members of a restricted clientele were reached quickly, so that ready acceptors entered the program almost immediately. Remaining members will join at a slower rate, if at all.

TABLE 3
Ministry of Public Health
CUMULATIVE ACCEPTORS BY CLINICS BY MONTHS

Older Clinics

Site	Base	Loc	1971				1972				Clinics open	
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Hrs/ week	Times/ week
Trinidad (12/70)	HC	AS	151	158	172	192	220	242	263	284	6	2
Cruz Roja (1/71)	HOSP	AS	167	198	214	262	284	293	311	328	12	4
Caacupé (5/71)	HC	OU	261	303	347	378	409	445	473	505	12	4
B. Obrero (2/71)	HC	AS	178	205	231	258	275	292	314	335	12	4
Average			189	216	241	272	297	318	340	363		
Special Hospitals (New)												
Policlínica Policial (12/71)	HOSP	AS			211	232	238	252	258	264	12	3
Max Boettner (10/71)	HOSP	AS	180	192	199	206	218	228	240		8	2
Average			180	201	208	222	235	243	252			
New Clinics												
Barrio Stroessner (9/71)	HC	AS	25	44	63	83	97	122	157	190	17	4
Pilar (11/71)	HC	OU			7	37	45	59	93	127	9	3
Luque (9/71)	HC	OU	12	25	48	67	91	128	152	179	6	2
Encarnación (11/71)	HC	OU			21	50	70	115	150	191	12	3
Average			18	34	35	59	76	106	138	172		
Recent Acquisitions												
Misión Amistad ^a	HC	OU						59	92	123		
Coronel Oviedo	HC	OU					23	43	64	81		
Concepción	HC	OU					9	28	63	97		
TOTAL PROGRAM ACCEPTORS			794	1113	1506	1758	1967	2296	2618	2944		

^aMisión de Amistad was acquired in January with approximately 1873 acceptors and has added 123 since.

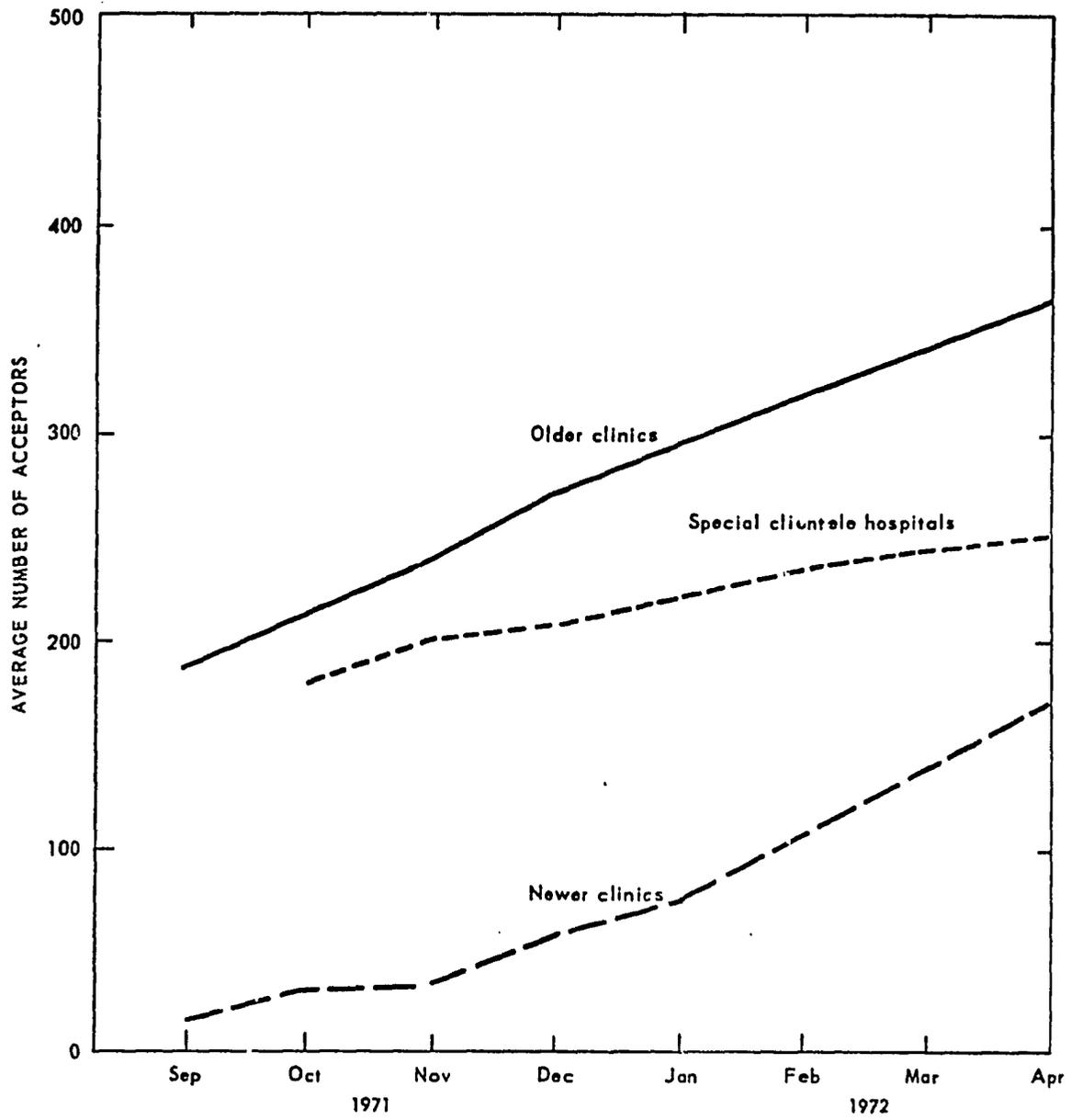


Fig. 3-A—Ministry of Public Health Cumulative Number of Acceptors by Class of Clinic

Clinics currently operate only six to seventeen hours per week in two to four sessions. These limited hours do not appear to restrict the number of acceptors (Fig. 3-B). This would indicate that clinic staffs could handle many more acceptors at current rates (average is 25 new acceptors per month) than they are now servicing, and that growth rates would have to increase markedly before longer hours became necessary.

The number of women registered in maternal clinics of all 87 MPH Health Centers in 1971 was 35,400. Perhaps an equal number accompanied their children to child care clinics, yielding an average of only 800 potential family planning clients per center. It is evident that a major effort will be required to increase the clientele of MCH clinics before family planning clinics become overtaxed. As discussed further in Chapter IV, it is virtually impossible to meet the births-averted goal of the Population and Nutrition program through 45 MCH/FP clinics, or even through the entire MCH program. Consideration should be given to providing family planning services in all government health care facilities.

(3) Client Characteristics. Social characteristics of patients have not been collated from records, but impressions of those attending MPH clinics, on the average, are described as follows by some of the program personnel who are in close contact with these clinics: She is a woman between the ages of 25 and 39. She already has had 5 or 6 children. She has attended the third grade in primary school, lives in two rented rooms and may have a family income of \$24 to \$35 a month. A greater effort must be made to reach the large group of women in the particularly vulnerable 15-25 year age group. To reach this group it will probably be necessary to mobilize considerable educational, advisory and counseling services to reach parents, grandparents and peers, as well as clients, with information about the advantages of smaller families.

(4) Costs. The first two years of operation have resulted in the following direct costs of the MPH family planning program, including certain centralized administrative and supervisory costs:

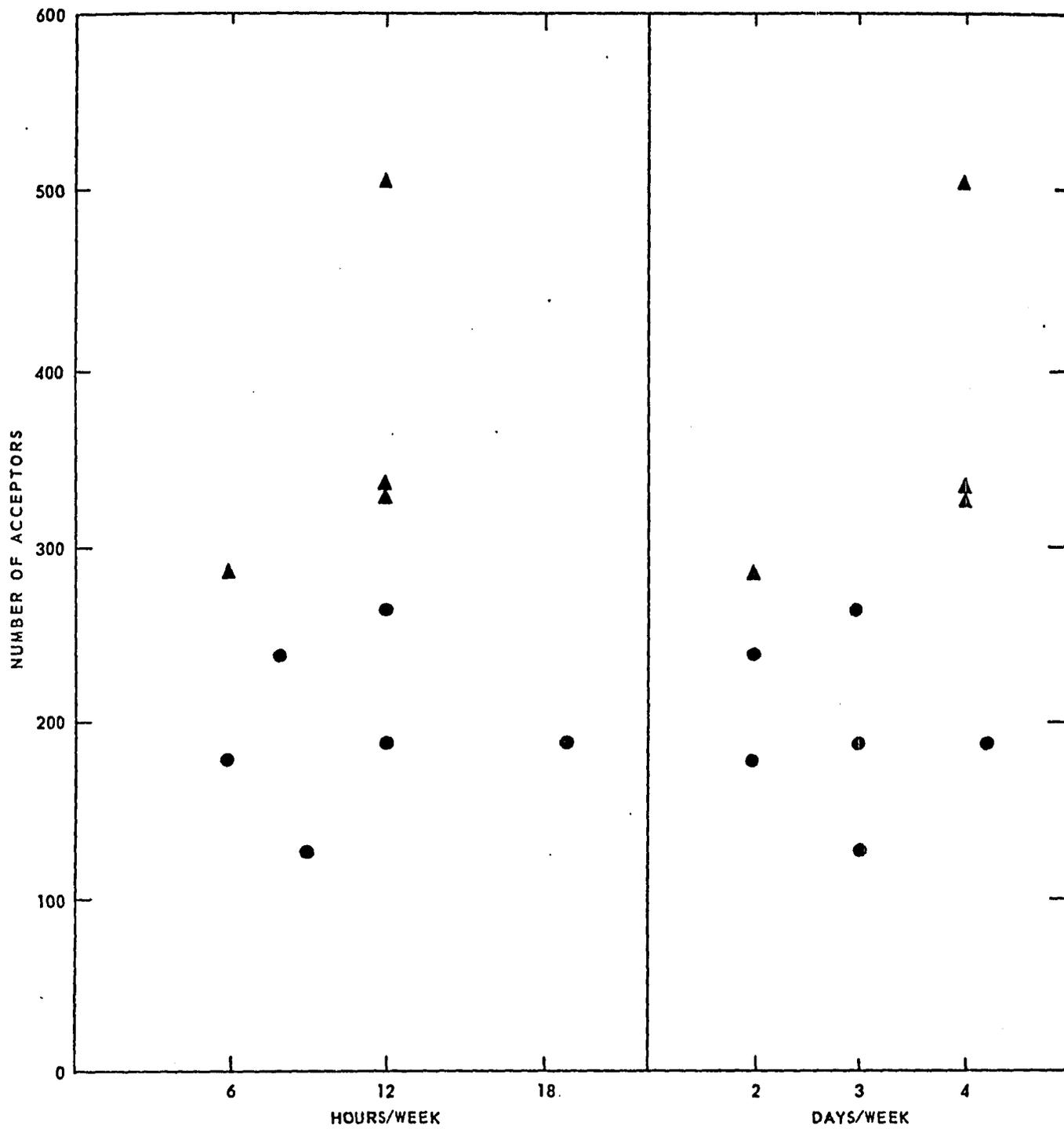


Fig. 3-B—Ministry of Public Health Cumulative Number of Acceptors in April 1972
Related to Hours and Days per Week of Clinic Operation

▲ Older clinics ● Newer clinics

CLINIC PROGRAM
EQUIPMENT AND OPERATING COSTS*

	USG			GOP (Kind)			Total
	5/18/70	5/21/71	Total	5/18/70	5/21/71	Total	
Technical Services	-	-	-	15.0	17.0	32.0	32.0
Commodities	78.0	47.0	125.0	-	-	-	125.0
Other Costs	<u>31.0</u>	<u>80.0</u>	<u>111.0</u>	<u>28.8</u>	<u>30.0</u>	<u>58.8</u>	<u>169.8</u>
Totals	109.0	127.0	236.0	43.8	47.0	90.8	326.8

* Includes costs for equipping and operating USAID Population Office, estimated at \$20-25,000. Excludes U.S. contract and PASA services and U.S. and third country training but includes local training.

In two years the program has produced 2944 acceptors for a unit cost of \$111 per acceptor. If commodities are amortized over a five-year period, unit costs would drop by \$17 to \$94. The costs per acceptor for direct operations of established clinics are, of course, much lower. Clinic salary costs have averaged \$7 per net new acceptor over the last four months. The most interesting aspect of these figures is the wide spread between unit cost per acceptor (\$94) and the local salary cost per net new acceptor (\$7). The former figure should drop slowly over the next few years. Although headquarters costs will be spread over a constantly increasing number of acceptors, the training and commodity start-up costs of new clinics will remain high. However, once these new clinics are operating effectively, the unit costs should decline steeply as total costs are spread over an increased number of acceptors. The second figure will remain almost constant unless the rate of acceptance can be expanded considerably over the 25 net new acceptors per month per clinic average of the last four months.

2. Private Sector Program⁴

The Centro Paraguayo de Estudios de Poblacion (CEPEP) is the Paraguayan affiliate of International Planned Parenthood Foundation (IPPF). It initiated its program with establishment of a planned parenthood clinic in the Gynecology Clinic of the University Hospital in 1968. It now operates twenty-three clinics with over 11,000 acceptors (Table 4).

a. Operations

In all but one respect (CEPEP clinics do not provide maternity services), CEPEP's operations are procedurally identical with those described above for the MPH clinics. Indeed, they should be. CEPEP trained the clinical teams for the Ministry's first twelve clinics, thereby establishing the basic program and record format. CEPEP clinics tend to be open more days per week (3 to 6, average 4) for more hours (8 to 24, average 20) than MPH clinics. Net new acceptors from program start averaged 24 per month per clinic, as compared with over 26 for MPH clinics. This slight difference is not believed to be significant.

CEPEP, as a private institution, can and does take a much more active role in forming public opinion and motivating the acceptance of family planning. The extent to which they perform this role is described in subsequent sections of this chapter.

b. Assessment

The expansion in the number of family planning clinics operated by CEPEP and by MPH present the possibility of an eventual conflict in jurisdiction, particularly when clinics draw clients from the same population. We incline to the view that the clientele of the two organizations may

⁴ The brevity of this discussion of the CEPEP program is no reflection on the extent or quality of that program. In most important respect it is comparable to the MPH programs, but larger and older. We concentrated our analysis on the MPH program since this is the program directly supported by AID, and the detailed results are more relevant for AID program decisions.

Table 4

CENTRO PARAGUAYO DE ESTUDIOS DE POBLACION (CEPEP)
 NUMBER OF ACCEPTORS BY CLINIC & METHOD
THROUGH DECEMBER 1971

Name	Type	Open. Date	Acceptors*			
			Total	Oral	IUD	Other
Ginecología - Hosp. Univ.	H	10/68	634	247	370	17
Maternidad Nacional - Hosp.Univ.	H	4/69	2360	657	1671	32
Santa María Community Center	CWC	4/69	588	226	342	20
Ricardo Brugada Community Center	CWC	10/69	395	148	222	25
Carlos Centurión Community Center	CWC	7/70	360	140	209	11
Barrio Obrero Community Center.	CWC	10/69	283	112	167	4
IPS Social Security Clinic	SSC	1/69	385	54	331	
Misión de Amistad	+	10/67	1856	624	1232	
Villarrica Rural Center	CWC	12/69	594	188	404	2
Cnel. Oviedo Amistad Comm.Ctr.	CWC	2/70	695	225	308	162
Km. 81 - Mennonite Hospital	H	4/70	453	29	424	
Santa Librada Community Center Consultorio Médico Club de Leones	CWC	5/70	290	160	115	15
San Ramón Community Center	CWC	5/70	240	127	112	1
Villamorra - Club de Leones	CWC	7/70	187	91	96	
T.B.C. Hospital Max Boettner	H+	7/70	192	14	178	
Filadelfia Hospital & Consultorio	H	9/70	285	28	257	
Hospital Bautista	H	9/70	516	133	330	53
Policlínico Policía	H+	8/70	224	40	183	1
Hospital Militar Central	H	11/70	246	92	140	14
Luis S. Talavera Comm. Center	CWC	12/70	115	44	59	12
Fernando de la Mora Comm. Center	CWC	2/71	42	12	29	
Pedro J. Caballero Rural Comm.Ctr	CWC	2/71	181	28	115	38
Lambaré Community Center	CWC	5/71	23	11	10	2
			11,144	3430	7304	410

* Current acceptors of program from opening of clinic until December 1971.

CWC = Community Welfare Center

+ Responsibility assumed by MPH.

H = Hospital outpatient clinic

well be different and that the opportunity for choice between public and private institutions offering the same service is desirable. We found nothing in our investigation that would lead us to believe that either organization is significantly more effective in providing family planning services. Instead, they seem to be complementary, reaching different clients within the same general population.

