ASIAN POPULATION STUDIES SERIES

No. 24

ROLE OF SURVEYS AND STUDIES FOR FAMILY PLANNING PROGRAMME MANAGEMENT AND DEVELOPMENT

Report of a Regional Seminar

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Bangkok, Thailand

UNITED NATIONS

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Held at Bangkok, Thailand
28 January to 9 February, 1974

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CONTENTS

PART ONE: REPORT OF THE SEMINAR

Chapter		Page
I.	Organization of the seminar	3
II.	Population policies and the magnitude of family planning programmes	5
III.	Family planning programme management	7
IV.	Family planning programme operations	9
V.	The contribution of social and cultural research to family planning improvement	11
VI.	The role of action research in family planning programme improvement	13
VII.	Survey research in family planning	14
VIII.	Mechanisms for the utilization of research findings	16
IX.	Summary and recommendations	19

Annex

I.	Recommended studies	21
II.	List of participants	22
III.	List of documents	24
IV.	Work programme	25

PART TWO: SELECTED PAPERS

Management issues in family planning programme operations: knowledge and action
by Hans C. Blaise .. 29

Action research for family planning programme management and improvement: scope and limitation
by K.A. Pisharoti .. 37

An experiment in administrative research by Gayl D. Ness .. 47

Family planning surveys and studies: current status and future needs
by Ismail Sirageldin .. 51

PART ONE

REPORT OF THE REGIONAL SEMINAR ON THE ROLE OF SURVEYS AND STUDIES FOR FAMILY PLANNING PROGRAMME MANAGEMENT AND DEVELOPMENT

CHAPTER I

ORGANIZATION OF THE SEMINAR

Introduction

The Regional Seminar on the Role of Surveys and Studies for Family Planning Programme Management and Development was convened at Bangkok from 28 January to 9 February 1974 in pursuance of the recommendations of the Second Asian Population Conference, held at Tokyo in November 1972. It was organized by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), with financial assistance from the United Nations Fund for Population Activities (UNFPA).

This Seminar represents the eighth meeting in a series of expert group meetings or regional seminars on various aspects of family planning programmes. The previous seven meetings, which were conducted from 1966 to 1972 covered the fields of family planning administration, communication, evaluation, training of personnel, cost-benefit and cost-effectiveness analysis of family planning programmes and the role of voluntary organizations in family planning programmes. These meetings and seminars have played a unique role in pulling together the latest thinking and research by experts in specific fields and applying them to development in the countries of the region.

Objectives

The main objectives of the Seminar, which was conducted in the form of a dialogue between family planning administrators and researchers drawn from the countries of the ESCAP region, were to discuss the extent to which interaction was currently taking place between research and administration and to identify ways and means through which research could be made more programme oriented. A large number of family planning and fertility surveys and studies had been conducted in the developing countries of the world, but only in very few instances had the results been fully utilized by family planning programme administrators to increase the efficiency and effectiveness of the programme. This might have been due partly to the predominantly academic orientation of these surveys and studies, partly to insufficient communication between family planning programme administrators and researchers regarding the relevant problems on which the studies should be focused, and partly to lack of awareness on the availability and utility of research findings for programme improvement.

The specific objectives of the Seminar were the following :

(a) To discuss the extent to which the findings from surveys and studies in the field of population and family planning have been useful in the past for planning, administration and efficient management of family planning programmes in countries of the ESCAP region, and to identify the reasons for the lack of full exploitation of survey findings;

(b) To discuss and determine the major administrative and management problems faced by the current family planning programmes and to identify those towards which survey research could be directed with a view to finding solutions;

(c) To discuss the methodological aspects of applying survey research techniques to priority issues;

(d) To recommend to the countries of the region the priority areas on which family planning research could be focused in the future with the objective of improving the efficiency and effectiveness of family planning programmes.

The emphasis of the Seminar was on the identification of priority issues currently faced by family planning administrators in the effective and efficient administration and management of family planning programmes and toward which research ought to be directed in the near future for finding satisfactory solutions. The identification of problem-oriented and researchable issues in the fields of population policy, the magnitude of programme, management and operational problems and socio-cultural factors relating to programme development were the main interests of the Seminar. The group was expected to evolve guidelines and recommendations to the countries of the region on problems requiring research for the management and development of family planning programmes and for greater synthesis between programme operation and research.

Organization

The Seminar was organized in the form of plenary and group discussions on selected areas related to family planning programme management and development. For each substantive agenda item, there was a plenary session in which the major issues were outlined by two or more experts with experience and expertise in the field, who also presented a guide for detailed discussions in two working groups wherein the priority researchable issues were identified; the report of the two working groups was presented at a plenary session and discussed. Approximately one day was devoted to each substantive item of agenda. In addition, there were also country statements on specific issues by experts participating from the

countries of the region and reports by specialized agencies. The detailed work programme of the Seminar is given in Annex IV.

Participation

The participants in the Seminar included 19 experts drawn from ten countries within the ESCAP region (India, Indonesia, Iran, Japan, Malaysia, Pakistan, the Philippines, the Republic of Korea, Singapore and Thailand) and three from outside. The experts from each included at least one senior family planning administrator and one researcher with the exception of the Republic of Korea and Indonesia, from each of which only one expert was able to participate in the Seminar. Two of the experts from within the region and one from outside were requested to prepare documents on topics significant to the Seminar. The experts participated in their individual capacity and not as the representatives of the Governments, organizations or institutions. In addition to the above, there were representatives from the World Health Organization, UNFPA, International Bank for Reconstruction and Development, Economic Commission for Africa and Population Council in the Seminar. A list of participants is given in Annex II of the report.

Opening address

The Seminar was inaugurated on 28 January 1974 by Mr. S. Masood Husain, Officer-in-Charge for the Executive Secretary, ESCAP.

In his opening address, the Executive Secretary observed that ESCAP had been increasingly involved during recent years in providing assistance to the countries of the region in various aspects of population and family planning programmes. That involvement had included the organizing of expert group meetings and seminars, the conduct of training courses at the national and subregional levels and the undertaking of studies and research projects on a regional or subregional basis in population-related programmes. Among such activities, expert group meetings and seminars had played a unique role in pulling together the latest thinking and research by experts in specific fields and applying them to development in the countries of the region. In the field of family planning, expert group meetings and seminars had covered the administrative, communication, training and evaluative aspects of programmes. The Executive Secretary said that the Seminar was a dialogue between survey researchers and programme administrators to explore the possibility of improving programme efficiency and effectiveness through changes in the orientation of family planning survey research.... It was expected that at the end of the Seminar participants would have evolved a set of recommendations and suitable guidelines for better interaction between survey research and programme management and development.

A vote of thanks to ESCAP for sponsoring the Seminar was proposed by experts from Singapore, India and Iran.

Election of officers

The Seminar elected the following officers by proposal and secondment from among the participants: Dr. A.M. Sardari as chairman; Dr. Wan Fook Kee as first vice-chairman; Dr. M.A. Sheikh as second vice-chairman and Mr. B.N. Mukherjee as rapporteur. Dr. M. Subbiah and Mrs. E.M. Razon were nominated to serve as rapporteurs for the two working groups. Mr. Hans C. Blaise served as the consultant.

Agenda

The following agenda was adopted by the Seminar :

i) Opening address
ii) Election of officers
iii) Adoption of the agenda
iv) Presentation of country reports on major surveys and studies undertaken in the field of family planning, significant findings therefrom, and the extent of utilization of the findings for programme management and development
v) Priority research issues relating to population policies and the magnitude of family planning programmes
vi) Research issues in family planning programme management
vii) Family planning programme operations research priorities
viii) The contribution of social and cultural research to family planning programme improvement
ix) Problems in the application of survey research methods in family planning programme development
x) The role of action research studies in family planning programme improvement
xi) Co-ordination mechanisms for utilization of research findings
xii) Recommendations on guidelines for future survey research in family planning

Documentation

Three background documents and twelve working papers were prepared and placed before the participants to assist in the discussions. A list of background and working papers is given in Annex III.

Course and adoption of report

The report of the Seminar was presented to the group on 8 and 9 February 1974 and adopted with some amendments. These amendments have been incorporated in the present text.

CHAPTER II

POPULATION POLICIES AND THE MAGNITUDE OF FAMILY PLANNING PROGRAMMES

Most of the countries in the ESCAP region have population policies in support of programmes designed to reduce population growth rates. On the basis of those policies, the majority of the countries have established specific goals in terms of reductions in population growth rates or crude birth rates. In the early stage of pursuing the population growth reduction, most countries have relied heavily if not exclusively on national family planning programmes with the intention of motivating married couples to adopt the small family norm and on the provision of contraceptive methods in a socially and psychologically acceptable manner. The experiences gained from such programmes in most of the developing countries reveal that they have had varying impact on the fertility levels of the population and have generally (with a few exceptions) failed to achieve the demographic goals set by the planners. It is increasingly recognized that there is a need to study, design and implement other measures which will supplement and strengthen family planning programmes and help to realize the population goals.

The Seminar came to the conclusion that more attention should be given to the relationships and interaction between population issues and the various aspects of socio-economic policies and programmes of the country. The need for socio-political consideration in formulating population policies was also recognized. The actual and potential effect of socio-economic policies on the population situation was considered an important area of analysis, as was the impact of population trends of socio-economic and other developmental fields.

There have been important developments and progress in the collection and use of demographic and socio-economic survey data that are useful in the formulation of over-all and specific programme policies. The Seminar was of the opinion, however, that there is much room for improvement in developing the methods and processes for bringing the available data to bear in a systematic manner on the policies and goals that guide the action of family planning programmes.

Specific reference was made to the need for a greater involvement on the part of the administrators and managers of family planning programmes in the formulation of population policies and goals for population growth-rate reductions. Increased consultation between decision-makers and managers in national development planning and family planning programme administrators could result in improved national population policies and the setting of more realistic targets for changes in population growth rates.

Although a number of experts have expressed their views as to how population policies might be affected by the broader socio-economic and political issues, their answers differ. Such a variety of opinions occurs because much of the discussion of questions pertaining to the formulation of a broader population policy takes place in the absence of relevant theories and factual data. Given the emerging awareness of the interdependence between fertility control programmes and other areas of social and economic action, there is an urgent need to conduct systematic studies regarding such interdependencies and to collect and analyse the relevant range of data accordingly.

Although family planning programmes are ultimately designed as a measure for attaining broad social objectives such as improved levels of living, better health and nutrition, and other social and economic improvements, most family planning programmes have focused their attention on the generation of demand for family planning services and on the development of a delivery system for contraceptive supplies. This narrow focus, the participants felt, could be a reason for the isolation of family planning programmes from other socio-economic action areas.

Experience in the ESCAP region as well as elsewhere suggests that development objectives with regard to fertility reduction, as well as concerning other programmes and sectors, may be more readily attained if an integrated population policy approach is used. In such an approach systematic consideration would be given to the demographic effects of the various social and economic policies and programmes, such as education, health, nutrition, housing, taxation, urbanization, industrialization. Conversely, demographic data and projections would enter into the determination of the policies and programmes in those respective areas. Both a knowledge base and adequate institutional arrangements are needed to facilitate the use of such an integrated approach.

The integrated policy approach is of particular importance in the context of rapid population growth and internal migration in many countries of the ESCAP region. Apart from the difficulties of choosing between alternative policies, the formulation of the policies themselves presents considerable problems. In the absence of data and/or an adequate conceptual framework of the interrelation and interaction among population

and other variables, the policy-maker has to grope in the dark. Additional research is therefore needed to permit the formulation of adequate population policies.

Research on population policy issues should lead to the current or short-term aspects of implementing a desired and viable population policy as well as to the long-term implications of policies for society. For research to be realistic and to lead to feasible and acceptable policy alternatives, close co-operation among researchers, policy-makers, and programme administrators is essential.

In many countries, the family planning programme is based on the rationale of health. Yet, the health benefits of family planning and health impact on family planning should be demonstrated through research in each country. The mutual interaction between health and family planning was, therefore, singled out as an area of research deserving special attention. Along with the interdependence of health and family planning, the policy issue combining or separating health and family planning delivery services, the feasibility of the alternative strategies, and their implications on programme effectiveness were identified as requiring more research.

For deciding on the magnitude of a family planning programme, the question of specifying population growth targets and the calculation of the size of the target population at a point in time merit attention. Targets (expressed in terms of acceptors, couple years of projection, contraceptive method users, etc.) are now set in concrete, quantified and well-defined terms or in a fairly loose way. In most countries of the ESCAP region, there has been considerable discrepancy between goals set, what could be achieved realistically, and goals achieved. Targets are useful, not only for the evaluation of the national programme as a whole, but also for the evaluation of implementing units. There appears to be a need, however, for the development of better methods for determining targets and for analysing their programme action implications. There should also be a continuous periodical process of assessing and/or reviewing targets to detect inconsistencies in the assumptions underlying the target setting. Target setting, however, should not be an end in itself.

For administrative and programme management, the over-all target needs to be translated into targets for specific operational units. The Seminar recommended the following sets of variables to produce adequate targets: (a) demographic data such as age structure, mortality, sterility, migration; (b) administrative data on cost, composition, past/present performance, future assumptions, use-effectiveness of methods over time, man-hour input, frequency and distribution of clinics, required supplies, etc.; and (c) the social and political machinery as well as agencies related to family planning/population management.

CHAPTER III

FAMILY PLANNING PROGRAMME MANAGEMENT

The Seminar considered the prospects of countries in the ESCAP region with regard to various management issues in family planning programme operations. Discussions of problems and research issues were based on the following six key questions: (a) what are the problems of co-ordination within and among the organizations managing the family planning programme; (b) what are the criteria for allocating resources among various aspects of the family planning programme?; (c) how can the efficiency and effectiveness of a family planning programme in relation to its cost be assessed?; (d) what qualitative and quantitative indicators can be developed to measure the programme effectiveness in addition to the rate of acceptance, couple years of protection and births averted?; (e) what are the problems in the selection, recruitment, job assignment and orientation as well as motivation of the family planning staff?; and (f) what should be done to improve the reporting, recording, evaluation and information system in the family planning programme?

Co-ordination

The Seminar came to the conclusion that, although there is co-ordination to a certain extent in all national programmes of family planning, the effectiveness of co-ordination needs to be strengthened at the operational level. The question of co-ordination becomes a key issue especially in an integrated programme where family planning is linked to maternal and child health, community development, etc. In this connexion, small-scale experimental projects such as the one recently sponsored by UNICEF in Mehebub Nagar Block of Andhra Pradesh, India provided an illustration as to the problems that might arise in an integrated programme and how these could be tackled. The processes and mechanisms of co-ordination both among programme elements and among organizations related to family planning were identified as an area requiring further study.

Allocation of resources

The Seminar strongly felt the need for evolving and adopting a rational method of resource allocation and re-allocation. When field workers or clinics are engaged in family planning as well as general MCH or post-partum work, the manager has to decide how much of the cost should be allocated to each activity. He has also to decide whether multifunctional family planning workers are more efficient and effective than the unifunctional workers for his programme. There is, moreover, a need for methods and processes to decide on the appropriate allocation and distribution of funds among the respective programme elements, such as information and education, training, clinic services and evaluation. At present the rules for fund allocation are often arbitrary. It was recommended, therefore, that studies be undertaken to develop systematic and straightforward means of rational resource allocation. It was, however, recognized that programme effectiveness in terms of fertility behaviour cannot always be ascribed exclusively to family planning programmes. Fertility behaviour is also dependent upon various socio-economic factors. In view of this, complex and sophisticated studies relating inputs of family planning programmes to fertility decline may not be of much value, if they do not include the contribution of the exogenous variables to the changes in fertility behaviour.

Cost-efficiency and cost-effectiveness

Managers and administrators in the area of family planning should assess alternative approaches, prior to implementing their programme strategy. This could be done through pilot projects undertaken on a small scale. The usefulness of cost-efficiency and cost-effectiveness studies (such as studies concerning respective contraceptive methods and service-delivery systems) in identifying preferred courses of action for attaining certain programme objectives was also recognized. Such studies could be quite useful to the programme managers when evaluating various components of the programme as well as identifying the weak points with a view to improving programme strategy. However, the problem of measuring the output of the family planning programme is a real obstacle in carrying out good studies in cost-efficiency and cost-effectiveness.

Programme effectiveness

Several problems are encountered in measuring the effects of programme performance. In the first place, there are the technical problems of sampling and the difficulty of data collection without any subjective bias. Secondly, it is often questionable whether the increase in the acceptance rate in just due to the family planning programme alone. A third difficulty relates to the availability of a reliable performance (output) index. Although the monthly rates at which a target population accepts various family planning methods is the administrator's best measure of effectiveness, it can be misleading if no indication is given of the regularity of application of the method. Measures such as couple-years of protection (CYP) or births averted which are used in some countries are recommended. These measurements provide better information on the programme's impact on fertility. Even these

measures, as they are currently used in various countries, are not free from short-comings. One of the problems with indices such as the CYP is the need to assign realistic weights. The estimation of births averted is made difficult if the extent of the substitution of methods and the potential fertility of acceptors in the absence of contraception are not reliably assessed, or if programme drop-outs who continue to protect themselves independently are not taken into account. Further studies are therefore needed to evolve suitable indices for estimating the effectiveness of a family planning programme in terms of births averted.

Manpower

The Seminar felt that research findings in the area of selection of field staff for the family planning programme had not been much utilized. More studies in the area of job analysis of family planning workers and regarding the personality and other characteristics suitable for promoting the idea of family planning are needed. Also, more studies and experiments are indicated regarding the relationship between tasks to be performed and the appropriate background of education and experience. This might for instance, lead to a more appropriate distribution of functions and tasks between medical and paramedical personnel. The extent of the utilization and underutilization of existing personnel should be empirically determined.

Management information system

The Seminar noted that the present reporting and feedback systems in many family planning programmes are inadequate. Management information systems should be designed that provide relevant performance data to the executive personnel in the family planning organizations, in accordance with their specific needs for feedback for decision-making purposes. In that way the programme and project managers will be in a better position to take corrective action and to improve their programme strategy. In particular, it was felt that improvements in data collection and feedback for the guidance of field level operations were needed.

CHAPTER IV

FAMILY PLANNING PROGRAMME OPERATIONS

The discussion on this topic focused on the questions relating to various aspects of (a) programme design and (b) programme management. In this connexion, the relevance of a broad systems approach was emphasized. Programme administration should avoid the over-simplified view that only the establishment of traditional family planning clinics is required, but should be concerned with the development of all types of activities which can influence fertility patterns. These include population education in school and raising the age at marriage.

To meet the complexities of the family planning programme, the use of the systems approach to programme design appears to be quite useful and can benefit from modern management techniques and sciences. The family planning programme can be viewed as a subsystem of the total national development system, which aims at fertility moderation. The programme, in turn, is made up of subsystems which aim at (a) facilitating the availability of birth control methods, (b) increasing information about family planning, and (c) increasing social support for smaller family norms. For each of these, a series of actions is necessary, each dependent on previous steps. For example, the provision of clinic services depends on skilled manpower, which depends on training and supervision, which depends on personnel procedures, etc. Thus, the total programme model can be analysed into different modules, each dependent on the achievement of other parts of the system.

One topic of research need is to ascertain whether module A (for example, the training of field workers) leads to module B (for instance, improved skills on the part of the field worker) as assumed at the outset, and to improve the efficiency of such specific parts of the total system. A second research need is to simplify methods of measuring the achievement of a given module, or objective, of the programme at any given time so that the administrator may more readily evaluate whether the programme is on schedule or where weakness of achievement at some step is occurring. A third research need is to strengthen methods for viewing the system as a whole, to estimate the usefulness of alternative approaches, and the priorities for the allocation of resources.

The systems approach points to the necessity of strengthening the education of senior programme managers in the strategy and methods of programme development. Also, the specific responsibilities delegated to professionals engaged in different aspects of the programme require more attention. As compared with the "macro" level of management, the "micro" level of administration (responsibility at the provincial or district level) also involves special problems and techniques which deserve much more research and special training. Rigidly over-specialized, or over-centralized organizations have in many instances failed to develop co-ordinated mechanisms conducive to good performance in such complex programmes. In this connexion, new thinking and new knowledge emerging from operations research regarding the need for decentralized family planning programme systems appear to be crucial.

In general, a centrally directed and financed national family planning programme is valuable so long as it is flexible enough to meet the different cultural, social and economic needs of various regions within the country. The different administrative conditions and the crucial need for the direct involvement of local people in the design and implementation of programmes in their own locality should be considered. In many cases there is an urgent need for studies on decentralized programme operations at the implementation level. Problems of co-ordination of various programme inputs at the local level can also be answered to some extent through pilot studies.

Irrespective of the fact whether the family planning programme in a country is centralized or decentralized, the over-all success of the programme in reaching the desired goals of population control may fail to materialize unless the respective governmental staff make serious efforts to encourage public participation, and enjoy public support. A crucial step towards gaining public support for family planning is to foster public confidence in the intentions and activities of the family planning administrations, and to achieve this, the attitudes of public servants need to be studied. In this connexion, research studies should be undertaken to examine the compatibility of the value system of the top administrators engaged in the family planning programme and in other related government agencies with the philosophy and goals of family planning.

Recognizing that the introduction and satisfactory continuance of a family planning programme require effective management, countries of the ESCAP region are striving to increase their management capabilities in executing the family planning programme. The United Nations Advisory Mission to India reported in 1969 that the "critical point for management improvement is at the district level, where management of personnel, and the ability to draw upon relevant governmental and community resources, can so greatly influence programme results." The Seminar therefore felt the need for an inquiry into

the training requirements for each administration to run the family planning programmes more efficiently.

Regarding the organizational structure of an effective family planning system, the Seminar recommended the need for analyses concerning the levels of responsibility for policy making, administrative supervision, and operational functioning, as well as the channels of communication, both vertically among these three levels and horizontally with other sections of the family planning services at each level, all this in terms of the relationship of those elements to programme effectiveness. Within this structure, there are many decisions to be made and if proper data are collected and a rapid feedback given, then it should enable the decision makers to choose the course of action in an objective and appropriate manner.

Voluntary family planning organizations play an important role in many countries of the ESCAP region in fostering an interest in and understanding of family planning goals, the provision of contraceptive services, the organization of training programmes, and fund-raising for the education of the public. The role of such voluntary family planning organizations in the dissemination of family planning information as well as in involving the local people in the family planning programme needs to be studied. Surveys should also be undertaken to identify community organizations and the opinion leaders who are capable of promoting family planning activities at the local level. In this connexion, particular reference is made to the usefulness of research studies on the perception of the community towards family planning workers and vice-versa.

The Seminar noted that, in some countries of the ESCAP region, a target-oriented time-bound programme using the cafeteria approach has been adopted. Some participants in the Seminar, however, felt that a 'guided-choice' approach with regard to the adoption and distribution of contraceptions was a better alternative strategy than the cafeteria approach. The former approach may contribute to the improved continuation rate because the cafeteria approach tends to allow the switch-off too rapidly. The guided-choice approach also puts more emphasis on the service-delivery-oriented strategy than the cafeteria approach where the motivational problem is predominant. In any case, it is necessary to undertake pilot studies to examine the cafeteria approach vis-a-vis the guided approach in terms of distribution effectiveness, as well as the provision of incentives for both the client and the family planning worker. The above programme elements and strategies can have a significant impact on programme effectiveness and efficiency.

The Seminar felt the need for a more thorough examination of the question of incentives. Monetary incentive schemes may encounter some serious problems but it may still be necessary to consider the provision of different forms of non-financial incentives, such as an educational allowance, housing facilities or old-age pension. In one country, for example, married couples aged 15-29 who have had one child are encouraged to enrol in a programme of educational and contraceptive services. For those who succeed in spacing a minimum of three years, free delivery and hospital care for the second child plus nutritional supplements for the children will be offered.

CHAPTER V

THE CONTRIBUTION OF SOCIAL AND CULTURAL RESEARCH TO FAMILY PLANNING IMPROVEMENT

The Seminar noted that, although many studies in the various countries of the ESCAP region have identified in the past some of the primary socio-cultural barriers to family planning and the measures required to overcome these obstacles, the findings have been applied in a limited way. Among the more commonly observed obstacles to contraceptive practice are: (a) traditions that place a high value on the birth and survival of sons; (b) the desire for children (and particularly sons) to provide support and security in illness and old age; (c) the perception of low probability of survival so far as children are concerned, even though the actual infant mortality rate is declining; (d) social and cultural traditions that relate a womans' status to her fertility; (e) the passive role of women in decision making with regard to the adoption of contraception; (f) the role of extended family members in encouraging a large family size; (g) the value of children as a source of family income; (h) the low level of interspouse communication and (i) related social, educational and economic factors such as poverty, lack of education and a traditional outlook. The Seminar expressed a strong recognition of the need to study the socio-cultural variables within which a family planning programme operates.

Many of the previous knowledge, attitude and practice (KAP) studies in family planning have thrown light on the significance of socio-cultural variables, such as norms, traditions and values of the community, so far as family planning practices are concerned. However, further analyses are required of the available KAP data since only in a few cases have those data been fully analysed, or been followed up by more detailed studies on particular KAP survey findings, or been analysed and presented in such a manner that programme action could or would be taken.

The delay in achieving the desired goal is probably a result of the gap between people's knowledge of contraceptives and the actual level of contraceptive practice. There is also a gap between people's level of favourable attitude towards contraception and the extent to which they use these contraceptives. The gap between knowledge and practice of contraception can only be bridged by analysing the factors that account for the discrepancy and by designing programme actions in accordance with those findings. Thus, studies are needed to identify the factors underlying people's resistance to a change in their fertility behaviour, even after reasonably good family planning services have been provided.

In this connexion, the Seminar focused on the importance of identifying the "hard-core" group of eligible couples who do not practise family planning despite their knowledge of contraception and favourable attitude towards small family-size norm. The need to identify eligible couples who are quite ambivalent about accepting family planning was also stressed.

In addition to the cross-sectional investigations of factors underlying the gap between attitudes and manifested behaviour pertaining to family planning, the Seminar recommended the need for conducting longitudinal studies. Time-series KAP data, if collected along with fertility data, can be immensely useful for programme performance assessment and improvement.

One major rationale underlying the communication-cum-motivational strategy is that this would generate a 'demand' on the part of eligible couples for family planning services. This motivational strategy has not worked out effectively in various places mainly because of a lack of social support for small family size and inadequate delivery system. Research efforts could therefore be directed to identifying the community and social support factors the most conducive to generating optimal motivation for family limitation, and translating motivation into effective action.

Studies in communication in family planning have shown that mass media are most effective if supplemented by word-of-mouth diffusion. Part of the inefficacy can be explained in terms of the questionable properties of the message transmitted. Very frequently posters, hoardings etc. are not pretested to ascertain how the message can be easily conveyed. Thus, there is an urgent need for audience research to determine the extent to which the media and the message transmitted are effective.

The Seminar also felt it was necessary to conduct more empirical studies on the role and status of women and its relationship to family planning. For a long-term fertility control, the higher status of women, measured especially in terms of education, employment and economic independence, appears to be an important factor. The greater the level of discrimination against women in education, employment and other aspects of public life, the lower will be their incentive for employment outside the home, and the higher the birth rate. The correctness of such hypotheses and their actual effect on fertility should be ascertained by empirical studies.

Although some countries in the ESCAP region are developing curricula for family life education in secondary

schools, the role of students in the dissemination of family planning knowledge to their parents and non-student youths needs to be investigated.

More social science research should be directed toward answering the commonly reported fears and fantasies associated with various methods of contraception. When related to the findings from studies in reproductive biology and medicine concerning the physical side-effects of contraceptives, they can help to design effective methods for counteracting fears and rumours.

Recent studies have shown interesting relationships between fertility/family planning variables and psychological factors such as modernity attitudes, personal reliance (subjective efficacy), and zeal for innovation. The measurement problem associated with these psychological factors poses new challenges.

CHAPTER VI

THE ROLE OF ACTION RESEARCH IN FAMILY PLANNING PROGRAMME IMPROVEMENT

The application of action research is useful in effectively solving management problems of population/family planning programmes. By developing proper research methods and trying out strategies within a minimum period of time, action research can provide answers to problems related to a programme. These answers can be rapidly fed back to the administrator for programme improvement.

The Seminar suggested a model for action research based upon the framework for programme process connected with the Athoor Community Development Block in Gandhigram, Tamil Nadu, India, as a guide. In this action-research programme, a team of public health administrators, behavioural scientists, statisticians and professionals in health education and medicine drew up the programme plan and implemented it. The model envisages in the first phase the need for baseline studies for the identification of problems of action research as well as bench-marks. In the second phase, the selection of various alternative courses of action becomes an important consideration. Once the course of action is decided, programming is done at the third stage. In the fourth stage, the plan for action, based on the third stage, is implemented as faithfully as possible. The final stage deals with the evaluation of the effectiveness of the action project.

Action research has much to contribute to the development and management of family planning programmes. In addition to providing bench-marks in the baseline studies, the action project can test different types of assumptions and hypotheses in the area of family planning. It can also generate additional studies. Furthermore, the results of action research can identify the minimum package (input) of family planning services for a given community or State.

However, action research is faced with the following major problems: (a) confounding of the effects of different programme inputs administered from time to time in the course of research; (b) requiring more inputs for the training and co-ordination of the multidisciplinary team of workers engaged in action research; (c) replicating the results (reproducibility); and (d) complexity of research design. The very process of building research into action places a number of constraints on the action-research team, but many of these can be overcome by deliberate effort. Building teamwork, evolving structural relationships mutually satisfying to research and action personnel, and insulating the action project from environmental influence to the extent possible are areas that need further consideration.

The research agency carrying out action research should be closely associated with the family planning programme. A clear understanding needs to be reached about the respective roles of the researchers and the programme managers regarding decision making on programme action.

The Seminar did not forsee any problem in university or independent research organizations conducting action research in so far as funding and personnel recruitment are concerned. The action-research projects conducted by these research organizations usually face fewer constraints in terms of autonomy. However, it was suggested that these research organizations should conduct studies in collaboration with the research unit in the government programme.

In choosing autonomous research organizations for action research the following criteria of research capability might be helpful :

(a) The institution should have already produced and published reports in media such as reputable academic journals, disseminating the implication of findings for the improvement of family planning programmes;

(b) It must have shown sufficient scientific evidence to demonstrate the plausibility and reasonableness of the solution of family planning management problems; and

(c) The solutions emerging from previous research undertaken by the research organization should have made some impact on the existing family planning programme.

There is a need to strengthen current vital registration systems and to develop new systems. Thus, the Seminar considered the possibility of improving the vital statistics registration system through action research. It was suggested that while doing the baseline survey and subsequent data collection required in the action project for bench-marks and trend analysis, one could easily include a few more questions on births, deaths, age of effective marriage, induced abortion, number of children, current pregnancy etc. Such vital statistics, if collected properly, would supplement and check the consistency of vital statistics obtained by sample surveys of the government census or statistics department.

CHAPTER VII

SURVEY RESEARCH IN FAMILY PLANNING

Survey research technique has been extensively used in family planning studies not only to estimate the level of knowledge and extent of practice of contraceptive methods in a population but also to obtain reliable estimates of populations' attitudes toward small family size, contraception, and the family planning programme which can be useful in the management and development of the programme. The surveys also provide valuable and reliable estimates within a short period on various socio-economic and demographic characteristics of the population. Trend analysis of various family planning and fertility-related variables is made possible by comparison of the data collected through surveys at different points of time, especially through longitudinal surveys. From the survey data, inferences can also be made between the relationship of two or more variables. Surveys are also tools in the process of conducting action research or quasi-experimental studies in family planning as in the bench-mark or baseline survey.

The results of survey data can be quickly fed back to the administrators and managers in family planning, if the studies are conducted by permanent research organizations specialized in survey research. In such cases, the interviewers experienced in interviewing will not require any specialized training and it is possible that for many surveys the frame for sampling will be also readily available. Under such conditions, the marginal cost of undertaking a sequential or longitudinal survey on the same sample will be much less than when the surveys are undertaken by *ad hoc* researchers.

Few administrators and researchers in family planning have applied survey research for the improvement of family planning programmes. Because of the large number of KAP surveys conducted in the countries of the ESCAP region, there is a tendency to identify survey research with cross-sectional KAP surveys. There are many other types of studies undertaken wherein the problems have emanated from the management of family planning programmes. However, there is a lacuna in the application of survey research techniques for finding solutions to programme-oriented problems. For example, in the ESCAP region, there is a dearth of data on various programme inputs related to the trends of fertility change, contraceptive usage and desired family size. Longitudinal surveys can yield these data which are required for policy formulation and/or for building programme strategy. Integrated sequential surveys, which cumulate data over time, are immensely useful for these purposes.