There are certain areas of comparative advantage which should be explored, however. The Ministry clinics, operating in the context of maternity services, are in an excellent position for direct referral of women at a time when they may be particularly susceptible to family planning information. Their already established health centers and sanitary posts provide a ready made outreach network for rural areas, if the Ministry will rapidly expand its family protection services to those areas. CEPEP has a unique opportunity to develop its expertise in all aspects of information, motivation and education of the public. As a private organization, it is in a position to lead discussions and debates and provide information and motivation on population matters that would be difficult for a government institution to deal with.

3. Conclusions

The experience gained by the Ministry in opening and operating its first twelve family planning clinics has provided a sound basis for future expansion. The establishment of a central Family Protection Department should satisfy the administrative and supervisory requirements for such an expansion.

The clinical operations of the Ministry and CEPEP are very similar, both operating in the context of family protection programs fully integrated with maternal and child health care. Although the programs are similar, they do not appear to overlap in clientele. We believe that there are some advantages to having public and private agencies offering the same services. Consequently, we recommend that both agencies continue to operate family planning clinics, while exploiting their natural

advantages. That is, the Ministry should use its extensive outreach network to rapidly multiply its services, while CEPEP concentrates on an expanded information and motivation program.

C. NUTRITION⁵

1. The Nutrition Situation

The ICNND 1965 Nutrition Survey found that "average consumption of Calories and Nutrients was invariably satisfactory." However, from the wide range of values around the means, it was evident that pockets of undernutrition and malnutrition exist in some areas. Least abundant nutrients in the Paraguayan diet were riboflavin, vitamin A and calcium.

Hematologic, biochemical and parasitological tests confirmed the low vitamin A and riboflavin dietary levels and also identified low iodine levels. Serum vitamin A deficiency occurred in about 6% of the total sample but in some locations rose as high as 40% in the "under 15 years" age group. About 40% of the population surveyed excreted riboflavin at low to deficient levels, rising in some areas to 70-90% of the "under 15 years" age group. Acceptable levels of iodine were rarely found.

A high incidence of goiter caused by iodine deficiency was the only clearly attributable primary malnutrition disease encountered in physical examination. However, a high incidence of anemia, measured by biochemical and clinical examination, and delayed growth and maturation in the presence of adequate nutrient intake are evidence of secondary malnutrition attributable to parasitism and prenatal/childhood diseases which reduce the utility of ingested nutrients.

More recent, but limited, information suggests that nutrition levels have not materially changed in the past seven years, but rising meat prices may have worsened diets in some areas. The incidence of goiter is declining as a reflection of improved salt iodization practices.

5 Data on nutrition and feeding programs used in this section came from the ICNND study and the PL 480, Title II, Evaluation Report. The analysis and conclusions are our own responsibility.

2. The USAID Nutrition Program

In its general PL 480, Title II program, the USAID has given priority I-A to pregnant and lactating mothers and their preschool children. This emphasis is reiterated in the Population and Nutrition PROP which projects a steady program increase to 540,000 feeding recipients served through MCH clinics by FY 78. The proposed dietary supplement would consist of 14.4 kg/year of non-fat dry milk and 12.0 kg/year of rolled oats.

3. Analysis

The obviously desirable nutritional ends of the proposed program can be examined from several different points of view:

- . Capacity to reach target clients
- . Suitability of proposed feeding program
- . Relationship of nutrition supplementation to population

a. Capacity to reach target population

At the present time, 55 Centros de Salud (out of 87) and 24 Puestos Sanitarios (out of 127) are participating in maternal and preschool child feeding programs. These are reaching 6803 mothers and 17,270 children. Other programs reach 4697 additional recipients. The total of 28,970 persons is well below the planned FY 72 total of 75,000 of the PROP or even of the 40,000 from the Annual Estimate of Requirements, FY 72.

Approximately 43,000 women in total register at the Centros de Salud and Puestos Sanitarios each year, along with some 80,000 children. The growth in the universe has been almost exclusively in the Centros de Salud, which serve the most populous areas. The MCH/Nutrition program, which is strongly focused on the Centros, reaches only 16% of mothers and 21% of the total registrants.

PARTICIPATING MOTHERS AND CHILDREN - FY 1972

	<u>Mothers</u>	<u>Children</u>	<u>Total</u>
Ministry of Public Health and S.W.			
Centros de Salud	5,320	13,571	18,891
Puestos Sanitarios	1,483	3,699	5,182
Other	1,342 <u>1/</u>	3,355 <u>1/</u>	4,697
	<u>8,145</u>	<u>20,625</u>	<u>28,770</u>

1/ Estimated.

Source: PL 480, Title II Activities in Paraguay.
RRNA Draft. May 1972, Tables IV-7 and p.IV.8.

MINISTRY OF PUBLIC HEALTH

ANNUAL REGISTRANTS AT MATERNAL, INFANT, AND PRESCHOOL CLINICS

	<u>Centros de Salud</u>			<u>Puestos Sanitarios</u>			<u>Total</u>		
	<u>CH</u>	<u>MO</u>	<u>T</u>	<u>CH</u>	<u>MC</u>	<u>T</u>	<u>CH</u>	<u>MO</u>	<u>T</u>
1967	42.1	29.1	71.2	23.4	10.8	34.2	65.5	39.9	105.4
1968	47.7	31.7	79.4	18.9	8.5	27.4	66.6	40.1	106.7
1969	48.2	32.1	80.3	21.1	7.5	28.6	69.3	39.7	109.0
1970	58.2	37.4	95.6	24.9	7.6	32.5	83.1	45.0	128.1
1971	54.2	35.4	89.6	24.9	7.4	32.3	79.2	42.8	122.0

Source: MSP&BS/Depto. Bioestadístico. Servicios Prestados en Centros de Salud y Puestos Sanitarios. Año 1971.

Note: CH = Children; MO = Mothers; T= Total

Two conclusions are evident: (1) The clientele of all MSP facilities' MCH centers must grow at a greatly accelerated rate (around 20% per year) just to provide a universe equal to the target of 540,000 recipients by 1979; (2) the participation rate would have to move from the current 16-21% to near 100%.

Neither possibility appears experientially rational. Therefore, the target should be recast in more realistic terms. The potential size of the program is essentially circumscribed by the total number of MSP/MCH clients. In 1971 this included 120,000 mothers and children, with an annual growth rate of around 5%. Projecting this growth rate to 1979 would yield a parameter of 177,000. Not all of these individuals would receive food, but participating private clinics could help fill requirements. Even so, an optimistic estimate of potential MCH feeding clients by 1979 would be about 150,000, barring an unforeseen much more rapid expansion of MCH clientele.

b. Suitability of Proposed Feeding Program

The principal supplements to be provided are riboflavin, vitamin A and iron and not food per se, although deficient total food intake is probably a problem in some areas. The proposed USAID program is fully adequate only in riboflavin. We concur with the RRNA recommendation to increase the portion and substitute blended food (CSM) for oats.

Prenatal and childhood diseases and parasitism are as important to Paraguay's nutritional problem as food intake. The prevention and treatment of these diseases is the best reason for feeding within the MCH context. Women go to MCH clinics to get services and medicines for themselves and their children. Food in this situation is more like a medicine than it is like other consumption items. Its "prescription" by health personnel is probably the most effective means for assuring its proper use. The concurrent availability of medicines and medical advice to treat and prevent parasitism and other diseases provides additional assurance that these supplements and other foods will be effectively metabolized when ingested.

c. Relation of Nutrition Supplementation to Family Planning

The only clear causal relationship which might exist between MCH feeding programs and family planning is the presumed value of food as an attractant to the MCH clinics. We suspect that this presumed value

is overestimated in situation (like Paraguay's) where gross food supply is generally adequate. This might be one explanation for low participation in the food program by health facilities and potential feeding clients alike.

POTENTIAL FEEDING CLIENTELE COMPARED WITH FOOD RECIPIENTS

	<u>Total MPH Clientele</u> 1971 ^{1/}			<u>Participation</u>	<u>Potential Feeding Clientele</u>		
	<u>MO</u> <u>000</u>	<u>CH</u> <u>000</u>	<u>TO</u> <u>000</u>	<u>Factor</u> ^{2/} <u>%</u>	<u>MO</u> <u>000</u>	<u>CH</u> <u>000</u>	<u>TO</u> <u>000</u>
C. de Salud	35.4	54.3	89.7	63	22.3	34.2	56.5
P. Sanitarios	7.4	24.9	32.3	19	<u>1.4</u>	<u>4.7</u>	<u>6.1</u>
Total Potential Feeding Clientele (000)					23.7	38.9	62.6
Recipients FY 72 (000)					6.8	17.2	24.1

^{1/} Ministry of Public Health Publication No. 13.

^{2/} % of participating public health facilities FY 72. RRNA Evaluation Report.

Note: This table is developed from an assumption that the overall client load is equally distributed among similar health facilities. "Total Potential Feeding Clientele" would be understated if, as we suspect, participating facilities have the most populous clientele.

Some further evidence may be adduced from the CEPEP experience. Initially no food was provided at these clinics. Food is now provided but only as a supplement to the undernourished. CEPEP officials in Asunción and the field have not observed that the food program has had an impact on number or characteristics of the clientele at their clinics nor on their acceptance of family planning practice. However, they feel that food is a very useful input to deal with the nutrition problems they encounter.

One other nutrition:population relationship is important. The PROP calls for 45 integrated MCH clinics providing family planning services. These would presumably be located within Centros de Salud with

their greater clientele, rather than in Puestos Sanitarios. However, the nutrition problem is generally more severe in rural areas served commonly by Puestos Sanitarios than in urban areas served by Centros de Salud.

4. Conclusions

We consider that the attractant value of food to family planning programs is unproven and is probably tenuous at best. Combining a major feeding program with a family planning program, just because both are conducted within the same institutional framework, tends to distort the essentially separate structure of both projects and to detract from the significance of each.

We recommend that these two programs be separated in redrafting the PROP. The ration for pregnant and lactating mothers and preschool children should be increased and modified as recommended in the RRNA Evaluation Report. The target figure for the number of pregnant and lactating mothers and preschool children to be reached through the MCH clinic framework by 1979 should be reduced to about 150,000.

D. PERSONNEL IDENTIFICATION AND TRAINING

1. Potential

There appears to be a good base of technical manpower in Paraguay to receive family planning training preparatory to entering program operations. Ministry of Health records show that approximately 50 physicians, 30 nurses, 40 auxiliary nurses and 12 social workers graduate from Paraguayan training institutions each year. There has been little difficulty in recruiting participants of all levels for training since the program began in 1968. An unknown but significant number of professional medical personnel migrate from Paraguay each year because of lack of employment opportunities in the country. At the present time there is no shortage of manpower qualified to receive family planning training, even at the expanded levels projected by the Mission in training document TOAID-A-21 (January 14, 1970) and by CEPEP, which plans to extend its operation into the rural areas.

2. In-Country Training

The only in-country training courses in family planning have been conducted by CEPEP. CEPEP has designed and implemented preparatory courses for the staff of their own clinics and for those operated by the Ministry of Public Health. Nine of these courses were designed and presented by CEPEP between April 1970 and September 1971. Each course was evaluated and changes incorporated in subsequent courses.

The overall objectives of the basic course, as explained by the Training Coordinator, are:

- . To strengthen the family planning technology of technical personnel, particularly the doctors and their operational staff.
- . To change their attitudes about the family planning program.
- . To train together in an effort to expand the team concept of the field program.
- . To provide a refresher in MCH work for professionals from the interior who may not be familiar with the latest technology in the field.
- . To initiate a training effort that includes theoretical work and practical experience in the same course.
- . To strengthen the course by bringing professional instructors from outside the country where existing resources were weak.

An average course lasts 18 days—10 days of formal lecture and group discussions and 6-8 days of field work in an active family planning clinic. The following table reflects the distribution of work hours throughout the course.

Each course is composed of 25 to 30 students evenly divided between doctors and auxiliary personnel.

CLASS SUBJECTS AND HOURS
NINTH POST GRADUATE COURSE

Subjects	Theory ^{1/}	Practice ^{2/}	Films	Seminars ^{3/}
Demography	10	-	1	1
Sociology	6	-	-	-
Medicine	18	27	4	-
Public Health	3	-	-	-
Communications	6	24	3	-
Sex Education	9	-	-	1
Miscellaneous	6	-	-	-
Library and Bibliography	1	27	-	-
Totals	59	78	8	2

1/ Classes of 45 minutes.

2/ Hours of practice.

3/ Each seminar lasts 1 hour 30 minutes.

The professional fields and geographical origin of the students from the last course were as follows:

NUMBER OF PROFESSIONALS TRAINED IN THE NINTH POSTGRADUATE
COURSE BY PROFESSION AND ORIGIN

Professions	Capital City	Rural Area	Total
Physician/Gynecology/Obstetrics	3	3	6
Physician/Pediatrics	5	2	7
Social Aids	3	2	5
Physician/Obstetrician	1	3	4
Nurses	1	2	3
Obstetrical Nurse	1	1	2
Health Educator	1	-	1
Communications Specialist	1	-	1
Totals	16	13	29

The cost of the course was given at G.9000 (\$71) per student, including transportation, lodging and practice materials.

A total of 190 individuals have attended these courses. Of this number 49 were employees of the Ministry of Health and the remainder were employees of CEPEP.

From discussions with students and professors of the course, reading the course outline and discussing it with CEPEP staff, it appears that CEPEP is achieving a major part of the training objectives listed earlier. However, a close examination of the course outline reflects, as one would expect, a greater emphasis on the medical aspects of the program than on anything else. The demographic area needs strengthening. CEPEP is aware of this and wants to improve it in the future. After talking to Clinic Staff, it appears they do not have a clear understanding of the relationship between reduced growth rates, the total number of children women have, and age-specific acceptor rates. That is, women, on average, are apt to have children with greater frequency within certain age categories, e.g., 20-24/25-29/30-34, than during the entire 14-45 fecund period. Thus, considerably more importance should be attached to an acceptor who joins the program at age 23 than one who joins at age 35. This is a difficult concept to get across in a program that is primarily concerned with MCH, where contraception is used for child spacing rather than as a means of fertility control. This problem has been recognized by many demographers, including David Krugle of the University of Maryland, who is writing a specific demographic module for training family planning professional workers. This will be available shortly to all AID Missions and should be passed on to CEPEP.

In addition to these formal training courses, CEPEP has been very active in sponsoring national and regional seminars on family planning activities. These were designed to expose national and regional officials and prominent citizens to the phenomena of present world and national growth rates and their implications for the future. The following table shows the dates, type and number of participants at these meetings:

Name	Date	Number Attending
National Seminar # 1	5-30-68 to 6-2-68	186
National Seminar # 2	8- 3-69 to 8-7-69	393
National Seminar # 3	8-30-70 to 9-3-70	293
Regional Seminar # 1 (Encarnación)	June 25-26-27, 1971	169
National Seminar for Union Leaders	November 26-27-28-29, 1970	54
Press Forum	April 23-24-25, 1971	<u>36</u>
Total		1131

CEPEP has also given a large number of informal lectures at community associations, schools, meetings and public service clubs which carried the same message to 29,000 other citizens in both urban and rural areas during 1970.

A complete list of the participants attending the seminars and a list of the locations of the community meetings is available through CEPEP. There has been no follow-up survey to determine the impact of this exposure on the participants' attitudes towards family planning.

3. Third Country and U.S. Training

With the exception of eight participants sponsored by IPPF/New York, it appears that AID has sponsored all foreign training which is clearly identifiable as family planning. There has undoubtedly been some population input into training programs sponsored by PAHO and UN agencies, but the extent of this input is difficult to ascertain.

Annex C lists those participants sponsored by AID. The following table summarizes this training by the categories listed in the PROP:

	Population - Family Planning Training Needs Projected in PROP	Proposed	Accomplished or in Progress
A	Academic and Specialized: Medical Doctors	4	1 (Health Ed.)
	Vital Statistics	1	1
	Nurses - Health Educators	1	1
	Demographers	3	2
B	Short Term Training and Conferences MD, Nurses, Social Workers outside Paraguay	103	103
C	MD, Nurses, Social Workers in country (CEPEP)	120	190
D	Observation and Conferences outside Paraguay for Offices of Government and Private Organizations in Positions to Influence Formation of National Family Planning Policy	14	1
TOTAL		246	299

The program has been successful in reaching its short-term training targets, both in-country and foreign (Categories B & C). The shortfall in academic training and orientation (Categories A & D) has been attributed to a shortage of candidates with English language capability. However, it may also reflect inadequate long range planning in the two areas: (1) selection and preparation of professional program planners and administrators for specialization in population dynamics, and (2) identification of influential senior public and private individuals who might benefit particularly from exposure to the population policy experience of other countries. A program which incorporates this concept has

recently been sponsored by the AID Mission in Turkey. Their experience might be useful to USAID/Paraguay in planning similar programs.

4. Future Training Plans

The Ministry of Public Health is planning its own program for training technical personnel to run the six clinics which it will open under its most recent agreement with AID. In the past, MPH has used CEPEP to train its personnel. The new MPH course (Annex D) uses as instructors some of the same personnel used by CEPEP, but there has been no other effort by MPH to draw on the CEPEP training experience.