The Seminar also recognized that survey technique is only one of the tools for gathering data. The study of the effect of certain types of manipulatable variables in family planning such as incentives and training programmes for field workers calls for experimental or action research. Similarly, studies which call for systematic observation cannot be done by survey technique. For the purpose of illustration, the following topics were cited as the kind of problem where the sample survey technique in general is not very effective :

(i) In-depth study of factors underlying resistance to the practice of contraception;

(ii) The determination of side effects and trends in the drop-out rate of a specific contraception method where the use of the method is found to be very low;

(iii) Interaction-process analysis of communication between family planning field workers and clients;

(iv) Time and motion study of the field workers' daily activities;

(v) In-depth study of value orientations of administrators in family planning;

(vi) The determination of cost-efficiency and cost-effectiveness of mobile clinics.

Although it is a powerful research instrument, the conventional survey interview method, especially with probability sampling, encounters some serious problems. Not infrequently the interview has to take place when other members of the respondent's family are around, and they also participate in the interview. The data obtained from the interview are not completely free from contamination. Even when the privacy of interviews is ensured, the survey interview method has an inherent problem by virtue of randomness in the selection of respondents, namely, that of treating respondents as anomic units without sufficient capacity to explore their social and psychological interactions. The Seminar therefore, suggested that an alternative group-oriented interview technique should be developed.

The use of small samples in survey research can be defended if the analysis of subgroups is not important and/or if it is not necessary to measure small differences between groups or small changes over time. However, measurement of sampling error becomes a crucial problem in the use of small samples. A good probability sampling design such as stratified random scheme will certainly minimize the magnitude of sampling error but

the cost and time restrictions do, in most of the circumstances, determine the size of the sample.

The Seminar recognized the limitation of non-probability sample in a survey of a population. If the purpose of the survey is to make statistical inferences about the population, the non-probability sampling technique is not useful. However, one may deviate objectively from the idea of probability sampling and use 'purposive' sampling for the following specific purposes :

(a) A quick exploratory study yielding a tentative hypothesis rather than leaving the researcher to work with his guess alone;

(b) Pretesting of a questionnaire or interview schedule.

The Seminar agreed that skills in sampling, interviewing, coding, tabulation and analysis should be developed for the purpose of strengthening family planning/population research. As such, the Governments of various countries of the ESCAP region can be urged to sponsor specialized workshops and/or summer schools in survey research techniques in co-ordination with other governmental organizations, not only for people engaged in family planning/ population research but also in allied fields.

The Seminar came to the conclusion that cumulative experience in survey research greatly enhances research capability and the ability to focus on pertinent problems related to population change. Therefore, it was suggested that a few continuing research institutions should exist within the framework of the organization responsible for the national family planning programme. The possibility of contracting out different types of survey research to external research institutions was also discussed.

The thrust of a research output involving trend analysis of fertility knowledge and contraception practice in the target population greatly depends upon the country itself and the time element involved. The seminar recommended that a country programme should harness the future activities of any research organization or university department engaged in population research in such a way that rewards for performance are given to encourage the researchers to undertake projects for the purposes of family planning programme improvement and for their own personal advancement.

In order to speed up the reporting of survey results to the administrators for a quick feedback, the Seminar recommended the utilization of a continuing research institution which has been doing survey research on a continuing basis. In addition, the use of a subsample of already available sample survey data was suggested. Analysis of a sample of service data was also suggested as another complementary method of expediting the reporting.

CHAPTER VIII

MECHANISMS FOR THE UTILIZATION OF RESEARCH FINDINGS

Introduction

The previous chapters have dealt with areas and topics where increased knowledge and data might lead to the strengthening and development of national family planning programmes. Consideration has also been given to selected research methodologies that are widely used for family planning programme research and/or that could be used more effectively for programme development. Yet, more relevant research by itself, or even the more careful selection and use of research approaches, will not guarantee the better or increased utilization of research findings. This final chapter explores the problems involved in research utilization and contains the suggestions made at the Seminar for approaches and mechanisms that would provide a better link between researchers, research findings, programme managers and programme operations.

Some of the factors that prevent the systematic translation of research findings into programme action are related to the inherent characteristics of large and complex organizations and to the characteristics of national family planning organizations in particular. The factors mentioned in this context were: (a) too much specialization within the family planning organizations, with rigid compartments or boundaries separating the specialized functions, (b) centralization of decision making, leading to the excessive filtering of information and preventing flexibility in the use of knowledge and data on the basis of diverse local conditions, and (c) hierarchy in the organizations, resulting in sharp boundaries in areas of responsibility, leading to the blockage of information and hampering participatory behaviour.

A further characteristic of bureaucratic organizations that almost inevitably threatens family planning organizations is that, with the passage of time, organizations tend to become self-perpetuating. Means become an end in themselves, modes of operation become sanctified by the passage of time, and organizations lose their flexibility and receptivity to change. As this occurs evaluation mechanisms tend to be subverted and changing programmes and approaches on the basis of new knowledge becomes more difficult.

In addition to the above organizational factors, several other elements can be mentioned as affecting the extent to which research findings influence family planning programme development. Among those are the extent to which researchers and programme managers communicate and collaborate in the formulation and execution of research projects, the understanding researchers have of family planning programme elements, and the format in which the research report and findings are presented.

There was a consensus among the Seminar participants that improvements can and should be made in relating research and research findings more effectively to programme performance. Some progress can be achieved by changing processes and procedures within the existing framework of family planning organizations. In other instances, the strengthening of or changes in the existing institutional patterns are suggested. It was felt that co-ordination between researchers and administrators in family planning could be strengthened and the utilization of research findings maximized if a solution could be found to problems connected with (a) generating research topics, (b) conducting research, (c) disseminating research findings, and (d) translating research findings into action.

Relating research and programme management

Team approach

It was mentioned above that a high degree of specialization and compartmentalization hampers the translation of research findings into programme action. This tendency also militates against co-ordinated programme action, particularly by blocking information exchange. The team approach is one of the recommended solutions to such a problem. It has been found to be an effective mechanism for overcoming information failures resulting from the characteristics of complex, bureaucratic organizations. A team may be established for each specific project and when the task is completed, the team is dissolved and the members become part of other teams designed for other projects. Family planning programme staff members with different backgrounds and from different sections of the organization could work jointly on specific problems and projects within the programme. As an example, the task of working on the extended use of mobile service units could be assigned to a special team including medical personnel, communications experts, logistics and evaluation staff members drawn from the respective divisions of the organization and forming an integrated team for this purpose. Sometimes, for policy-oriented problems, an interministerial team may have to be formed consisting of experts of different professional fields and government departments such as Ministry of Finance, Ministry of Agriculture, and Ministry of Planning. Both relating research to such a team project and using the team to implement previous research findings could be very effective.

A number of general recommendations can be made to bridge the communication gap between the researchers and the programme managers. Among the approaches suggested were: (a) increased collaboration between researchers and managers in the formulation and execution of the research; (b) developing more knowledge among researchers of the various family planning programme elements and considerations; (c) enhancing the ability and willingness of researchers to provide concise and brief reports in a language that is meaningful to the administrator; (d) equipping practitioners with the training and knowledge necessary to interpret research findings and translate them into action; (e) using the multidisciplinary approach to research, thus ensuring that several facets and implications of the problem are taken into consideration. What action is feasible and desirable within the area listed will depend on the nature of the conditions and on the communication problems in each country and organization.

An important consideration in relating research more effectively to action is the relationship of the organization or unit conducting the research to the family planning programme. Some family planning programmes have found it useful to develop an ongoing relationship with a research organization, resulting in a broader and deeper understanding of the family planning programme among researchers of that organization over time and facilitating follow-up research, once a given research project (e.g. a KAP survey) has been completed. Other programmes have relied more heavily on *ad hoc* studies by qualified university research centres and research organizations. The approach chosen will depend on both the purpose of the research and the local conditions. Given that a choice in strategy is often available, careful consideration should be given to the relative advantages of carrying out a research project or programme through one or more of the following entities: (a) a research unit within the family planning organization, (b) specialized research organizations, (c) university departments or research centres.

Clearing-house

Research findings often may not find their way into programme decision making because family planning organizations have no mechanism for the systematic collection, classification, processing and dissemination of information and research findings. Some national-level population and family planning programmes have established one or more clearing-houses to perform this function. The establishment or strengthening of such clearing-houses and information-exchange systems was recommended as a potentially valuable mechanism for facilitating communication between researchers and programme managers. The Seminar noted that the Clearing-House and Information Section of the Population Division of ESCAP had already taken steps toward assisting countries in the ESCAP region in the establishment and development of population and family planning clearing-houses.

In addition to the establishment of clearing-houses on the national level, consideration should be given to the development of a network among national clearing-houses on a regional and world-wide basis. This will ensure the international flow of information and research findings.

Policy analysis

Neither improved direct communication between researchers and managers nor improvements in information availability through the clearing-house function may be sufficient to ensure the translation of research into action. "Translating evaluation and research findings into programme strategies and action requires the analysis of priorities, alternative uses of resources, trade-offs, consequences for other aspects of the programme, possible resistance to the changes that the information suggests etc. The analysis of action implications raises an entire new set of questions that are not answered or answerable on the basis of the evaluation or research report."

For the systematic analysis of the implication of available research findings in terms of possible programme strategy and action, it was proposed that family planning organizations should introduce or strengthen the function of policy analysis. The responsibilities of the policy analyst(s) would be: (a) to collect and review systematically research and evaluation findings in order to identify possible programme implications; (b) to analyze action implications in terms of the total family planning system, its elements, and the environment in which the programme operates; (c) to present action implication findings and alternatives to the programme decision-makers for their consideration and action.

To a limited extent, the roles and functions described above are fulfilled in some family planning organizations by programme planning, research or development units, or by research advisory committees. The function of policy analysis may be sufficiently important and specialized, however, to warrant the development of specialized personnel and capability in this area in family planning organizations. The location of the policy analysis function within the organization and the number of specialists needed will depend on the nature and size of each family planning programme.

There appears to be a need for the formation of *ad hoc* and standing committees to advise the administrator on both the implications of research conducted and on

promising research areas for decision-making purposes. *Ad hoc* committees can be valuable in the annual budgeting process to ascertain that significant research and evaluation findings are reflected in programming and resource allocation decisions. In theory, these tasks are expected to be carried out by the research and evaluation units of the programme. In practice, however, the goal-oriented evaluation responsibilities are so numerous and demanding that the implication-oriented evaluation does not receive adequate attention.

CHAPTER IX

SUMMARY AND RECOMMENDATIONS

The Seminar participants commend ESCAP on its initiative in convening a group of programme administrators and researchers to discuss the critical issue of relating the conduct and findings of family planning connected research more effectively to the improvement and development of programme management. The deliberations have helped to bring forth both some of the research areas that are significant for continuing improvements in family planning programme decision making and to explore the ways and mechanisms through which the gap between researchers and programme managers can be bridged. From among the many important issues and recommendations contained in the foregoing report, a few elements have been selected as warranting special consideration and action in the near future. Those recommendations are highlighted in the following paragraphs.

It is recommended that all countries of the ESCAP region establish or strengthen a data bank comprising statistical data relevant to population and family planning. Such a data bank will make it possible to develop an awareness of the population issue among policy-makers and administrators and will make information available on a systematic basis for analysis and planning purposes. It is suggested that the data bank be centrally located to facilitate use by all relevant agencies within and outside government. It is further suggested that the classification schemes of the respective data banks be exchanged among the countries of the region to facilitate international communication and sharing of information.

It is recommended that a population and family planning clearing-house be established or further developed in each country of the region. The national clearing-house would serve to collect, classify, process and disseminate research reports and other relevant documentation concerning family planning and population programmes. ESCAP is commended on having developed guidelines for the establishment and organization of a national clearing-house and on having assisted several countries in the region in this area. Other countries are encouraged to avail themselves of the model and assistance offered by ESCAP. It is suggested that the data bank and the clearing-house perform complementary functions and that their activities be closely co-ordinated.

Specific recommended topics for research are to be found in Annex I.

Among the many areas of needed research mentioned in this annex, the following have been identified as deserving priority attention:

(a) Research leading to the identification of sensitive indicators to determine the impact on fertility of family planning programmes. This would entail the analysis of the fertility impact based on data regarding contraceptive use, method mix and continuation rates. The research could be done on a sample basis and lead to refinements in service statistics and their analysis, allowing for the more detailed and concise analysis of the impact of family planning programmes;

(b) Research on possible improvements in vital statistics registration on a sample basis as a means to determine fertility changes on a national or local level and the relationship of those changes to family planning programme performance;

(c) Research into organizational performance to determine the causes of differential performance of units within the family planning programme, establishing causal relationships between these differentials and organizational structure and inputs;

(d) More detailed analysis of available KAP and other surveys to ensure that currently available data and knowledge are utilized for programme development and to find ways of improving the quality, utility and analysis of survey research in the future;

(e) Research on the factors that determine the utilization and non-utilization of research findings. The analysis of past experience can serve as a basis for improving processes and mechanisms for the translation of research into action;

(f) Organizational and administrative studies on the component elements of the service delivery system and their interaction with the recipients of the services.

Given the objectives of the Seminar, the above research recommendations emphasize areas of direct relevance to programme management and decision making. The participants of the Seminar also stressed, however, that studies concerned with factors affecting long-term fertility change, such as measures and issues beyond family planning, need research attention.

The Seminar further recommends increased emphasis on experimental projects with regard to administrative elements and new programme strategies, with a built-in research component. As an example, the testing and research on variations in acceptor incentives and personnel incentives can be mentioned.

The communication gap between researchers and programme managers and ways of ensuring more effective translation of research findings into programme action requires further exploration. In addition to the research on research utilization recommended above, it is recommended that a small task force be formed to explore possible means and mechanisms for bridging the gap, with special emphasis on the elaboration of concepts of policy analysis as applied to family planning programmes.

Considering the effectiveness of the dialogue between administrators and researchers at the ESCAP Seminar, it is recommended that similar seminars be organized by family planning organizations and researchers in the field of population and family planning at a national level in the countries of the ESCAP region.

To facilitate and ensure follow-up regarding the suggestions and recommendations that have emerged from this Seminar, the Population Division of ESCAP is requested to assign a member of its staff to encourage and co-ordinate action in the areas covered in this report and to keep the participants, family planning and research organizations in the region informed of the progress made.

Annex I

RECOMMENDED STUDIES

In the course of the plenary and working group sessions, a considerable number of topical areas were suggested for further study. All these suggestions were recorded and, toward the end of the Seminar, the full list of suggested studies was distributed to the participants with the request that high, medium, or low priority ratings be assigned to the respective study and research topics.

On the basis of the priority ratings given by participants a limited number of studies that were rated most frequently as belonging in the high or medium priority categories is presented here. No attempt was made to identify the study area in the precise terms that would be necessary to design a research project. Rather, the listing reflects in more general terms the areas, within the context of this Seminar, that were considered significant for further study by an experienced group of family planning administrators and researchers.

Seventeen Seminar participants took part in the priority rating of the issues suggested for further inquiry. The following are the topics rated by more than one half of the respondents as having high priority :

(a) The socio-economic benefits of family planning;

(b) The effects of the practice of family planning on family health;

(c) The effects of a population's state of health, and of available health services, on population dynamics;

(d) Indicators of family planning programme performance and their interrelationships;

(e) Efficient and effective methods of record keeping for evaluation purposes;

(f) Relationships between the size of family planning programmes and the use and continuation rates of conventional contraceptive methods;

(g) Reasons for non-participation in family planning in hard-core and ambivalent groups of the population;

(h) Modes and criteria for the utilization of paramedical staff in service delivery;

(i) The physical and psychological accessibility of family planning services, and their effect on programme performance;

(j) Perception of the family planning service providers in the eyes of the client and vice versa;

(k) The factors affecting communication between family planning service providers and recipients.

The following additional studies, while not rated as belonging to the high priority category by more than 50 per cent of the respondents, were rated as either of high or medium priority by more than 75 per cent of the respondents:

(a) Social and economic programme policy implications of alternative population projections;

(b) Data requirements for cost-effectiveness measurement;

(c) The identification of community organizations capable of providing family planning services at the community level;

(d) The role of traditional midwives in the family planning service delivery system;

(e) The effect of different supervisory styles at the community level on staff and programme performance.