CEPEP plans to continue its seminar and community education activities, directing these particularly towards the rural areas in a new program. They also plan to open clinics in new areas, and these, too, will require technically trained personnel.

PAHO is preparing to provide foreign training in comprehensive maternal and child health care to ten physicians. It has just signed a project agreement with the Ministry of Public Health and the National University to upgrade maternal and child health care which, among other things, calls for resident training of obstetricians, gynecologists and pediatricians, as well as seminars and short courses for all levels of MCH clinic personnel.

5. Suggested Approach for AID Training

It is evident that past training efforts have been adequate to satisfy immediate technical needs of the program on a short range basis. Further efforts must be made to meet long range specialized technical needs and to provide a greater common basis for understanding of the population problem by Government and professional leaders. The impact of three new events—the proposed CEPEP rural program, the MPH decision to initiate its own technical training program, and the PAHO-MPH agreement with its heavy training component—need to be sorted out before AID's future training role can be precisely determined. These events

will materially change the need for AID training inputs, but the nature of this change will depend upon the interaction of the respective programs. Until the impact of these events is clearer, we suggest that AID follow an approach consisting of the following elements:

- a. Maintain an active interest in the development of these other programs, including a willingness to help resolve problems of coordination, but encouraging local and multinational agencies to assume this responsibility.
- b. Limit the number of participants sent to general family planning training courses and seminars. Increased effort should be directed to encouraging multilateral agencies to assume responsibility for this type of training.
- c. AID should concentrate its grants for academic training on those specialized population-related areas which may not be adequately covered under PAHO, UN and other international programs.

E. PUBLIC OPINION

The decision to have or to not have a child is taken at the individual marriage level or not taken at all, which is another kind of deciding. This is a very private decision, but one which is influenced by personal knowledge of the consequences, by doctrinal beliefs, by peer group ideals and by government.

1. Policy

Government exerts its influence primarily by its intervention in the flow of information and assistance and by its application of laws which favor or disfavor procreation. Government leadership in this area is very much a matter of the way in which it perceives the attitudes of its citizens and their representatives as well as its view of its own priorities and concerns. Very few governments have enunciated a formal population policy or are willing to exert strong, positive leadership in

such a sensitive field. Most, like Paraguay, follow a "positive neutralism," a de facto policy of permitting debate, but not leading it; of permitting the operation of private family planning clinics; of providing responsible parenthood assistance in some of its own maternal and child health centers, but not advertising it; of avoiding the promulgation of laws which favor larger families, but not necessarily removing pronatalist benefits. This approach is to be expected wherever man:land ratios are low and vigorous opposition might coalesce around such a sensitive subject. At the same time, there appear to be few significant policy incentives for large families, e.g., particularly favorable tax exemptions, maternity and paternity laws, welfare provisions.

2. Information Programs

AID research and training programs have had a considerable influence on the availability of knowledge about the population situation and particularly on the differing costs of alternative rates of population increase. The conduct of these studies by Paraguayans in several respected institutions has established a corps of economists, statisticians, sociologists and physicians with personal experience in population research. Several of their publications have received wide diffusion. For example, the IDIA study on the socio-economic implications of population growth is being serially published in an Asunción newspaper. More than a hundred Paraguayans at all professional levels have been exposed to recent thinking about the population problem in third country and U.S. training courses and seminars.

On a more generalized local level, CEPEP national and regional seminars have reached some 1100 individuals; presentations at schools, service clubs and community associations reached 29,000 in 1970. USIS films on the world food problem have reached several hundred thousand viewers. CEPEP is now preparing an information program designed specifically to reach the rural population.

3. Attitudes

The absence of a knowledges, attitudes and practices (KAP) study precludes a precise analysis of the effect of attitudes on the prospects of a family planning program. Broadly speaking, three major classes of attitudinal effects can be distinguished:

a. Peer Group Attitudes

Two separate studies, one by IDIA and the other by ARA-ANDU, emphasize the Paraguayan ideal of large families, both in practice and desire:

No. of Children	<u>IDIA</u>		<u>ARA-ANDU</u>
	Urban Leaders	Rural Leaders	
	<u>Actual Family Size</u>		
	%	%	%
1	-	0.5	10.7
2-3	4.2	0.9	48.9
4-5-6	70.5	26.1	31.5
7+	18.7	69.2	9.0
	<u>Desired Family Size</u>		
1	0.2	-	1.3
2-3	32.7	23.2	21.8
4-5	50.2	46.4	55.6
6+	16.9	27.5	21.2

This societal ideal is a strong pressure to have many children. It is complemented by an easy attitude towards early marriage and towards illegitimacy. It would tend to lead to large families, even when the spacing of children was regulated by family planning. Both studies reveal considerable tolerance for family planning. Some 95 percent of the first and 60 percent of the second ARA-ANDU samples had planned their families and avoided having children at one time or another. Eighty percent of the urban leaders and 47 percent of the rural leaders in the IDIA study considered birth control to be a legitimate practice.

b. Doctrinal Attitudes

The moral aspects of individual attitudes towards birth control strongly influence the openness with which governments, or even private agencies, can approach public discussion or assume advocacy of birth control. The Catholic Church has been given much credit for the strength of these attitudes. It may well be, however, that the Church's position is as much reflective of the individual beliefs of its adherents as it is causal. Many people would have denied the practice of contraception, even had the thrust of the *Humanae Vitae* been reversed, just as many continue to practice contraception despite it. Some support for this is found in the ARA-ANDU study question 9, which shows rather widespread use of contraceptive devices among those who practice family planning.

Approximately 18 percent of the second ARA-ANDU sample did not plan their families for reasons best described as doctrinal; this question was not included in the first sample. These values must, of course, be respected. As deep-seated doctrinal values, they are not readily changed, nor is it necessary that they should be. Many Paraguayans now practice birth control, while comparatively few find it morally objectionable. Presumably, enough of the population would practice birth control to stabilize growth rates below current levels if they became convinced of the desirability of such a course of action. Rather, the problem here, as elsewhere, is one of avoiding such a confrontation and its reactionary consequences. No wise government should court the opposition of a sizeable minority of its people any more than it should impose the moral values of the majority on the minority.

Free and open discussion of population matters, including birth control, is essential to broad understanding of the consequences of unbridled population growth and to provide the basic information which individual families need to make their personal decisions. However, such discussion should be led by non-governmental forces precisely to avoid an unproductive confrontation over moral issues.

c. Interest Group Attitudes

Doctors and nurses, midwives and pharmacists are the major groups with a traditional professional/commercial interest in fertility patterns. Latin American doctors, generally, perceive population control in the context of maternal and child health care, and this approach has been formally adopted by PAHO as the preferred technique for administering family planning programs. In practice, this means that all official public service family planning programs will be conducted through maternal and child health clinics of the Ministries of Public Health, given the extraordinarily influential position of the medical profession in government. It also means that official public service family planning programs will thereby be limited by the capacity of the maternal and child health clinic system to reach the population. In 1971 the MCH clinics of the Ministry treated 42,800 women and 115,200 children.

We know virtually nothing about the attitudes of midwives and pharmacists towards family planning. Some limited information on general attitudes of pharmacists was acquired during the commercial contraceptive study, but there has been no examination of their role in the provision of family planning information. We know even less about the general attitudes of midwives, their ability and willingness to provide birth control information, and their capacity to provide either reassurance or treatment in the case of undesirable side effects of contraception. It is extremely important to enlist the cooperation of these groups if they are to help (or at least not hinder) the program. The extensive networks of midwives and pharmacists extend throughout the country and reach a much larger clientele than any system of clinics.

4. Conclusions

This is a very difficult area for residents to appraise, much less a team which has been in country for less than three weeks. The problem is aggravated by the lack of a good KAP study. The ARA-ANDU study and the IDIA leadership survey are helpful but are too limited in scope to provide any feeling of certainty. The following conclusions are therefore presented with all due humility:

a. A cautious attitude on the part of the AID Mission is still warranted. In particular, this means continuing a program designed to increase factual knowledge through research and its appropriate diffusion. It also means conducting AID-sponsored population programs in ways which will avoid unproductive confrontation, both between Church and State and between public and private family planning programs.

b. Considerable significance should be attached to the propensity to want large families. Family planning programs directed at child spacing will have only limited impact on population growth rates so long as the large family is the desired model. There is some indication that the economic benefits of smaller family size are being recognized and that the ideal size is diminishing. However, no one knows that the ideal is in fact diminishing, nor the factors which might influence such a reduction. A well-designed KAP study may help determine these factors.

c. Do not expect an official government organization to initiate a major public debate on a population policy. Increasing public discussion of the subject should take place, but it is preferable that it be led by private organizations or multilateral agencies.

d. High priority should be given to studies of the attitudes towards family planning of midwives and pharmacists and to the role which they might play in providing accurate assistance on responsible parenthood to their clients.