Annex II

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Mr. B.B.S. Bhatia	Project Expert, Population Division
Mrs. Judith M. Sangsingkeo	Research Assistant, Population Division
Mr. Pricha Bhumiratna	Administrative Assistant

Annex III

LIST OF DOCUMENTS

1. POP/SRS/3 Management issues in family planning programme operations: knowledge and action.
   Hans C. Blaise
2. POP/SRS/4 A note on the first national survey of family planning in Singapore, 1973.
   Wan Fook Kee and Saw Swee-Hock
3. POP/SRS/5 Surveys on population and the utilization for policy making in Japan.
   Yoichi Okazaki
4. POP/SRS/6 Major Peninsular Malaysian family planning surveys.
   Tan Boon-Ann and M. Subbiah
5. POP/SRS/7 Action research for family planning programme management and improvement: scope and limitation.
   K.A. Pisharoti
6. POP/SRS/8 Role of surveys/studies for population planning programme management and development.
   Maqbul Ahmad Shaikh
7. POP/SRS/9 The role of surveys and studies in Iranian family planning management.
   A.M. Sardari
8. POP/SRS/10 Consultations on the role of the Department of Social Sciences and UNESCO in population and family planning.
   UNESCO
9. POP/SRS/11 An experiment in administrative research.
   Gayl D. Ness
10. POP/SRS/12 Family planning surveys and studies: current status and future needs.
    Ismail Sirageldin
11. POP/SRS/13 Review of longditudinal data on the impact of family planning in 22 sample areas.
    Franz Rosa
12. POP/SRS/14 An outline of the WHO interregional programme for research on family planning care in the health service.
    William Barton
13. POP/SRS/15 Major surveys on fertility-family planning in Thailand.
    Visid Prachuabmoh
14. POP/SRS/16 KAP findings and their utilization: the Philippines population programme.
    Tita A. Serrano.
15. Thailand : Country Report.
    Chaichana Suvannavej
16. Research on the operational aspects of family planning in the health services.
    WHO

Annex IV

WORK PROGRAMME

28 January 1974 (Monday)

0830-0900 Registration of participants

0900-0930 Welcome and inaugural address

1. Mr.S.Masood Husain, Officer-in-Charge for the Executive Secretary
2. Mr. Carl M. Frisén, Chief, Population Division

0930-1000 Election of officers

1000-1030 Coffee break

1030-1115 Scope, objectives and plan of the Seminar: Dr. S. Bang, Mr. K. Srinivasan, and Mr. H. Ando

1115-1200 Presentation of background information and materials for the Seminar : Mr. H.C. Blaise.

1400-1700 Presentation of country statements and discussions: India, Indonesia, Iran, Japan and Malaysia.

29 January 1974 (Tuesday)

0900-1200 Presentation of country statement and discussions (continued) : Pakistan, Philippines, Singapore and Thailand
Statement by United Nations and specialized agencies

1330-1430 Presentation of background information and materials on Topic 1: Identification of priority research issues relating to population policies and the magnitude of family planning programmes (Mr. I. Sirageldin and Mr. S. Hashmi)

1445-1630 Group discussions on Topic 1

30 January 1974 (Wednesday)

0900-0945 Presentation of reports by groups, and plenary discussions on Topic 1

0945-1030 Presentation of background information and materials on Topic 2: Research issues in family planning programme management (Mr. H.C. Blaise and Mr. H.R. Morales)

1045-1200 Group discussions on Topic 2
&
1330-1530

1530-1630 Presentation of reports by groups, and plenary discussions on Topic 2

31 January 1974 (Thursday)

0900-0945 Presentation of background information and materials on Topic 3: Family planning programme operations research priorities (Dr. M.W. Freymann and Mr. J.E. Laing)

0945-1200 Group discussions on Topic 3
&
1330-1530

1530-1630 Presentation of reports by groups, and plenary discussions on Topic 3

1 February 1974 (Friday)

0900-1000 Presentation of background information and materials on Topic 4: The contributions of social and cultural research to family planning programme improvement (Mr. Visid Prachuabmoh, Mr. A. Merhyar and Mr. B. Mathsson)

1015-1200 Group discussions on Topic 4
&
1330-1530

1530-1630 Presentation of reports by groups and plenary discussions on Topic 4

4 February 1975 (Monday)

0900-1000 Presentation of background information and materials to Topic 6: The role of action research studies in family planning programme improvement (Mr. K.A. Pisharoti and Dr. F. Rosa)

1015-1200 Group discussions on Topic 6
&
1330-1530

1530-1630 Presentation of reports by groups, and plenary disscussions on Topic 6

5 February 1975 (Tuesday)

0900-1000 Presentation of background information and materials on Topic 5: Problems in the application of survey research methods in family planning programme development (Prof. Freedman)

1015-1200 Group discussions on Topic 5
&
1330-1530

1530-1630 Presentation of reports by groups and plenary discussions on Topic 5

6 February 1974 (Wednesday)

0900-1000 Presentation of background information and materials on Topic 7: Co-ordination mechanisms for the utilization of research findings:

(a) Co-ordination mechanisms between administrators and researchers (Mr. G.D. Ness)

(b) Mechanisms for utilization of research findings (Miss L. Olson and Mr. H.C. Blaise)

1015-1200 Group discussions on Topic 7 a, b

&

1330-1530

1530-1630 Presentation of reports by groups, and plenary discussions on Topic 7 a and b

PART TWO

SELECTED PAPERS

MANAGEMENT ISSUES IN FAMILY PLANNING PROGRAMME OPERATIONS: KNOWLEDGE AND ACTION*

For a number of years, leaders in the field of population and family planning have been stressing the need for more research. The call went out to bio-medical researchers, demographers, economists, sociologists, communication experts and anthropologists to provide more data and better knowledge to monitor and guide family planning programmes. Gradually the research promotion effort has gathered momentum. In the ESCAP region as elsewhere, the diversity, quantity, and quality of population programme related research has increased significantly. The information available on knowledge, attitudes and practices with regard to fertility behaviour, knowledge regarding contraceptive method effectiveness, the effect of different messages and channel of communication in motivation and information programmes, and in many other areas is substantial. One only needs to regularly follow international summaries and reports like those issued by the Population Council and by the International Planned Parenthood Federation to become impressed by the accumulated information and knowledge that can serve as a basis for programme development.

While the search for more and better knowledge continues, a new concern emerges. What is being done with the programme evaluation reports? Are the service statistics really being used significantly and systematically as a basis and input for programme decision making? What evidence is there that KAP surveys have been analysed systematically and translated into programme action? To what extent have research findings and contraceptive methods and cost-effectiveness been a major consideration in determining programme policy and strategy? The evidence seems to indicate that there is a wide gap between the available data and knowledge and the family planning programme practices that are being followed (1,2,3). In many cases, knowledge does not appear to be translated into action. The gap between knowledge and action is not peculiar to the field of population programmes or to any given part of the world. Particularly in dealing with social programme and problem areas, concern about the lack of utilization of social science knowledge has been expressed before (4). The fact that the use of social science knowledge for the solution of social problems is observed in other fields as well makes it all the more important to find ways to bridge the gap between knowledge and action in family planning programmes.

Viewing the translation of knowledge into action as one of the most critical management issues facing family planning operations, this paper is focused on the analysis of symptoms, and the causes of and ways of remedying this issue.

Evaluation and research

In the writings and discussions about the lack of utilization of evaluation and research findings by programme managers it is common for each party to point an accusing finger at the other. The most explicit complaints are usually those of the programme managers regarding the reports of researchers. The busy programme manager finds that, both on account of their number and their length, he cannot keep up with the research reports that cross his desk. The use of jargon, at times the lack of a concise summary and frequently the absence of recommendations and an analysis of programme implications tend to be viewed by managers as factors that reduce the usefulness of research reports. The manager wants short and concise statements regarding the problem investigated, the findings, and recommendations for action, a product that is seldom provided either by researchers or evaluators.

Researchers and evaluators, on the other hand, often feel that they and their analyses are not taken seriously enough by programme managers. Their complaint is that their studies and findings are too seldom taken into consideration when programme decisions are made, that they are not consulted, and that the organizations and their programmes are excessively change-resistant.

The fact of the matter is that, in most cases, the expectations of all three groups, the evaluators, researchers, and managers, regarding their respective roles in translating research and evaluation findings into action programmes are unrealistic. The thesis that will be presented here is that the role and capabilities of the three groups of people are such that no significant improvements in the translation of knowledge into action can be expected in family planning programmes unless some specific changes are made in organizational structure, staffing and processes.

It is now necessary to clarify what the functions and limits of evaluation and research are in the context of family planning programmes. Basically, evaluation seeks to assess whether objectives have been reached according to plans and standards. Through the process of evaluation one records, processes and analyzes observations and can calculate relationships among the data observed. A typical example of evaluation activities in a family planning programme is the service statistics. These statistics make it possible to draw conclusions about the

* This document was prepared by Mr. Hans C. Blaise, The Ford Foundation, Manila, Philippines, for the Seminar. The views expressed are the author's own and do not necessarily reflect those of the ESCAP secretariat or of the United Nations.

number and characteristics of acceptors, about the performance of clinics in rural and urban areas, about continuation rates, etc. Evaluation, however, provides only information about what is; it can provide base-line data about characteristics of the programme and their relationships, but it does not and cannot tell us *why* a given situation exists or what can be done to bring about change. Evaluation helps to identify accomplishments, problems and opportunities, but evaluation by itself will not identify the resulting action requirement.

Research on the other hand is designed to identify and classify phenomena and to develop systematic knowledge about the relationships between and among phenomena. While the principal function of evaluation is to measure the accomplishment of objectives, the principal purpose of research is to systematize knowledge and to explain. A KAP survey is a typical example in the family planning field of research that serves to "set forth objectively and scientifically what people now know, believe, and do with regard to fertility" (5). Evaluation and research are similar, however, in that both provide information that can guide programme decisions but neither evaluation nor research findings will tell the programme manager how to do what with the information provided.

Translating evaluation and research findings into programme strategies and action requires the analysis of priorities, of alternative uses of resources, of trade-offs, of consequences for other aspects of the programme, of possible resistance to the changes that the information suggests. In other words, the analysis of action implications raises an entire new set of questions that are not answered or answerable on the basis of the evaluation or research report. Research findings often contain information from which significant inferences can be drawn for programme operations. They may be suggestive of programme strategies and approaches that would contribute to the attainment of objectives. As an additional step, however, it is almost always necessary to analyse the feasibility of making use of the findings and to project the likely effect on the various elements of the programme and on over-all performance.

Here is one example of a research finding to illustrate the point. In a summary of family planning research findings, the Population Council reported that "specially trained paramedical personnel compare favourably with physicians with respect to retention rates, side effects, and complications of IUD insertions" (6). To anyone familiar with family planning programmes--and this presumably includes the researchers who have arrived at the above conclusion--the finding cited must appear to be potentially significant for programme strategy and operations. Yet it would be entirely unjustified to make any action recommendation on the basis of these findings alone. The conclusions presented in the foregoing statement are simply insufficient to serve as an explicit guide to programme action. Some of the additional questions that one would need to ask before considering the implications for programme operations are: Are there currently any legal restrictions on the use of paramedical personnel for IUD insertions, and how can those restrictions be overcome? Would there be objections on the part of the medical associations, and how are those to be handled? How would the clientele react to IUD insertion by paramedical personnel? What safeguards, if any, would be needed in terms of supervision by physicians? How much training will have to be provided, and what are the basic prerequisites for paramedical personnel to participate in such training? How many paramedical workers are available for such training and where are they located? How much, if any, special remuneration should be offered to paramedical personnel carrying out IUD insertions? What changes need to be made in the information and education programme if other factors suggest an increased emphasis on the IUD as a contraceptive method? What would be the cost implications and logistics requirements of resulting programme changes? What would be reasonable targets?

The above is by no means a complete list of the questions that need to be answered, nor are the issues listed in any order of priority or logical sequence. The sample list has only been presented to indicate the variety of interrelated aspects that need to be analysed when the implications for a programme of a given research finding are considered. The example has been given to demonstrate that it is both unreasonable and unrealistic to expect a researcher to make programme recommendations on the basis of an isolated research finding. To trace the implications of a finding like the one quoted here through the family planning programme system is not the role of the researcher and he is not likely to be qualified by expertise and experience to translate his findings into specific programme strategies and procedures.

It is certainly true that the usefulness of research and evaluation reports would be enhanced if researchers made a greater effort to communicate with practitioners rather than use a style and language that only their fellow researchers are likely to comprehend. It is also true that the format of presentation and length of research and evaluation reports often discourage the programme managers from trying to keep up with the relevant new knowledge in the field. Yet even improvements in the language, format and length of the reports will not provide the programme manager with specific guidelines for programme implementation. The interpretation of research and evaluation findings in terms of programme strategy and action is something that research and evaluation specialists should in general not be expected to provide.

Programme management

The fundamental concern of management is with the allocation of human and physical resources for the pursuit of an organization's objective. The operations of family planning organizations, like those of any organization that provides goods and services, have a number of inputs that are processed in accordance with established methods and procedures to produce a certain output. When family planning related research provides information on the characteristics of some target population, the effectiveness of certain channels of communication, or alternative methods of personnel utilization, then this is clearly of concern to the family planning programme manager.

Management issues are not just issues that specifically deal with personnel policies, organization structure, budgeting procedures and the like. Any substantive issue that can have an influence on the mix of resource utilization, the methods and procedures to be followed by the organization, and the effectiveness and efficiency of the organization is a management issue. The family planning programme manager, therefore, should be very much interested in what demographers, medical researchers, communications experts, sociologists, economists and other have to say in their research findings.

Even the most competent and dedicated programme manager, however, faces serious limitations when it comes to making use of the research and evaluation findings that are available to him. A major constraint for all programme executives is time. The daily pressures of running an organization or a department within an organization are such that those with major programme management responsibilities seldom find time to read all the research and evaluation studies that could affect their programme let alone reflect on the findings and analyse their implications. It is one thing to look over an evaluation report that provides information on the acceptor and continuation rates of a range of contraceptive methods. It is quite another to work out a possible programme strategy on the basis of this information that could lead to a better mix of methods used in order to increase the number of births averted. It is one thing to determine, as was done in the Singapore family planning programme, that the cost per birth prevented in the case of the IUD was one half of the cost of a birth prevented by oral contraceptives (7). It is quite another thing to determine whether and how this finding can be used to increase the over-all cost-effectiveness of the family planning programme.

Earlier in this paper, it was suggested that researchers and evaluators should not be expected to analyse the programme action implications of their findings because this is not their responsibility and they are not likely to be qualified to do so. It should now be added that the managers of operational programmes are not likely to translate the available knowledge into action either, for one or more of the following reasons: (a) lack of time to concern themselves with any but the urgent current operations issues; (b) the quantity of evaluation and research materials available nationally and internationally; (c) difficulties in understanding and appreciating the potential implications of research and evaluation findings, particularly if they deal with an area outside the professional background of the manager; (d) the difficulties and complexities of relating given findings to all the other relevant and related elements of a programme; and (e) the absence of a system design through which the relationship among programme elements can be traced.

This seems to point to a stalemate. Research and evaluation are being carried out and more of this needs to be done. Yet, there is a communication gap between the managers and the researchers that prevents the available information and knowledge from being translated into programme action. It also prevents the systematic identification of research and evaluation priorities in accordance with programme needs (3). One of the most serious management issues in family planning programmes, and the one that will be explored in more detail in the balance of this paper, is establishing a communication bridge between programme managers on the one hand and researchers and evaluators on the other.

The suggested link: policy analysis

Earlier in the paper, it was mentioned that others have expressed concern about improved research utilization in family planning programmes and that people in other social programme areas have also commented on the lack of relationship between social action and social science research. One approach to enhancing the social science research contribution to social action programmes is to focus on "problem solving" research. This would mean that programme managers possibly in cooperation with researchers, would identify what they judged to be the most significant gaps in knowledge or problem areas hampering the success of their programmes. Research on those issues would then be designed to find answers to the important questions identified. Much can be said in favour of the problem-solving research approach. If the researcher and the practitioner collaborate in problem identification and understand each other's needs and priorities, then this is likely to yield information that can more readily be applied to practice.

Directing all research towards the identification and solution of problems as viewed by the practitioner or manager, however, would be undesirable. The fact that a researcher, being free from the "felt need" of the practitioner, becomes curious abut the character and relationship between some phenomena and conducts

research on that topic does not make that research necessarily less significant or useful to the practitioner. Without ignoring or denying the utility of, and even the need for, bringing data collection and analysis to bear on the solution of given real world problems, one would do well to pay more attention to the general problem of bridging the gap between knowledge and action, regardless of the source and motivation that led to the research undertaking.

Other people who have recognized the problems confronting both the researcher and the practitioner in relating research findings and programme action in family planning have suggested that "human linkers" (8) or "middlemen" (9) are needed to bridge the gap. This group of people should have an understanding in some depth of both scientific research and of the practice of programme operations and be able to translate research findings into action patterns based on them. Using the scanning and transfer device of middlemen who can provide information about research and evaluation results and transpose them into feasible programme activities and alternatives appears to be a sound proposal. Simultaneously, as suggested by Rogers (8), these intermediaries could translate the needs of the practitioners to the researchers for their action. Admittedly, finding or developing the people who can understand and communicate in the language of both the researcher and the programme manager is a difficult task. As there seems to be little hope for a significant improvement in direct communication between the researcher and the programme manager, the development of a linking system may be the only realistic answer to bridging the gap between knowledge and action.

While the basic problem of developing a system of middlemen may appear to be formidable enough, it is now necessary to complicate matters even further. This paper hinted at such a complication when referring earlier to the many questions that need to be asked when considering the implications for programme action of the research finding that the performance of paramedical personnel compares favourably with that of physicians in the case of IUD insertions. What the list of questions illustrates is that there is a "systemic" interdependence among the elements of a family planning programme and that the ramifications throughout the system need to be traced and analysed before feasible and desirable action can be determined. Moreover, programmes are not faced with isolated or sequential findings but with sets of findings that may be complementary but that also may suggest divergent programme strategies and resource allocations. As an example, while certain research findings may suggest that a more active promotion and use of the IUD would lead to greater programme effectiveness and efficiency, another research study may suggest that a better and simplified distribution system for oral contraceptives could reduce programme cost and increase effectiveness. Which path or mix of programme strategies should be suggested to the programme manager?

What is suggested here is that the need is not merely for a group of persons capable of translating specific research and evaluation findings into programme action implications and recommendations, but rather for this group of middlemen to engage in *policy analysis*, tracing various findings and conclusions through the programme system, considering clusters of related findings, conflicting elements and alternatives, and basing their recommendations on those alternatives. The policy analysts, although they should understand the process and language of scientific research as much as those responsible for programme management and operations, cannot possibly be expected to have a profound knowledge of all the scientific, professional and programme operations areas that will enter into their analysis. Therefore, they will have to establish effective consultative relationships with a range of relevant experts among both the scientists and the practitioners in charge of the respective functional areas of the programme. Their strength and capability must lie in their interpretative skills, in synthesis and integration, and in the analysis of systemic interdependencies among the diverse elements of a programme.

Of critical importance is the relationship of the policy analysts and the programme managers. The analysts cannot accomplish anything unless they have the full confidence of the manager. In part, the analysts will carry out their work independently, systematically assessing the potential operational implications of all evaluation and research findings to which they have access. When these analyses indicate possible new directions and strategies for the programme which would enhance goal attainment, the analysts should be assured that they will get a ready and sympathetic hearing. Frequently, significant policy and strategy changes are involved and the analysts need to be effective communicators who can present a convincing case in a form and language that the manager understands. In part also, the analysts must be responsive to the managers and be prepared to analyse evaluation and research findings that strike the manager as possibly significant for the programme. Regardless of their technical and professional competence, the extent of their contribution to programme operations will in large measure depend on the confidence they inspire and the effectiveness of the personal relations they are able to develop within the organization.

Policy analysis unit

Nominally, the research and evaluation divisions which form a part of most family planning organizations are currently the ones that provide the programme managers and functional departments of the programmes with both

the feedback on programme performance and the new knowledge that can be used to improve that performance. On the basis of what has been stated earlier, it is suggested that the task of interpreting research and evaluation results in programme terms and the identification of programme issues requiring research and evaluation be added as an explicit task of the research and evaluation division or department. Serious consideration should be given to the addition of a policy analysis unit to the R & E divisions, reconstituting them as research, evaluation, and development divisions. The members of the policy analysis unit would not be directly concerned with any research and evaluation. They would have the interpretative and creative task of analysing research and evaluation reports by tracing, estimating and calculating their potential implications for programme policy and action. Clearly, some of the functions referred to here are currently carried out in the review and planning process of many family planning organizations. Perhaps there is no organization, however, where this function of research and evaluation analysis in programme terms is carried out on a systematic and continuous basis, as recommended in this paper.

There is no need to restrict such policy analysis to evaluation and research reports based on national programmes. Some research findings may indeed be culturally specific; others may require adaptation to local conditions; yet others may be universal in their applicability. In fact, the policy analysis unit may be in a good position to recommend that a research finding from abroad that looks promising from a programme operations viewpoint be verified or tested nationally. The unit should work as a filter through which all evaluation and research material passes, regardless of its source, to assess whether, to what extent and in what manner the available knowledge and information can be used to improve programme performance. In the reverse direction, the policy analysis unit can assist in the transposition of operational problems into areas and topics for research and evaluation.

The following example will help to make the matter clear. Based on data from the Philippines, Laing reports that, in terms of long-range demographic effectiveness, an IUD insertion is apparently 50 per cent more effective than a pill acceptance and nearly three times as effective as the rhythm method (12). Studies done in other countries tend to confirm this greater method effectiveness of the IUD. The Singapore study cited earlier shows that the cost of the IUD method can be one half of the cost of the oral contraceptive in terms of births averted (7). Other studies show that paramedical personnel can be effectively used for IUD insertion (6), making possible the extension of service points and reducing cost. Medical researchers also affirm that such improvements as are likely to be developed in contraceptive methods over the next few years are likely to be in the field of intra-uterine devices. The combination of these four factors certainly provides a set of powerful arguments for programme policies and strategies that favour the promotion and servicing of the IUD method. Yet, little appears to be done in most countries to take systematic steps in that direction. Statements have been made that the expansion of IUD services is limited because the service statistics indicate a client preference for other methods. There is sufficient evidence available, however, (although perhaps there are no specific research studies in that area) that client preferences can be influenced to a considerable extent. In this and other cases, the major factor preventing the transposition of research findings into programme policies and actions would seem to be the absence of institutional mechanisms and analytical approaches and methods to enhance research utilization. For this reason, the development of "middlemen" or policy analysts and the creation of a policy analysis or programme development unit in family planning organizations are recommended.

Clearly not all research findings can or should be put into practice immediately, even if a policy analysis indicates that the effect would be beneficial. Particularly in the case of research conducted abroad, it may be necessary to verify the findings in a national setting. Also even if the findings are judged to be applicable to the new setting, and regardless of how great the benefits promise to be, it is often advisable to test the implementation in an experimental project before applying the new knowledge on a large scale. No matter how competent and complete the implementation analysis, it must always be recognized that policy analysis is a paper exercise. The complexity of interacting forces and the possibility of unforeseen consequences make it desirable to carry out experimentation on a smaller scale before major commitments are made to changes in programme operations.

System design

Regarding the transposition of research findings into programme strategy and action, it was suggested that the implications need to be traced by considering the effect on all relevant elements of the programme. This involves a management issue which is a weak point in many of the family planning programmes. Implicitly, the family planning programme manager is aware of the relationships in the activities of, for instance, the information and education, training, and medical service departments of his organization. Without this implicit recognition of the interdependence of activities and functions, there would be no need to maintain them all or no basis for the allocation of resources to the diverse activities. Explicitly however, there seldom exists a detailed analysis of the relationships and flows in the respective activities of a family planning programme.

Seldom is any systematic attention given to the specific and assorted clinic staff requirements resulting from different percentage distributions of contraceptive methods serviced by different clinics. Even more infrequent is it to find that concrete relationships have been established to produce a given volume or range of information activities (such as press or radio campaigns, brochures, posters, community talks). The various programme elements are viewed as desirable or even essential for the operation of the programme, but neither the flow among the respective programme elements nor even in many cases the actual relationships among the elements tend to be analysed. Yet the family planning programme needs to be viewed as a "system" (7) and management decisions must be regarded not as "slicing up the pie" of resources among competing claimants and activities in information, education, training, clinic services and evaluation, but as a distribution among the interdependent elements of the system.

With a view to the transposition of research and evaluation findings into policy analysis as suggested above, a system design that incorporates the respective programme elements from motivation activities through service delivery is essential. Without such a design of the system elements, their relationships and the flows among the elements, it is impossible to do the tracing and implication analysis that was recommended. A good example of a partial system is the one developed by Blumstein, centred around the clinic operation (10). For purposes of illustration, the system flowchart is presented on the next page. Another example—and this is in the communications area, frequently considered to be very difficult to analyse rigorously in the form of systems analysis—is "The Isfahan communications project" described by Lieberman *et al.* (11).

Both for programme management and decision-making purposes in general and as part of the recommendations made in this paper for the better utilization of research and evaluation findings for programme management, a much greater effort should be made in family planning programmes to design the system of programme elements and to analyse the flow of inputs and outputs among those elements.

Management information system

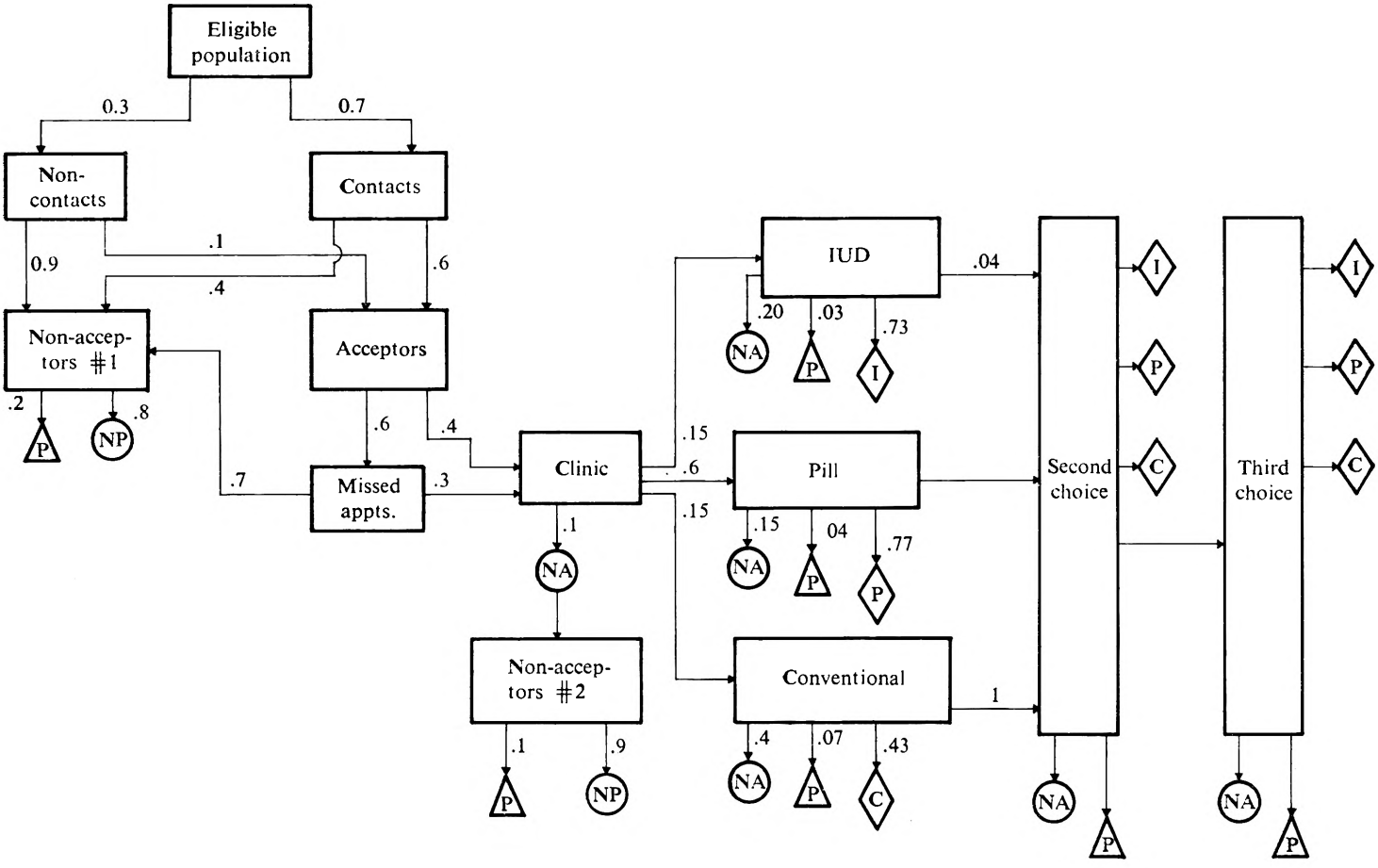
One more management issue in the context of relating research and evaluation to programme management which will be considered in this paper is the need for improved management information systems in family planning programmes. At the beginning of this paper, it was stated that the amount and variety of the data routinely collected by family planning organizations are impressive. Unfortunately, however, the service statistics and other information gathered routinely by virtually all family planning organizations appear to have little effect on programme design and management decisions. The data and their summary presentations usually serve only to show how a programme has performed and whether the targets have been achieved. They are seldom used as a guide to corrective action. In part, this can be remedied by the steps recommended earlier. In other respects, however, programme executives could and would use the data feedback more effectively if methods were developed to supply them with information, summaries and data analyses that they would recognize and accept as being relevant and useful to the decision making for which *they* are responsible.

Service statistics of family planning programmes can serve as the core of a management information system (3), but only if the relevant people get relevant information in a format that helps *them* in their decision making. What this means is that an analysis needs to be made of the decisions reached at the various levels and in the respective parts of the organization. It also requires an analysis of the programme performance data which are now used or could profitably be used as inputs into the decisions made by respective programme executives. Setting up a system and a procedure whereby programme service statistics and analyses are distributed selectively on the basis of need and usefulness according to the functional responsibilities of the different executives is not a major problem. On the other hand, as long the potentially useful data are buried in a welter of information that does not concern a given department or division manager, the entire report may go unheeded.

To develop a management information system and channel the flow of information in a logical way, it is again necessary to carry out the system design that was recommended. Only by mapping out the flow of decision inputs and outputs throughout the organization and among related units is it possible to identify the information needs of the various people.

The establishment of management information systems is not presented as an alternative to the policy analysis unit that was suggested. The policy analysis unit is viewed as a device for programme innovation and development which serves the entire organization as well as its respective departments. Its concerns will be with both research and evaluation findings and its perspective will be the entire system. The management information system is a device to channel and structure information in such a way that all parts of the organization are in a better position to take corrective action and to capitalize on past experience in the ongoing programme operations.

Figure: Simplified flow diagram for a family planning model



Legend

NA = Non-acceptors #2 (post-clinic dropouts)

P = Pregnant

C = Continuing contraceptors on pills (P), IUD (I), or conventionals (C)

NP = Non-acceptors remaining non-pregnant

Numbers on flow paths represent branching ratios

Source : Alfred Blumstein, "Systems analysis in family planning programming," in *Readings on Family Planning and Population Program Management*, (New York: The Ford Foundation, January 1973).

Conclusion

In this paper, it has been suggested that there is a serious gap between knowledge and practice in the operation of family planning programmes. This gap was identified as one of the most important management issues confronting the programmes. While a better linkage needs to be established between evaluation and research findings and management, it was argued that it is unrealistic and unjustified to expect researchers and evaluators to present their findings in terms of operational implications. On the other hand, programme managers are not in a position to transpose the findings into programme strategies and procedures. To overcome the dilemma the following recommendations are made :

1. To engage and develop a group of policy analysts who understand both the process and language of research and the management and organization requirements;
2. To create policy analysis or development units in the research and evaluation divisions of family planning programmes. The task of the persons in such a unit would be to interpret research and evaluation findings in terms of feasible programme actions and submit recommendations accordingly to programme managers. They would also help in the identification of operational problems requiring research and evaluation;
3. System design needs to be carried out in family planning organizations to chart the flow of decisions, inputs and outputs throughout the organizations and their divisions. This is an essential supplement to the conduct of policy analysis;
4. Management information systems should be developed in family planning organizations to provide the respective functional executives with such information and analysis of programme performance as are relevant to them in making decisions for corrective action and future programme activities.