IV. ANALYSIS OF PHASE II

A. THE LOGICAL FRAMEWORK

The following two-phased logical framework was developed from the PROP:

<u>PHASE I</u>		<u>PHASE II</u>
Recommendation for program start-up	<u>GOAL</u>	Birth rate reduced from 3.6% to 2.5% in 1980
Evaluation, refinement and replanning of program	<u>PURPOSE</u>	Identification of 140,000 acceptors averting 35,000 births per year by 1980
Data (from research and clinics) Experience (from clinics) Personnel (identified and trained)	<u>OUTPUT</u>	Provisions of information and/or services on family planning to 180,000 women of childbearing age; provision of nutrients and nutrition education to 540,000 pregnant and lactating mothers and preschool children
Research Activities Training Activities Trail Clinic Operations Publicity (Food, commodities, technical assistance & budget support)	<u>INPUT</u>	Establishment of 45 fully-integrated MCH clinics providing family planning and nutrition services in MPH facilities, effectively directed by a central MCH department. (Food, commodities, technical assistance and budget support)

B. CONSIDERATION OF ALTERNATIVE APPROACHES

1. The Maternal and Child Health Clinic

The concept on which Phase II is based deals with family planning in the total context of the family, particularly as it affects the health of mother and child. In this context, the unfortunate connotation of "population control" is avoided, as family planning is related to the needs of the individual family. Significant adverse publicity and overt opposition is avoided, and the program has positive health benefits to individuals beyond those provided by family planning. CEPEP and other IPPF affiliates in Latin America normally provide family planning information and services within the context of MCH clinics.

MCH clinics deal almost exclusively with the fecund female target group with which family planning programs are concerned. However, only a relatively small number of the total target group makes use of MCH clinics, so that a program which operates exclusively through MCH automatically circumscribes the universe from which it draws its clinics. For example, the total number of women attending maternal clinics in 87 Centros de Salud of the Ministry of Public Health in 1971 was 35,400.

The costs of operating MCH clinics are high, relative to the number of acceptors, but these costs are attributable to services other than family planning. MCH family planning programs tend towards planned spacing of children rather than total avoidance, so the precise births-averted coefficient is unknown.

Despite these problems, MCH clinics and the post partum program in maternity hospitals are about the only kind of direct operating family planning program in which the Paraguayan and U.S. Governments can cooperate at this time. Despite the high costs per acceptor which the U.S. is incurring, we recommend continued assistance to the MCH program as the best means to assure that family planning will become an increasingly important factor in MCH clinics in the future.

2. Unassociated Family Planning Clinics

The kind of public family planning clinic which is not associated with a hospital or maternal and child health clinic, common to some African and Asian countries, is probably unacceptable to Paraguay at this time.

3. Personal Programs

The practice of contraception outside of MCH clinics, i.e., by individuals, with or without the advice of a physician, is far greater than commonly expected. A recently completed survey of the sales of contraceptives in Paraguay provided the following data:

ANNUAL CONTRACEPTIVE PURCHASES

<u>Method</u>	<u>Asunción</u>	<u>Nearby Towns</u>	<u>Interior</u>	<u>Total</u>
Pills (cycles)	189,620	17,976	69,888	277,484
Injectables (cyclic units)	3,869	126	674	4,669
Spermaticides (units)	256,896	18,114	74,052	349,062
Condoms (units)	518,040	32,796	113,136	663,972

Source: Contraceptive Study being carried out by Benjamin Torres Herrera in the Instituto para el Estudio de la Reproducción Humana. Unpublished data.

A rough idea of the number of acceptors using these techniques can be calculated as follows: Dividing the annual sales of monthly cycles of pills by 13 equals approximately 21,350 full-time users. The ARA-ANDU study indicated that some 67% of the people using these types of contraceptives used the pill. Thus the total number of full-time contraceptive users would be about 31,800. This is more than double the number of acceptors now recorded by 23 CEPEP and 13 MPH clinics. There is, of course, no way to determine the number of acceptors who annually enter or leave these individual programs or who use contraceptive techniques inadequately, so that a births-averted figure is even more speculative

than is the calculation of acceptors. Nevertheless, it is evident that this broad universe has greater potential for significantly reducing population growth rates than the more limited clientele of MCH clinics.

C. CONSIDERATION OF ALTERNATIVE LEVELS

The key figure in the reduction of population growth rates from the projected 3.6% to 2.5% by 1980 is the aversion of 35,000 births per year by then. The PROP estimates that 140,000 acceptors would be required to meet this target if all acceptors remained in the program. In fact, in a family planning program, an unknown number of fecund females will drop out of the program to give birth, and this number would probably be greater in a family spacing program. If we assume a continuous acceptor coefficient of 0.8, then the required number of acceptors would rise to 175,000.

The number of women patients registered in the maternal clinics of all 87 Centros de Salud in 1971 was only 35,400, and this number has grown by about 5% over the last five years. Perhaps an equal number of mothers accompany their children to child care clinics. This would yield a target universe of only 110,000 women by 1980 in all 87 MCH clinics. Obviously, 45 clinics are not going to find 175,000 acceptors unless attendance grows much more rapidly. Put another way, 45 clinics would have to average about 3900 acceptors to reach 175,000 acceptors. The only two family planning clinics (out of 36) which have so far exceeded 2000 are the Misión de Amistad (4600 acceptors, started in 1967) and the National Maternity Hospital (5000 acceptors, started in 1969).

This analysis does not suggest that the target of 175,000 acceptors will not be met by 1979, but that it probably won't be met through any reasonable combination of public and private MCH clinics. Instead, it will probably be reached through an expansion in the number of individuals following private programs. Current information about contraceptive users is indicative:

Private program users (sales data)	31,800
MPH/MCH clinics (1/1/72)	3,800
CEPEP clinics (1/1/72)	<u>11,100</u>
Total	46,700

The conclusion seems rather obvious. A program aimed at increasing the number of decisions to limit family size among families who don't use formal MCH facilities will probably be needed to achieve the target. An information program which reaches large numbers of potential private acceptors would also increase the demand for such services from MCH clinics.

The question then becomes one of determining who should conduct such a program and what support it warrants. We do not believe that the government should be expected to assume such responsibility, nor do we believe that either bilateral or multilateral agencies which operate through the government should do so directly. This is the kind of thing which private agencies do best. CEPEP has been conducting such programs and has built up a good deal of experience in the area. CEPEP is now preparing a broad level campaign designed to reach rural families. Support for this program and similar approaches deserves careful consideration.

D. RESTATEMENT OF PRINCIPAL VALUES OF PROP

With an improved information and motivation program directed at the private (non-MCH) target population, we might redefine the "purpose" level as:

35,000 births averted annually by	
175,000 acceptors, distributed among	
45 MPH/MCH clinics	45,000
30 CEPEP MCH clinics	30,000
Private programs	<u>100,000</u>
	175,000

In Section III.B, we examined the part of the program which deals with nutrition and its relationship to population. We concluded that the relationship between population and nutrition is so tenuous that these should be treated as separate projects.

Annex A

PERSONS AND INSTITUTIONS CONTACTED

Ministerio de Salud Pública y Bienestar Familiar

Wilfrido Rivelle, Director, Department of Biostatistics
Estela S. de Benítez, Statistician
Efrén Villalba, Director, Centro de Salud, Barrio Stroessner
Renée Murdoch, Director, Clínica de Protección Familiar, Centro
de Salud, Barrio Stroessner

Ministerio de Hacienda

Jose Díaz de Bedoya, Director General, General Directorate of
Statistics and Census
F. David Vera, Chief, Department of Census

Secretaria Técnica de Planificación

Francisco Guppy, Director, National Office of Social Progress
Gerardo Fogel

United Nations

Jose Luis Bustamante, United Nations Representative
Enrique Vela, United Nations Office
Luisa Quesada, Regional Population Program Officer
Hernán B. Julio, Advisor, World Food Program

Pan American Health Organization

Julián Rodríguez, Country Representative
Juana Palma, Statistician
Julie Ellis, Nutrition Advisor

Centro Paraguayo de Estudios de Población (CEPEP)

Dario Castagnino, Director
José T. Negrete, Coordinator of Training
Nelson Rocas, Training Specialist

Instituto para el Estudio de la Reproducción Humana (IERH)

Julio Manuel Morales, Director
César Sisa

Instituto de Desarrollo Integral y Armónico (IDIA)