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ACTION RESEARCH FOR FAMILY PLANNING PROGRAMME MANAGEMENT AND IMPROVEMENT: SCOPE AND LIMITATION*

Introduction

Most developing countries are currently engaged in planning and implementing programmes for the improvement of the socio-economic conditions of their people through governmental and voluntary efforts. Such programmes cover the diversified fields of agriculture, industries, education, health and family planning among others. The management of some of these programmes is complicated by the fact that the provision of services does not in itself ensure their acceptance and utilization. Programme activities have to include two broad, but closely interrelated fields of demand generation and satisfaction. Simultaneous attention has to be paid to a number of variables pertaining to organization and socio-cultural aspects of the community to ensure a programme's success. Family planning promotion is typical of such complexity in administration. While population pressures are mounting all over the world and especially in the developing regions, large segments of these populations are not motivated to the extent of initiating self-action to control their family size. Faced with this situation and its effect in neutralizing most of the developmental efforts, policy-makers and administrators are mounting large-scale programmes in family planning on the assumption that deliberate efforts to increase the level of motivation of the population for a small family size through education and provision of contraceptive services to those motivated will bring about a decline in fertility. There have, however, been relatively few experiences in this field to draw upon for the development of action programmes. The socio-cultural and developmental differentials among these nations make the application of standardized methods impracticable. Much remains to be learnt with regard to designing and implementing programmes in different cultural settings. The role of action-research in the development and management of family planning programmes in the above context assumes great significance.

An action-research project in family planning was undertaken in Athoor Block, Madurai District, India, towards the close of 1962 and is being continued in part. This paper reflects largely the experiences arising out of that project.

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Concept of action research

Action-research models are based generally on the major concept of integrating action and research in a programme. They usually develop out of the problems and experiences of persons directly engaged in developmental programmes and their primary purpose is 'action', i.e. building a programme for promoting social change, such as helping people to accept family planning or any innovative practice. Action-research models are increasingly used in designing training programmes for development.[1] Research is planned and executed in the various phases of an action programme with the central aim of manipulating the variables necessary for developing the programme.

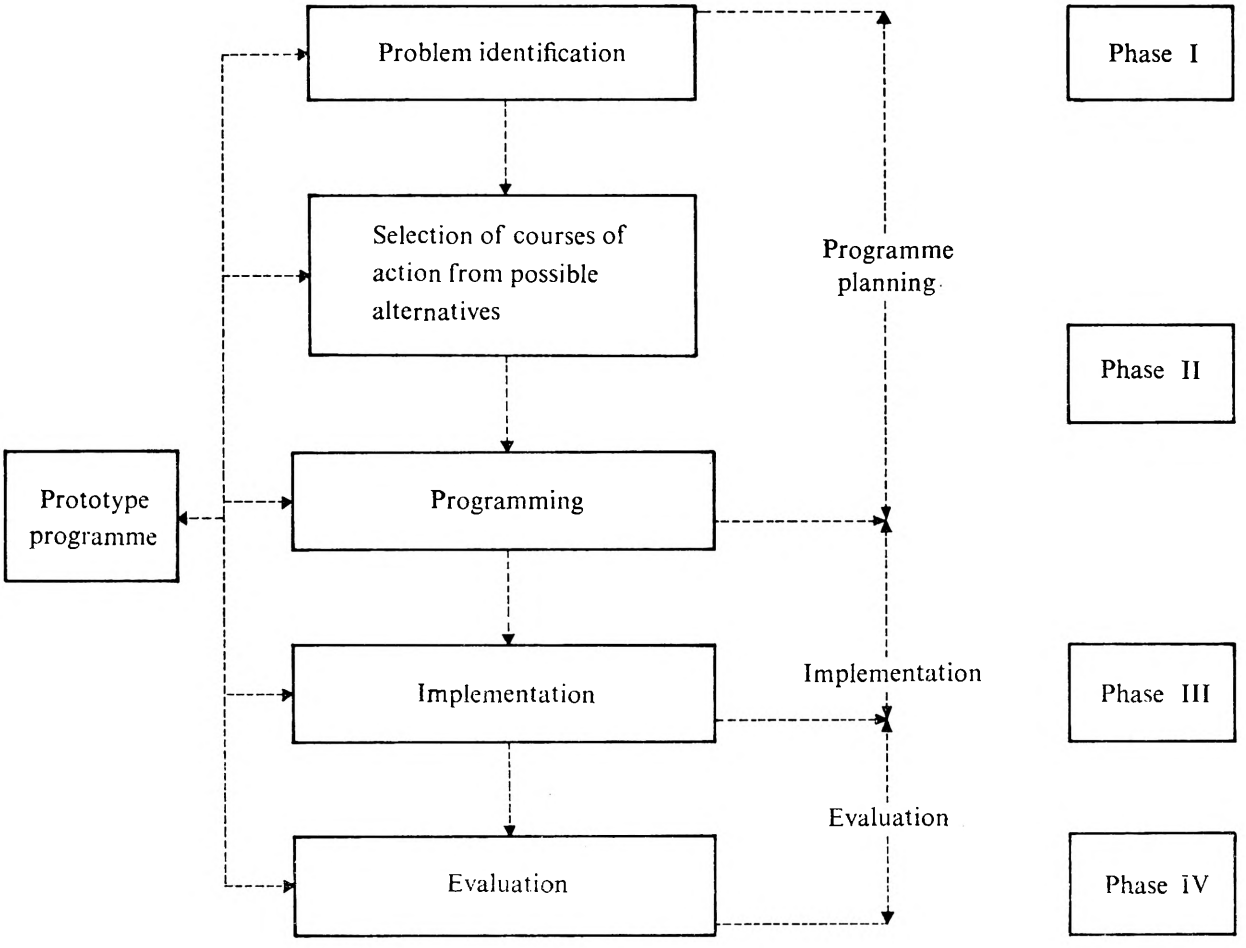
Action research generally aims at developing prototypes of programme models prior to their country-wide implementation. It can also simultaneously exist with country-wide programmes in selected areas, but should march ahead of those programmes so that the results are available for feeding into the operating programmes.

The practice in most health administrations in the past and even today is to call in social scientists or other researchers to evaluate the efforts of an action programme, especially when the action has not produced the contemplated results. Occasionally, they are engaged to carry out baseline surveys which provide useful information for action or serve as bench-marks for evaluation. As against this approach, action research emphasizes simultaneous action and study by the combined efforts of researchers and programme personnel until an effective and feasible model for action is developed. Research will thus have no independent basis in action research unless it is related to action; research workers have to become sensitive to this role, understand the roles of action workers and relate to them. Simultaneously, action workers, though primarily interested in producing results, have not only to orient themselves to the role of studies as a means of facilitating action but also to participate in such studies to the extent desired.

Action research primarily draws knowledge from the various disciplines related to the subject under study and applies it to programme development. To this extent, it becomes multidisciplinary as well as applied research. In addition, much of the knowledge gained in the course of action-research activities can also be related to general theory in the social sciences, confirming aspects of that theory or suggesting new formulations; it can thereby

[1] Rolf P. Lynton and Udai Pareek, 'Training for Development' Irwin Dorsey series in Behavioural Sciences, 1967.

Figure 1



contribute to the building of basic sciences.[2] Action research, thus, not only draws upon theory but can feed into it.

A model for action research

A framework for action process

Since programme development is central to the action-research process, it will be useful to spell out a framework for this action process which can not only serve as a model for developing programmes on a systematic basis but also identify those phases of the programme where research could fit in. The general framework suggested for programme process, which includes distinct but cyclic phases of programme planning, implementation, and evaluation, will fit all action programmes. The programme planning phase itself can be further split up into a sequential chain of interrelated activities consisting of problem identification selection of courses of action, from possible alternatives, and programming. A schematic model is shown in figure 1.

The model in figure 1 implies that the action-research process has to be continued long enough to obtain a feasible solution. The cyclic nature of the process calls for modification of plans developed after initial thinking and based on experiences resulting from implementation and evaluation, further implementation, etc., until a feasible model is developed. The emphasis on the development of a programme would demand simultaneous attention to a variety of variables concerned mainly with technology, administration and education, though action research will mostly concern itself with the latter two categories. However, there are examples where an action-research project in environmental sanitation took up as part of its responsibility, the development of a sanitation facility, as the initial studies had revealed that the success of the project was conditional upon attention to that essential aspect of technology. Both researchers and action personnel have to recognize and treat the programme as a system of interacting elements. Since weakness in any one of the elements can hinder the programme's success, the objective of action research is to help to develop all aspects of such an entity.[3]

[2] Moye W. Freymann and Herbert Lionberger: 'A Model for Family Planning Action' Research', in *Research in Family Planning*, edited by Clyde V. Kiser, (Princeton University Press, 1962)

[3] Ibid[2]

Research within the programme framework

If programme development is central to the goal of action research and consists of systematic steps, questions can be raised as to what scope the programme offers for research. Part of the answer depends upon the orientation and personal inclination of the researcher. Unless he is highly specialized and does not want to move beyond the narrow field, a researcher will find immense possibilities for scientific studies within the proposed framework. Data gathering for problem identification makes possible a number of studies relating to the community and organization. Some of these are knowledge, attitude and practice of people towards the proposed innovation; fertility status of the community; communication pattern; leadership profiles; decision-making process among communities; staff required; roles of personnel; programme coverage; leadership and attitude of programme personnel; organizational barriers in programme promotion, etc. An understanding between research and action personnel is needed at this stage on the sequencing of such studies. While an action programme may not have to wait until all studies are completed, the action-research team will have to decide on priorities so that those studies absolutely necessary for the design of the programme are completed early. The researcher has to convince action personnel of the need for control areas and extend some of the baseline studies to the control villages.

The second phase of a programme model, concerned with decisions on courses of action based on alternatives, offers possibilities for many other types of study. Various hypotheses regarding programme development will have to be formulated at this stage. Some of these may have to be tested if necessary, in the field on a small scale or else through mathematical modelling before they are ready for application on a larger scale in the third phase. In fact, this phase and the action phase are so closely interrelated that the team may decide on more than one preliminary course of action, test it in a few areas and evaluate it, and then build it into the model proposed for the third phase.

The second and third phases offer scope for field experiments to test the effectiveness of different educational approaches and staffing patterns, the application of various observational techniques to the study process, etc.

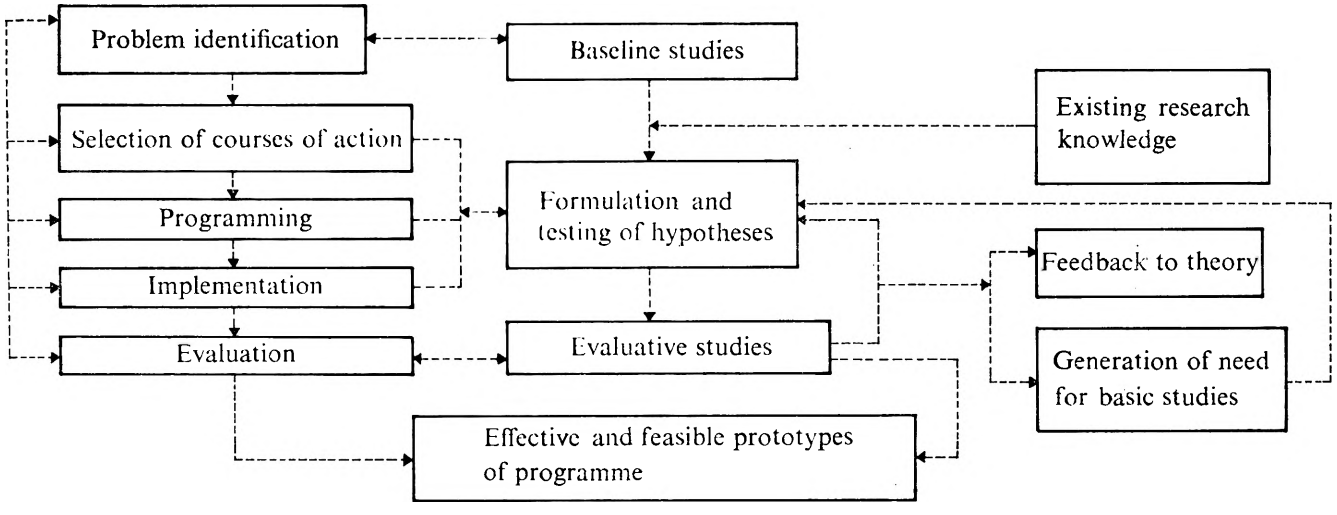
Evaluative studies become the major focus during the implementation and evaluation phases, and such studies will have to run concurrently with the programme to a large extent. The presence of social scientists in the team throughout the study, but divorced from the immediate responsibility for action, helps to add a new dimension to evaluation, viz. the qualitative aspects of action programmes. Evaluative studies are primarily studies of effectiveness and efficiency. The quality of inputs, which is a major determinant in efficiency studies, is rarely measured. Experience has shown that programme management could profit greatly from such qualitative evaluation.

An action-research model

Based on the concepts described in the previous paragraphs, it is possible to have a model for action research (see figure 2). It should be capable of modification as further experience is gained.

Figure 2

ACTION-RESEARCH MODEL



Besides integrating action and research processes, the model provides a holistic approach which would facilitate research and enable action personnel to search for the ultimate common goal of developing effective and feasible prototype programmes. It provides for areas of differentiation and integration between action and research personnel. Such a model could be adopted to tackle the problem either as a whole or in parts.

Action-research process: the Athoor experience

An action-research project in rural health services was initiated in the Athoor Community Development Block,[4] Madurai district, Tamil Nadu in 1959. In conformity with national needs and priorities, the project initiated action research in family planning in 1962 with the major aim of developing the prototype of a programme that could be adopted elsewhere, and which would lead to an appreciable decrease in fertility in as short a period as possible. The Athoor Community Development Block has a population of 100,606 (1961 census) living in 22 village panchayats[5] with 102 hamlets and three town panchayats, spread over 233 square kilometres. The chief occupation was agriculture and 64 per cent of heads of households were engaged in it.[6]

The specific objectives of the project related to three major problem areas, namely : (a) evolving methodologies for educating people to adopt family planning practices; (b) evolving organization structures and processes optimally suited for delivery of services; and (c) finding the suitability of available types of contraceptives under prevailing rural conditions. Various hypotheses were developed and tested from time to time in the course of the project.

The action-research programme was planned and implemented by a team of personnel drawn from the disciplines of behavioural sciences, statistics, public health administration, health education and medicine. The action personnel consisted mostly of the staff of the primary health centre of the block and the personnel appointed under the project for family planning work. Care was taken to see that the staffing pattern for health centres, including the newly appointed staff under family planning corresponded with the nationally envisaged pattern.

Some of the activities of the project, which will highlight the action-research process, are explained. The major project findings have been published.[7]

Baseline studies

The baseline studies consisted of (a) measurement of knowledge, attitude and practices of people in family planning; (b) fertility measures; and (c) in-depth studies of the work of two family planning clinics functioning in the area for the past three years. Information on the functioning of the primary health centres was already available as part of the baseline study made in 1959 for developing the rural health services project.[8] As part of the general health project, a study has been carried out to test the effectiveness of three educational approaches, viz. mass media, individual contact and community organization, for influencing people to accept BCG vaccination. These and also the experiences arising out of a previous action-research study in environmental sanitation elsewhere in the country provided valuable information for formulating and testing hypotheses.

Education approaches, utilization of community leaders

Following studies on the functioning of family planning clinics and the comparative effectiveness of the community organization approach,[9] the action programme evolved strategies for leadership utilization. Initial attempts at working through formal leaders alone did not give adequate results. Observational visits to villages and discussions with people revealed the need for further studies on leadership identification. It also became clear that the methods ultimately worked out should not only be effective in terms of identifying the most influential leaders but be such that they could be used by programme personnel working at the community level. A fully effective method of identifying leaders using sophisticated research tools had to be abandoned in favour of a method that would probably be less than fully effective but feasible to administer. The research staff evolved two methods and tested them in the field to measure their comparative effectiveness[10] and discover the conditions under which each could be used. Following leader identification, plans had to be developed to increase the leaders' capacity to play effective roles in programme promotion. Questions arose on the type of training, duration of training and methods to be adopted for such training. This gave an opportunity for the behavioural scientists and health educators to work together and develop different methods and test them. While exclusively experimental situations were not feasible, the technique adopted was to try different patterns and study their effectiveness through follow-up observations.

4 A block is the second smallest political unit of administration with 80,000 to 100,000 population.

5 A panchayat is the smallest political unit of administration.

6 Pilot Health Project, Gandhigram, "Report on the baseline Survey" 1961.

7 GIRH & FP: "Athoor experience: implications for a statewide family planning programme", *Action-Research Monograph No. 4, 1971.* GIRH & FP: "Research Activities during 1964-72", Major Findings and Implications Bulletin, 1973.

8 Pilot Health Project, Gandhigram "Report on baseline survey", 1961.

9 S. Sarojini, K. Srinivasan, and N.R. Ramakrishna, 'B.C.G. vaccination in the project area and faceted educational approach to the campaign' *Bulletin of Pilot Health Project, Gandhigram*, January 1961.