Luis T. Martino

Instituto "ARA-ANDU"

Angel N. Acha Duarte

Centro Paraguayo de Estudios de Desarrollo Económico y Social (CEPADES)

Virgilio Paredes
Victor R. Zarate

Centro Paraguayo de Estudios Sociológicos (CEPES)

Domingo M. Rivarola, Director

Catholic Relief Services (CRS)

Jack Fazio, Program Director
James Joseph Moran, Assistant to Program Director

Agency for International Development (USAID)

John R. Oleson, Director
Ronald A. Witherell, Program Officer
Marilyn A. Zak, Assistant Program Officer
Anthony J. Kranaskas, Food for Peace Officer
Sidney B. Clark, Population Officer
Odón Frutos
Benjamin Torres Herrera
Jans J. Muller, Census Advisor
Sanford W. White, Chief, Rural Development Division
Vinton C. Plath, Chief, USDA/PASA
Frank A. Mann, Chief, Education Division
R. G. Bateman, IRS/PASA Tax Advisor

Annex B

ACRONYMS AND ABBREVIATIONS

ARA-ANDU	Instituto ARA-ANDU
CELADE	Centro Latinoamericano de Demografía
CEPADES	Centro Paraguayo de Estudios de Desarrollo Económico y Social
CEPEP	Centro Paraguayo de Estudios de Población
CEPES	Centro Paraguayo de Estudios Sociológicos
CRS	Catholic Relief Services
FM	Facultad de Medicina
IERH	Instituto para Estudio de la Reproducción Humana
IDIA	Instituto para el Desarrollo Integral y Armónico
IUD	Intrauterine device
MCH	Maternal and Child Health Center
MFIN	Ministry of Finance
MPH	Ministry of Public Health
MSP y BF	Ministerio de Salud Pública y Bienstar Familiar
PAHO	Pan-American Health Organization
STP	Secretaria Técnica de Planificación
UN	United Nations
USAID	U.S. Agency for International Development Mission to Paraguay

Annex C

U.S. AND THIRD COUNTRY TRAINING IN
FAMILY PLANNING AND RELATED POPULATION FIELDS

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position at Time of Departure</u>
ACEJO, Florencia Ibars de	90097 - Family Planning Course (580)	5/ 3/69 5/25/69	Mexico	Instructor, Obstetrics Nursing, School of Nursing & Obstetrics, Asunción
ACHEVEDO, Cáceres, Hilda	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Prof., Med.-Surgical Nursing, School of Nursing, Asunción
ACUÑA, Ranoni, Sulma Dejesús	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
ADORNO Sosa, Leonidas Cayetana	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción
AGUAYO, Ayala Amada	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción
ALCARAZ, Matilde Villamayor de	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Prof., Nursing, School of Nursing, Asunción
ALVARENGA, De las Nieves Vargas de	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción
ALVARENGA, Martinez Angela Zunilda	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
ANDREIEFF, Polzi- koff Luba	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Nursing, Asunción
ARANDA, Andrea Mercedes	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
ARANDA, Armoa Felicita	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción
ARRIOLA, Irala Mercedes	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position</u>	<u>Time of Departure</u>
ARRUA, Marina S.	MPH Degree in Public Health Education with emphasis in FP.			Dep. Director, Health Education Dept., Ministry of Public Health	
BALBUENA, Beatriz	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción	
BARRIOS, Bogarín, Julia Antonia	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción	
BARRIOS, Samaniego Nélida Nicasia	90085 - Third Family Planning Workshop (580)	4/12/69 5/ 2/69	Colombia	Vice-Director, School of Social Service, Asunción	
BENITEZ, Dolores Yilada Bogarín de	90017 - Summer Workshop on Family Planning (580)	6/12/69 8/27/69	U.S.	Instructor, Obst., School of Obstetrics, Asunción	
BENITEZ, Gómez, Vidal Ramón	00158 - Family Planning Course (580)	5/ 2/70 6/ 3/70	Chile	Instr., Gynecology Semiology, Faculty Medicine, Asunción	
BIAIRES, Rodolfo Dr.	Seminar in Unification of Concepts in Sex Education	4/26/71 5/ 6/71	Ecuador	Dir., Public Health Educ. Div., Ministry of Public Health	
BOGADO, Roberto Dr.	VI Latin American Course on Family Planning & Population	9/14/70 9/26/70		Chief, Urology Dept. of Hospital de Clínicas	
BOGALO, Sabelli, Roberto Bibiano	10050 - Family Planning Course (580)	9/11/70 10/ 3/70	Colombia	Chief, Urology Dept., Hospital de Clínicas, Asunción	
BOGARIN, Gómez, Emiliana	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción	
CABRERA, Marina Ruiz Díaz de	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción	
CANETE, Soto	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Instr., Social Work, School of Social Service, Asunción	
CARDENAS, Gallardo Luz Bella Angélica	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción	
CARDENAS, González, María Josefina	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción	
CARDENAS, Marti Carlos Alberto	00188 - Family Planning Course (580)	7/ 5/70 7/27/70	Chile	Resident Physician, Natl. Maternity, Hosp. de Clínicas, Asunción	

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position</u>	<u>Time of Departure</u>
CARDOZO, Sanabria, Noelia Georgia	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción	
COLMAN, Quiñónez, Alba	90085 - Third Family Planning Workshop (580)	4/12/69 5/ 2/69	Colombia	Instr., Public Health, School of Nursing, Asunción	
CONTESSI, Villalba, Ceferina	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción	
COVIS, Centurión, Leonida	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción	
DE VOOGHT, Torres, Elva Eulalia	90117 - Summer Workshop on Family Planning (580)	6/12/69 8/27/69	US	Social Worker, Hosp, de Clinicas, Asunción	
DEGIOVANNI, Giménez María Luisa	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Instr., Nursing, School of Nursing, Asunción	
DIAZ DE VIVAR, Justo Asunción	00188 - Family Planning Course (580)	7/ 5/70 7/30/70	Chile	Physician, Mcal. López 1040, Pedro Juan Caballero	
DUARTE Vera, Emilia Reinalda	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Instr., School of Social Service, Asunción	
ESCOBAR González, Emilia Esperanza	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción	
ESPINOLA, Delicia	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción	
ESPINOSA, Leopoldina González de	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Dir., School of Obstetrics, Asunción	
FARINA Torres, Guillermo	00158 - Family Planning Course (580)	5/ 2/70 6/ 3/70	Chile	Pediatrician, CEPEP Clinic, Villarrica	
FLORENTIN, Rosa Carmen Santamans de	90097 - Family Planning Course (580)	5/ 3/69 5/25/69	Mexico	Instr., Psychiatric Nursing, School of Nursing, Asunción	
FRANCO, Cástulo César	00158 - Family Planning Course (580)	5/ 2/70 6/ 3/70	Chile	Physician, Private Clinic, Fernando de la Mora	