10 A. Govindachari, and Sastry, Ramachandra, 'A comparative study of the two methods of identifying leaders' *Bulletin of GIRH & FP*, Vol. II, No. 2, July 1967.

Having developed the leadership approach and effectiveness over the clinical one,[11] the staff extended the programme to cover more villages in a phased manner. Communication studies[12] carried out showed that the level of knowledge among the population on various aspects of the programme had increased. However, the acceptance rate had not increased proportionally. This led the action-research team to investigate more thoroughly the reasons for the gap between awareness and practice. Since this phenomena was observed in areas not covered by the action-research project also, the social scientists had the option of choosing a sample from a much wider universe for the study.[13] The same observations also led to more basic studies on decision making in family planning by individuals [14, 15] and utilization of their results in reorienting the educational strategy.

While observations and studies highlighted the role of satisfied adopters in promoting family planning, deliberate attempts at their utilization for more effective diffusion of family planning remained unexplored. This led to a hospital-centred study on the diffusion of female sterilization,[16] which established beyond doubt the usefulness of this channel. Results were then used for designing a community programme based on utilization of statisfied adopters. The latter study had to be organized outside the Athoor Block from the research point of view.

Depot holder system

Studies on family planning clinics pointed to the need for evolving a system for the distribution of condoms to eligible couples in a manner free from physical and psychological barriers. Some of the leaders, after special training, were thereupon given responsibility of stocking and distributing contraceptives. These leaders were designated depot holders. Experience after a few months revealed the need for establishing criteria for the selection of depot holders, as the leadership qualities alone were not sufficient to make them effective depot holders. This led to a study of the depot holders system, which provided new directions for their selection and utilization.[17]

Organizational aspects

The research staff did not have adequate information, before starting the project, to draw up detailed job functions for the various categories of workers. This led to some senior members of the project staff themselves assuming positions as family planning field workers in order to gain first-hand experience as to what problems would arise and how best they might be solved. This was enormously helpful in defining job functions, relationships and training needs. Such job functions were further refined through analysis of the work diaries maintained by workers.

The project started on the initial hypothesis that one male family planning worker for every 20,000 population and a female auxiliary nurse midwife for every 10,000 population would be able to carry out most of the community-level functions in family planning, the latter integrating maternal and child health with family planning. Periodic evaluation of their working revealed that the jurisdiction and population assigned to the auxiliary nurse midwife was beyond her capacity for integrated functioning in MCH and family planning. Studies on communication within the village also pointed to a need to reach the female population more effectively. This led to a decision to divide the area of jurisdiction of the auxiliary nurse midwife into two halves, the intensive and not-so-intensive, under which the latter half received only emergency attention in MCH. Further discussion between project personnel and administrators led to another study by means of which the effectiveness of one auxiliary nurse midwife for every 5,000 population was to be tried. The research pattern provided for pre-and post-measurement and comparison with neighbouring community development blocks in which the worker population ratio was not changed. An evaluation carried out at the end of the five-year period proved its effectiveness to a great extent.[18]

Routine visits by social scientists to observe action programmes provided many opportunities to study what was going on and suggest improvements. Observation of the group process at staff meetings provided insights into cohesiveness, team work, training needs, etc. of the staff that merited remedial action. Sometimes it was observed that an organizational climate which would assist community-level workers to discharge their expected functions did not exist. In all such cases, corrections were applied and further observations provided information on the effectiveness of methods tried. Action research offered immense scope for such studies.

The evolution of a recording system by the service agency itself was subject to action research. Initial

11 K.V. Ranganathan, K. Srinivasan and Betty Mathew, 'Role of community leaders in promoting family planning in rural India', *Action-Research monograph*, No. 1, 1965.

12 A. Govindachari, 'Communication in family planning : a study in a community development block', Bulletin of GIRH & FP, Vol. II, No. 2, July 1967.

13 'A study of factors responsible for the gap between awareness and adoption of contraception', Study under progress, GIRH & GP, Gandhigram.

14 K. Mahadevan Pillai, 'Study of the decision process in adopting family planning methods', Bulletin of GIRH & FP, Vol. VI, No. 1, July, 1971.

15 'A study of the process of decision making in adopting family planning' (a study of non-adopters) study under progress, GIRH & FP, Gandhigram.

16 K. Mahadevan Pillai, A. Govindachari, and S. Sethu, 'Diffusion of contraception: a hospital-centered study on female sterilization' (mimeo, 1973)

17 A., Govindachari "A study on the depot-holder system" Bulletin of GIRH & FP Vol. III, No. 1, July, 1968.

18 D. Narayanan Namboodiri, and P. Ramankutty, 'Evaluation of maternal and child health and family planning programme in Athoor', Bulletin of GIRH & FP, Vol. VI. No 2, January 1972.

attempts were made to produce and use a simple eligible couple register. It was soon found that the routine evaluation of the service statistics called for a total enumeration of households within the jurisdiction of the family planning field workers. Later emphasis on adding certain immunization programmes as part of the family planning called for a further revision of registers so that the services made available under both items might be traced from a single register. The policy of instructing field workers to bring the eligible couple registers up-to-date in a phased manner, during every visit to the village, had to be abandoned as it was found that a large portion of their time was devoted to survey work, which hindered programme promotion activities. This led to a decision that the enumeration and preparation of eligible couples would be updated once a year.

Another type of study was on the utilization of a statistical assistant, a worker employed in each primary health centre for the compilation of family planning statistics and improvement of registration of vital statistics. It was hypothesized that the improvement in registration of vital events would provide data for the measurement of fertility decline. After spending a considerable period of time in evolving a methodology for the assistant's work a model work programme was drawn up. This was put into practice for two or three years, when further evaluation showed that attempts by this worker to improve the vital statistics ran into many insurmountable problems connected with the system of registration itself. In addition, the registration could not be improved to the level at which the data could be used to measure changes in fertility. This led to a further modification of his work plan under which he would, apart from computing family planning statistics, survey a sample population in the block from which more reliable measures on fertility could be calculated. Though this led to related changes in his training, administrative procedures, etc., it provided for an improved system of routine evaluation.

Acceptability of contraceptives

Action research provides adequate scope for testing the effectiveness of various contraceptives in field situations. The characteristics of those who adopt different types of contraceptives, why they choose a particular method, problems involved in continued use, follow-up needed, switch over from one type of contraception to other, etc. are the areas studied. Analysis of acceptor characteristics cross-sectional and prospective follow-up studies, including physical and psychological sequels of certain types of contraception, provide data. In Athoor Block, such studies were made with respect to IUD and male and female sterilization.[19, 20, 21, 22] These studies were helpful in many ways.

Training-related action research

The training of personnel for delivery of services in the project followed an action-research model. Initially, field workers were given brief training for two weeks, but observations in the field showed the inadequacy of the training and the need for concentration of skill development in the training programme. Longer courses were therefore organized with emphasis on field training. As the programme developed further and a co-ordinated approach between health and community development agency was encouraged, the newly emerged training needs of other categories of workers were met. While the initial training courses were organized category-wise, observations at staff meetings revealed the need for team training, in addition. Team training of short duration, with emphasis on planning and evaluation, was organized at the health centres. The emphasis in the initial stages was on training community level workers on a priority basis. Observations by the research team showed that the trainees did not receive adequate support from their supervisors to put into practice what they had learnt. These observations led to the rearrangement of training priorities and the orientation of supervisory staff first.

It was realized early that the major objective of training in family planning should be to enable the workers to perform effectively on the job. Job functions arising out of the experiences of the project were therefore used as the basis for development of the curriculum.[23] It was also decided that training should be field-oriented, so that the workers during training would develop the necessary skills by performing in real life situations. This led to the concept of the development of a field practice demonstration area as an integral part of the training centre, which could be used for field training. development of a model programme and research.[24] The action-research team at Gandhigram had the advantage that, after the process had been developed to a certain stage, a decision was taken to set up training courses for a variety of personnel concerned with family planning. While a separate faculty was constituted for training, assistance was provided by

19 K. Srinivasan, and M. Kachirayan, 'Vasectomy follow-up study: findings and implications' Bulletin of GIRH & FP, Vol. 3, No. 1, July 1968.

20 A. Muthiah, 'A follow-up study of sterilized women in six community development blocks'. (mimeo, 1973)

21 A. Muthioh, 'Social and demographic characteristics of IUD acceptors in Athoor Block, Tamil Nadu', Bulletin of GIRH & FP, Vol. V, No. 1, July 1970

22 A. Muthiah, 'Termination rates and other contraceptive use of IUD acceptors in Athoor Block', Bulletin of GIRH & FP, Vol. V, No. 2, Dec. 1970

23 Betty Mathew and K.A., Pisharoti, 'Job specification as a basis for training design', Action Research Monographs No. 2 of GIRH & FP, 1966.

24 'Development and use of field practice demonstration area', Bulletin of GIRH & FP. Vol. VII, No. 2, March 1973.

the action-research team in the development of training programmes.

Methodological studies

During the initial baseline study itself, the research staff were confronted with the problems of devising more sensitive methods to measure attitudes, family size norms, etc. The outcome was the development of a scale for measurement of attitude towards family planning and the testing of the comparative effectiveness of the Thematic Reaction Test and Pictorial Choice Tests for measurement of family size norms.[25,26] Similarly, through the superimposition of more than one independent sample survey in the same area, it was possible to have some measures on the extent of non-sampling errors.[27]

Evaluation studies

Action research offers great scope for well-planned evaluative studies.[28, 29] The availability of such disciplines as social sciences and statistics, facilitates incorporation of the principles of scientific research into evaluation studies. Action research offers additional advantages in the interpretation of the findings of evaluation and explanation of the causes of shortfall in the achievement of objectives because of the presence of research personnel throughout the action programme and their observation of the process. Action personnel could be helped in the objective evaluation of routine statistics and in relating inputs to outputs. While the package programmes developed would increase the acceptance of the programme in the geographic area of the project as a whole, differentials in achievement between units within the area would provide opportunities for further studies, especially of the effect of areal variables on family planning acceptance.

Problems and constraints of action research

Team work

The planning and implementing of action research calls for team work involving various disciplines. A team for family planning action research should consist of members belonging to the disciplines of administration, health education, medical science, behaviour science, statistics and public health nursing. Personnel from other disciplines such as economics, public administration, could be drawn upon for consultation, as and when necessary.

Experience reveals that teamwork among different professional disciplines is not easy. To facilitate it, every member should feel committed to the methods and goals of the project as a whole, in addition to his commitment to his individual discipline. Each member has to learn the vocabulary and a considerable portion of the technical knowledge of the other. Action research works in a realm of uncertainty to an extent, and this makes adjustment difficult. In such situation, a temptation to circumvent difficulties and delegate the decision making to one person arises. An action research team has to avoid this tendency and should develop a team approach to decisions, however difficult that may be.

While formal training in action research for team members is not indicated, they need exposure to group dynamics and particularly to sensitivity training. Experience in planning the project, training others, initiating action and measuring success would by itself provide opportunities for growth for effective action research. An inquisitiveness to learn should be a primary quality of everyone in the team.

The team leader should have a broad understanding of the various disciplines involved in the team, a background of experience either in research or action programmes, if not both, and the capacity to promote team work. Frequent changes in the project staff would be highly detrimental and their continuity should be ensured by having proper staffing policies.

Problem of structural relationship

In the case of the Athoor Project, the research team belonged to the voluntary sector, while the action personnel belonged to the government. In many cases the research team might also be part of the governmental agency. Whatever the structural setting of the research team, it is preferable to promote action in a natural set-up by working with the existing service agencies. This would enhance its reproductibility. It would additionally help to identify the organizational problems connected with the delivery of such services, and to find suitable solutions. Since working with existing agencies creates a number of problems connected with motivation, quality of input and its reliability, the tendency develops on the part of an action-research project team to deploy its own personnel for service activities also. While some appointments cannot be ruled out in terms of need and expediency, it should not form a pattern. Otherwise the extension of the findings to the natural set-up would need further research.

The co-ordination between the action-research team and the service agencies has to be brought about through committee mechanism. In the Athoor Project, high-level

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25 A. Govindachari, 'A scale for the measurement of attitude towards small family in a rural community', Action Research Monographs No. 3 of GIRH & FP, 1966.

26 K. Ramachandra Sastry, 'Instruments for measuring family size norm in a rural community' Action Research Monographs, No. 3 of GIRH & FP, 1966.

27 M. Kachirayan, 'Final report to the ICMR on analytical study fertility indicators' (June 1972), mimeo.

28 S. Krishnamoorthy and A. Muthiah, 'Report on the Gandhigram standard fertility survey' (1962) to be published.

29 K. Srinivasan, A. Muthiah and S. Krishnamoorthy, 'Analyses of the declining fertility in Athoor Block', Bulletin of GIRH & FP, Vol. IV, No. 3, June 1969.

policy decisions were arrived at by a project advisory committee consisting of representatives of the project team, the Directorate of Health and Family Planning Services, other related governmental agencies, the Indian Medical Association, and consumers. At the operational level, co-ordination was effected through an implementation committee consisting of project officials, local chiefs of primary health centres and community development, appropriate district officials and consumer representatives. The design for action programmes, methods of supervision, record keeping, etc., were discussed and finalized at the meetings of the implementation committee. Special efforts were also made right from the beginning to help the existing service agencies to develop interest in studying their problems and to create the conditions necessary for implementing improved methods of work. Members of the action-research team attended the regular staff meetings of these agencies to plan and evaluate the activities.

In the case of the Athoor Project, the State government permitted the action-research team to exercise technical control over the primary health centres concerned with the project. The director of the project was given freedom to reorganize the work of the personnel in the primary health centres concerning family planning and MCH to the extent dictated by the action-research needs. Such reorganization was first cleared with the district officials. While the arrangement had its own weaknesses, it was probably the best available under the circumstances. The vesting of full administrative control in the action-research team would result in diverting its attention from the research aspects to solving day-to-day administrative problems of action staff. These structural mechanisms need to be supplemented by personal efforts and by building up an atmosphere of mutual trust and confidence. Tendencies to find fault when a programme is not carried out according to design will have to be avoided; instead, a spirit of inquiry to analyse the causes of failure will have to be built up.

Problem in execution

Getting sanction from the governmental or departmental heads alone did not ensure that the programme plans would be put into action. It soon became evident that flexibility in the work plan originally designed was desirable to an extent. Other responsibilities of the staff of the health centres and community development took up their time, and local circumstances often interfered with the scheduled programme. A sudden death in a village, a local festival or an election often called for rescheduling of activities. In addition, lack of well-defined responsibilities, a tendency to look at the programme as something beyond their normal routine activities, and difficulties in bringing about co-operative planning between various service agencies often interfered with the work. This sometimes tempted the research staff to assume responsibilities within the realm of service agencies. The service agencies sometimes expected additional remuneration for participation in the action-research project.

The research needs called for action to ensure that the planned inputs were made into the programme. Members of the team had to assume some supervisory responsibilities without coming into conflict with the line authorities. Plans for joint visits had to be made. All these called for special efforts.

Problems are sometimes caused by environmental efforts beyond control. In the Athoor Project, strong emphasis was placed right from the beginning on bringing about co-ordinated action between the primary health centre and community development agency. Planned efforts were made to involve the multipurpose village-level workers of the community development agency and others in the family planning programme and these efforts were highly successful. A few months later, the Government decided that the village-level workers throughout the country should devote 90 per cent of their time to the promotion of agriculture. The programme had a set-back and the involvement of the workers could start again only after another governmental decision which allotted family planning as a priority item, next only to agriculture, to community development workers.

Sometimes, problems are caused by certain decisions of the health and family planning agency itself. An instance was the decision to use canvassers to promote family planning acceptance. These canvassers are not governmental servants but receive fixed remuneration for every case canvassed by them. Such a programme introduced throughout the State makes it difficult to keep the experimental areas outside the influence of such a system and affects the validity of the testing of the experimental variables in the programme. Similarly, policy decisions on the organization of mass camps affect the experimental nature of the project.

Another type of problem arises from targets. While fixation of a predetermined target for achievement is part of every social action programme, it cannot have the same value in action research. A by-product of action research itself is the generation of ideas and norms useful as a basis for fixing targets. Insistence on achieving a target on the part of service agencies interferes with hypothesis testing; hence the project area will have to be exempted from the application of such administrative instructions during the experimental period.