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position at Time of Departure</u>
GARCETE Rodas, Braulia Elena	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
GOMEZ Ramos, Higinia	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
GUERRENO, Aida O.	Advanced lab experience in diagnosis & interpretation of Pap test	Mar-May 1971	Argentina	Citotechnician, Central Hosp. of Welfare Institute
GUERRERO Barros, Olga Victoria	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
HEINROTH Román, Nélida Elsa	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Nursing, Asunción
ISEA Espínola, Bertilda Asunción	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción
JAVALOYES, Rosa M.	Master degree in Public Health Education with emphasis in FP	2/72- 2/73	Puerto Rico	Public Health Educator, Ministry of Public Health
KUNZLE, María Julia Guillermina Prantl de	00158 - Family Planning Course (580)	5/ 2/70 6/ 3/70	Chile	Social Worker, Hosp. de Clínicas, Asunción
LAGRAVE Olmedo, María Florentina	00188 - Family Planning Course (580)	7/ 5/70 8/ 3/70	Chile	Social Worker, Cristo Rey Parish, Asunción
LAINO, Dr. Domingo	Demography	3/71 - 6/71	Brazil	Dir., Economic & Demography Dept, CEPEP
LEON Valinotti, Etelvina Francisca	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Social Service, Asunción
LOMBARDO Rojas, Blanca Silma	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Prof., Intro. to Social Work, School of Social Service, Asunción
LOPEZ Guillén, Nida Mirtha	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
LOPEZ Pereira, Emilia Angela	90013, Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position at Time of Departure</u>
LUJAN Benítez, Rosalia Teresita	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción
MARIN Quintana, Cristina	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción
MARIN Quintana, Eusebia del Carmen	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
MARTINEZ Nuzzarello Osvaldo	10050 - Family Planning Course (580)	9/ 4/70 9/27/70	Colombia	Coordinator, Clinic & Medical Activities, CEPEP, Asunción
MEDINA, Otilia Gauto de	90117 - Summer Workshop on Family Planning (580)	6/12/69 8/27/69	US	Instr., Social Work for Groups, School of Social Service, Asunción
MELLID Rivelli, Hilda	00090 - Family Planning Seminar (580)	1/2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
MEZA Ayala, Beatriz	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Social Service, Asunción
MONTANER, Marta Edith	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
MORASSI, Angel Yordano	90097 - Family Planning Course (580)	5/ 3/69 5/25/69	Mexico	Prof., Obstetrics, School of Nursing, Asunción
MORENO, Justa M.	Seminar in Unification of Concepts in Sex Education	4/26/71 5/ 6/71	Ecuador	Instr., Regional Educ. Ctr, Ministry of Education and Worship
MORINIGO, Ana María	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Dir., School of Social Service, Asunción
MORINIGO Galeano, Selva Pelagia	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
ORTIZ Olazar, Norma Aída	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
ORTIZ Villalba, Edelira Casal de	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position at Time of Departure</u>
OSORIO, Gemma	Seminar in Unification of Concepts in Sex Education	4/26/71 5/ 6/71	Ecuador	Public Health Educator, PHED, Ministry of Public Health
PACIELLO Ríos, Miguel Angel	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
PACIELLO Torres, Rosa Lina	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
PANE, Gioconda Lucía Senés de	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
PERALTA Paredes, Juan	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
PINEDA Patiño Antonia Teodolina	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción
PIRIS, Modesta Ayala de	90117 - Summer Workshop on Family Planning (580)	6/12/69 8/27/69	US	Instr., Obstetrics School of Obstetrics, Asunción
PRADO Noguera, Gladys Isabel	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción
QUINONEZ, Alberta Sarabia de	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción
RAMIREZ Collar, Carmen Beatriz	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service Asunción
REJALA Lovera, Eferildia Stella	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
REYES, Gladys Martha Troche de	90117 - Summer Workshop on Family Plan-	6/12/69 9/ 3/69	US	Instr., Admin. of Nursing, School of Nursing, Asunción
REYES Echauri, Pedro Víctor José	90117 - Summer Workshop on Family Planning (580)	6/12/69 9/ 3/69	US	Chief-of-Service in Pediatrics, Hospital de Clínicas, Asunción
RIOS, Gladis Teodosia	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position at Time of Departure</u>
RIOS, María Cristina Raquel	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
RIVALDI, Celsa Díaz Zárate de	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
RIVELLI, José Wilfrido	00183 - Health Planning (ILPES) (590)	7/24/70 11/22/70	Chile	Dir., Biostatistics Dept., MOPH, Asunción
ROLON Iglesias, Blanca Antonia	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
ROMAN, Jeorgelina Cañete de	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Social Worker, Social Security Inst., Asunción
ROTELA Caballero, Verónica	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Nursing, Asunción
RUIZ Rojas, Sofía Irene	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
SALINAS, Arquimides Lopez	Advance course in Demography	1/71 - 12/71	Chile	Chief, Demography Sec., Statistics & Census Bureau, Ministry of Finance
SANCHEZ, Alfredo	Seminar in Unification of Concepts in Sex Education	4/26/71 5/ 6/71	Ecuador	Instr., Regional Education Ctr, Ministry of Education & Worship
SERRATO, Dr. Santiago Gomez		3/71 - 6/71	Brazil	Staff Member, Economic & Demo. Dept., CEPEP
SILVA, José Claudelino	90117 - Summer Workshop on Family Planning (580)	6/12/69 8/27/69	US	Asst. Chief, Obstetrics Dept., Paraguayan Red Cross, Asunción
SOSA Ibarrola, Carmen	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
SZWAKO Lanice, Maria	00090 - Family Planning Seminar (580)	1/ 2/70 1/17/70	Chile	Student, School of Obstetrics, Asunción
TOPPI, Gladys Matto de	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Social Service, Asunción
TROCHE Galeano, María Cristina	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Nursing, Asunción

<u>Name</u>	<u>PIO/P No., Title & Training Field Code</u>	<u>Training Period</u>	<u>Place</u>	<u>Position at Time of Departure</u>
VAZQUEZ Estigarribia, Margarita Vercelia	00096 - Family Planning Seminar (580)	1/16/70 1/31/70	Chile	Student, School of Nursing, Asunción
VELAZQUEZ, Lina Amparo Yegros de	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción
VELILLA, Tito Efigenio	00187 - Pre-School Workshop (590)	7/ 1/70 8/ 9/70	US	Dir., Endemic Goiter Eradication Program, MOPH, Asunción
VENIALBO Alcaraz Victoria	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Head Nurse, 2d Ward, Hospital de Clínicas, Asunción
VERA, Jovita M.				Nursing & Public Health Teacher, Nursing School, National University of Asunción
VILLAGRA, Otilio R.	Computer course to prepare for CENTS workshop	3/71 - 4/71	Argentina	Chief, Data Processing Section, Office of Statistics & Census, Ministry of Finance
	CENTS tabulation systems for census	5/71 - 6/71	Costa Rica	"
ZARZA Riquelme, Máxima Estela	90013 - Family Planning Seminar (580)	8/29/69 9/12/69	Chile	Student, School of Social Service, Asunción

Annex D

TRAINING COURSE IN THE POPULATION AND NUTRITION PROGRAM
(Maternal-Child Health and Nutrition)

PARTICIPANTS: Doctors and paramedical personnel of the six new clinics

PROBABLE DATE: 19 June - 1 July 1972

LOCATION: Classroom for Medicine Law, Ministry of Public Health
and Social Welfare

PRACTICE: Health Center No. 5, Barrio Stroessner, Paraguayan
Red Cross

THEMES:

LECTURERS

- | | |
|--|---------------------------|
| 1. Demography: Basic Dynamics of Population, Theory of Population | Srta. Juana Palma |
| 2. Public Health and Maternal-Child Hygiene | Dra. Olimpia G. de Godoy |
| 3. Demographic Situation in Paraguay
Vital Statistics | Dr. Wilfrido Rivelli |
| 4. Anatomy and physiology of masculine
and feminine reproduction | Prof. Dr. Juan M. Morales |
| 5. Human sterility and infertility | Dr. Antonio Ruotti |
| 6. Abortion as welfare and health
problem | Prof. Dr. J. M. Morales |
| 7. Detection of genital cancer | Dr. Zenón González |
| 8. Nutrition in growth and development
Endogenous factors and origins | Dr. Hugo R. Miranda |
| 9. Physical and ethical aspects of
family planning | Dr. Agustín Carrizosa |
| 10. Nutrition in family economics and
food education | Dr. Hugo R. Miranda |

THEMES:**LECTURERS**

- | | |
|---|----------------------------------|
| 11. The family, purpose and functions
Rights of the family and the child | Dr. Diógenes Latorre |
| 12. Contraception - basic principles: | Dr. Hernán Mujica |
| a. Traditional methods | |
| b. IUD | Dr. Carlos Mersán |
| c. Pills and other methods | Dr. Carlos Cárdenas |
| 13. Methods of Social Communication | Asist.Social N. Peña Cuevas |
| 14. Functioning of a Family Protection
Clinic | Prácticas en Centros de
Salud |
| 15. Community Medicine | Dr. Vicente Battaglia |
| 16. Sex Education | Dr. R. Blaires |
| 17. Supplemental Feeding | |
| a. Catholic Relief Services | Srta. Celia Alfonso |
| b. Evaluation of its effects | Sra. Julia Ellis |
| 18. Programming, administration and
evaluation of a Family Protection
Table | |

ROUND TABLE

Coordinator: Prof. J. M. Morales

Participants: Dr. Rodolfo Blaires, Dr. Agustín
Carrizosa, Dra. Marina Arrua,
Asistente Soc. Nilda Peña C.

SEX EDUCATION**ROLE OF PROFESSIONAL AND PARAMEDICAL PERSONNEL IN FAMILY
PROTECTION**

Coordinator: Dra. Olimpia G. de Godoy

Participants: Lic. Marcelina P. de Gómez
Dietista Celia Alfonso
Asist. Social Nilda Peña C.
Educadora San. Rosa Javaloyes

COURSE DIRECTOR: Dra. Olimpia G. de Godoy

General Coordinator: Dr. Rodolfo Blaires

Coordination of Field Work: Asist. Social Nilda Peña C.
Lic. Marcelina P. de Gómez

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