Felt needs of a community

It has been found from experience with action-research projects in family planning, and also with a project on environmental sanitation, that village people have felt

needs which are of a higher priority to them than the services which action research has to offer. Such problems are encountered especially by those working on projects that do not belong to the category of immediate 'felt needs' by the community. Research designs could partly take care of this problem by seeking such variables at the time of selection of villages. In other cases, the action plan could provide for meeting such contingencies through an initiative on the part of family planning personnel to bring together the community and service agencies that could help to satisfy their felt needs. Such an initiative boosts the stature of the workers in peoples, eyes and enhances the chances of acceptance of the programme. Such inherent problems in action-research process have to be recognized by research teams at a sufficiently early stage.

Maintenance of records and returns

A problem often encountered in action research is the tendency on the part of the research staff to over extend the recording systems of service agencies, and use them for all types of evaluation. While service records form an essential part of the information system for evaluation, their use should be limited to generating only those essential items of information which could be collected within the competence of and the time available to the service staff. Under no circumstances should service staff be asked to divert the time reserved for action inputs to record keeping. There is a limit to the quality of the service statistics usually collected. The evaluation system should therefore provide for independent collection of data by trained interviewers who do not form part of a service agency. Occasional checking of the service statistics is necessary to find out their reliability. As stated earlier, the evolution of a recording system manageable by service personnel itself usually forms part of an action-research project.

Interpretation and use of social science insight

The problem of interpreting social science data and statistical conclusions and presenting them in a way useful for planning action programmes is a challenge and a new demand on social scientists. They have to do this without using their usual technical jargon. The translation of such findings into an action programme is also an equally difficult task for educators and administrators. Personnel connected with the action programmes have to develop a new way of thinking. Every event that has occurred has to be translated into an experience for learning by going into the 'how and why' of it. As action personnel are exposed more and more to social science findings, they will become better interpreters of events and profit by them.

Reproducibility

A criticism often voiced is that the findings of an action research project are not reproducible because of the conditions under which the work is carried out, viz. high quality of technical direction, supervisory inputs by the action-research team, deployment of additional personnel, etc. Participation by the research faculty in action programmes, though primarily for study purposes, will affect the input to an extent mostly qualitative. It indirectly contributes to supervision. The utilization of an existing service agency for action programmes alone does not fully meet this criticism. So much interaction develops between research team and service agency personnel that outsiders perceive the entire team to be working for the action programme and do not easily perceive the differentiation in roles. Some of these criticisms, partly true, are inherent in the process and cannot be avoided. It is therefore felt that action-research projects should be so designed that, when once the prototype of a programme is developed by the research team, there should be provision for further testing in other primary health centres under the over-all guidance of the district officials and remote supervision by the research team. The research team would orient the district staff in the implementation of the prototype and provide continuous guidance. Such guidance is necessary because of the need to provide the organizational climate and support necessary for the implementation of the prototype developed. Such a procedure will provide additional validity to the findings of research. It will also provide the research team with opportunities to identify the administrative barriers related to the extension of the programme to a higher hierarchical level of administration and to solve them. The focus of action research will thus shift from study at community level to studies on organizational variables at the district level or any level higher than that of health centres.

Problems of research design

Two inherent factors associated with action research, namely, its primary orientation towards action and the simultaneous attack on a number of variables relating to education, organization and technology, make the design of research difficult. This constitutes both the weakness and strength of action research. While action research provides enough scope for field experiments to test some essential hypothesis, an experimental design is not always possible for all hypothesis testing. The study and manipulation of many variables while action programmes are going on, even within an over-all experimental design, make absolute comparisons and the establishment of cause and effect relationships difficult. What taxes the capacity of the researcher in action research is not the setting up of an experimental design, but applying different

techniques to measure what is going on at different stages of the programme and drawing conclusions from that. There are bound to be problems of sample size with certain types of variables under study, expecially organizational. Before and after observations alone can measure the effects only of certain interventions. The researcher has also to keep his eyes open to what goes on outside the experimental area and draw appropriate controls from there. It will thus be clear that coordination of research with action programmes is not easy, and that the research team has to use all its ingenuity to draw conclusions from the programme. Since what is being aimed at essentially is development of programme prototypes with wide applicability, a relaxation in the rigour of the research design is in some cases a price worth paying.

Summary

The development of programme prototypes for family planning promotion among the people will be greatly facilitated by action research. Programme development is central to action research and is the result of integrating research into the action process. A model for action research based upon the framework for programme process is suggested as a guide.

An action-research project in family planning has been in operation in Athoor Community Development Block, Madurai District, Tamil Nadu, India, since 1962. The paper describes some of the experiences of building the research into the various phases of an action programme and the cyclic nature of research and action until a desirable programme prototype is developed. Unlimited scope exists for research in the whole process, as revealed by the nature of the studies made possible in the Athoor Project.

Action research primarily depends upon multidisciplinary efforts. The very process of building research into action places a number of constraints on the action-research team, but many of these can be overcome by deliberate effort. Building teamwork, evolving structural relationships mutually satisfying to research and action personnel, and insulating the action-research project from environmental influences to the extent possible are areas that need special attention. The need for simultaneous manipulation of variables relating to technology, administration and education reflects both the constraints on research design and the strength of the action research.

AN EXPERIMENT IN ADMINISTRATIVE RESEARCH*

Introduction : an experiment

This paper reports tentatively on an ongoing experiment in research on family planning administration. The experiment attempts to combine research and action goals in a survey of family planning organization in the ESCAP region. The key element in the experiment is the use of a Study Advisory Council in each country participating in the survey. The Council is made up of middle-level officials from a variety of agencies, whose functions are related to the over-all objective of the family planning programme. Each Council's function is to tailor a regional study design to the unique conditions in its country to oversee the study as it progresses, and to formulate recommendations from the results of the study. Although the final results of the experiment are not available since it is still in progress, it may be useful to report here on the background of the experiment and on its progress to date.

The problem : organizational characteristics and intelligence failures

Modern bureaucratic organizations are powerful and effective, and yet inefficient and wasteful. They surpass all other types of human organization in their power to mobilize resources, to co-ordinate an astounding array of different activities, and to focus those activities in a rational way for the solution of a vast range of complex and highly intractable problems. And at the same time, the modern organization can be so highly wasteful of human resources that it becomes itself a more intractable problem than those it is designed to solve. The persistent challenge to organizational leadership is to harness the power of the modern organization and to keep the organization from dominating those whose problems it is designed to solve. Similarly, the persistent challenge to the scientists studying organizations is to so advance the understanding of organizational processes that the power of the organization can be effectively utilized.

One of the things we have learnt about organizations through both scientific investigation and intuition, is that organizational problems are inherent in the very characteristics that provide organizational power. It is commonplace to observe that the impersonality which permits many actions to be routinized and thus performed efficiently in the modern organization produces one of its most common sources of difficulty: the treatment of diverse problems of human beings in an inflexible manner, without consideration for the inherent variety of experience that is the human condition.

More to the point of this paper is the issue of organizational intelligence. One source of power in the modern organization stems from its ability to generate and mobilize vast amounts of highly sensitive information of the type that is necessary to the identification and solution of problems. And yet a persistent source of organizational problems lies precisely in intelligence failures. The information needed to solve problems is often available in the organizational system, but it does not get to the right places and in the proper form needed to permit the right decisions to be made. In an excellent survey of the problem of organizational intelligence, Professor Harold Wilensky has shown that intelligence failures derive from the very characteristics that make organizations effective.[1] The hierarchic arrangement of positions, the centralization of authority and the specialization of functions that are necessary for organizational success also produce blockages in the flow of precisely that information which is needed to produce effective action.

Intelligence failures have been widely observed in Asian family planning programmes, although the term itself is not widely used. Let us recount some of these observations in the language of intelligence failures.

Case 1 : One family planning programme suffered a decline in new acceptors and in continuation rates when the budget for field worker travel was cut. The budget cut was made by finance agencies under pressure to conserve funds. Information existed in the over-all organizational system that could have shown the positive relationship between field worker and acceptance rates, the relationship between acceptance rates and estimated number of births averted, and the financial benefits of births averted. The specialization of both finance and family planning functions prevented officials from asking this type of cost-benefit question, however. The hierarchic separation of intelligence-gathering functions from policy-decision-making functions obstructed the flow of answers to such questions, if they had been asked, to the place of decision-making. And the centralization of authority that is both normal to and necessary for the operation of complex and large-scale government operations means that whatever intelligence exists on such an issue will not be a part of the factors taken into account in the decision-making process.

Case 2 : Extensive studies of the organization or administration of family planning programmes have been undertaken in some cases. There is little evidence,

* This paper was prepared by Professor Gayl D. Ness, University of Michigan with the assistance of a member of the Population Division, ESCAP as a background paper for the Seminar. The views expressed are the author's own and do not necessarily reflect those of the ESCAP secretariat or of the United Nations.

[1] Harold Wilensky, *Organizational Intelligence* (New York, Basic Books, 1967)

however, that such studies have had any impact on the programme. In some cases, the studies have been done by foreign experts, who have not managed to ask questions or translate answers into terms considered reasonable and relevant to local officials, whose long experience has given them a good intuitive grasp of what kinds of changes and operations are feasible in their governments. In other cases, studies have been done by indigenous experts, whose position in the specialized agencies, relatively low in the hierarchic structure and without close relations to remote centres of power, isolate them from decision-makers. It is this isolation, generated either by cross-cultural or indigenous organization barriers, that constitutes the intelligence failure reflected in the non-use of administrative studies in the reorganization of family planning programmes.

The above cases illustrate intelligence failures that derive from obstacles that lie in the boundaries between specialized government agencies or in the boundaries between national administrative systems. We have also seen intelligence failures that result from obstacles that lie in the boundaries between subunits of the same organization. The rapid development of research technology in terms of organizations and procedures for data collection and analysis has for the most part resulted from technological developments in international organizations, which have done excellent work in devising standard reporting and record-keeping techniques for family planning programmes. At the same time, we note that in most programmes there is neither an effective nor full utilization of the research and evaluation capacity. The same hierarchic, specialized and centralized organizational characteristics, witnessed in the interorganizational arena, appear to obstruct the flow of the right kind of information to the right places within the organization as well. In addition, it seems probable that the research and evaluation technology has been developed primarily by and for foreign demographers interested in the determinants of fertility decline. Thus, the technology itself may not be fully appropriate to the needs of administrative control. Here too, the source of the intelligence failure lies in part in the obstructions of the boundaries between national administrative systems and national cultures.

A possible solution : the team approach

In administrative doctrine and to a lesser extent in administrative practice, the team approach has become a standard mechanism for overcoming the organizational characteristics that seem naturally to produce intelligence failures.[2] Typically, the team approach implies the establishment of a temporary team of specialists from different departments or agencies, and from different hierarchic levels. The team is given a specific task or set problems that it is to solve. Programme management is essentially an institutionalization of the team approach, in which distinct teams are generated for each specific project and placed under the direction of a programme or project manager. When the task or contract is completed, the team is dissolved and the members become parts of other teams designed for other projects.[3] Lawrence and Lorsch have noted that the team approach is crucial for the success of firms operating in highly unstable environments.[4] It is precisely in such an environment that intelligence is most important for survival and that intelligence failures can be most costly to the organization. The association of the team approach with success in such cases gives further indication of the utility of crossing the boundaries of specialization, hierarchy and centralized authority, which, Wilensky argues, produce intelligence failures and thus reduces organizational performance.

This theoretical and scientific background provided part of the impetus for our experiment with the Study Advisory Committee. Another and perhaps more important source of the idea lay in a successful Puerto Rican experience with administrative reform.[5]

In 1956-1957, Mr. Guillermo Irizarry conducted a survey of agricultural administration in Puerto Rico. The object of the survey was to develop recommendations for the most effective co-ordination of the great variety of agencies dealing with agriculture in Puerto Rico. What we can consider a normal bureaucratic growth had resulted in the development of at least 10 different agricultural agencies and 9 non-agricultural agencies with programmes affecting agriculture, all dealing in some way with Puerto Rican farmers and farming. Some of the agencies were based in Puerto Rico, others were federal government agencies with local offices on the island. The result of this high differentiation and specialization was a great lack of co-ordination in agricultural services, which was felt to be in part responsible for the generally underdeveloped state of Puerto Rican agriculture.

Prior to Irizarry's survey, there had been a number of government planning exercises attempting to bring better co-ordination to the agricultural services system. None of these had been successful. Irizarry argues that this was "because those responsible for the agricultural services did not feel that their experience and knowledge had been adequately reflected in these past reports, nor in the conclusions reached therein. Furthermore, although some of these conclusions were apparently valid

[2] Ibid, p. 46. See also H.A. Shepard, "Nine dimensions in industrial research", *Administrative Science Quarterly*, Vol. 1 December 1956.

[3] J.A. Litterer, "Programme management: organizing for stability and flexibility," *Personnel*, Vol. 40, 1963, pp.36-35.

[4] P.R. Lawrence & I.W. Lorsch, "*Organization* and *environment*", (Homewood, Illinois, R.D. Irwin, Inc. 1969). See also Joan Woodward, *Management and Technology* (London, HMSO, 1958)

[5] Guillermo Irizarry, *The operations and relationships of the agricultural services in Puerto Rico.* (San Juan, Puerto Rico, Puerto Rico Bureau of the Budget, 1961)

on the evidence presented, there was no machinery available for their discussion or implementation."[6]

Irizarry then developed a strategy to preclude these past failures. He planned a survey of agricultural administration, with financial assistance from the Rockefeller Foundation. This external financial support apparently increased the freedom for the survey from one source of internal opposition. To design and administer the survey, Irizarry drew together the heads of the agencies that would be the object of the study. Those agency officials themselves worked with Irizarry and a foreign expert provided by the Rockefeller Foundation to establish the broad policy and aims of the survey and to oversee the details of question construction, sampling, data analysis, and to write the recommendations. The two committees, a policy committee and a participants committee, which designed the survey were transformed in 1957 into the Agricultural Council. The Council thus became the formal body that analyzed the survey data, wrote the recommendations and was subsequently in a position to implement the recommendations. In the ensuing years, the Agricultural Council has been effective as a team because it broke through the obstructing boundaries of specialization and hierarchy, and because it was composed of indigenous officials with long experience in and knowledge of the ways of the bureaucratic culture in Puerto Rico.

It should also be noted that, unlike many studies, Irizarry's survey was designed not simply to discover or understand something. It was designed both to understand the character of agricultural administration and to do something about that administration.

The experiment

In April of 1973, we began a comparative organizational study of three family planning programmes in the ESCAP region. On the basis of the analytical and historical background noted above, the study was designed with a combination of research and action goals. The general objectives were stated as follows:

> The general objective of this study is to demonstrate the utility of research towards the effective administration of family planning programmes. This will require research that can assess the performance of the family planning programme, identify some of the organizational determinants of performance and make effective recommendations for administrative changes that can increase the programme's performance. Thus the objective involves both research and action.[7]

To provide a study structure that would ensure the generation of useful results, which could readily be translated into action, it was proposed that a Study Advisory Council be established in each of the three countries participating in the study. The exact composition of the SAC was not specified, since it was felt that this should be determined by the specific administrative character of each of the programmes. It was suggested, however, that the Council include the family planning programme director or his immediate deputy, a member of the treasury department who has some responsibility for population matters, and any other officials from agencies involved in family planning. This might include the health, information, education, establishments (personnel) and census agencies.

It was suggested that the Council meet frequently, perhaps once a week, in the early stages of the study. This would be the period in which the study design adopted by all study directors together would be tailored to the specific conditions and demands of the country. While the study was in progress, the Council might meet less frequently. Upon completion of the data collection, the Council would meet more frequently, perhaps once a week again, to analyse the results and to propose recommendations on the basis of the results.

The study budget provided for a modest honorarium for the members of the Study Advisory Council and to defray the costs of meetings. Since many members of the Councils had not themselves been directly involved in family planning programmes, they were also invited to participate in a study tour of family planning administration. The study tour was expected to provide them with useful insights into the experiences and problems of programmes in the region.

The experience of the Study Advisory Councils to date can be briefly summarized.

Country A : The Study Advisory Council is chaired by the director of the family planning programme, an official of the Ministry of Health. The study director acts as executive secretary to the Council. In addition to the chairman and the study director the Council has five members representing economic planning, central administration (home affairs), establishments (government affairs), family planning research, and the Graduate School of Public Administration of the national university. The Council members are essentially upper-middle-level officials, section chiefs, who are generally responsible for collecting specific information and drafting specific proposals for such things as budgets, personnel, and long-term target planning.

The Council met frequently during the early stages of the study, going over the proposed study design in detail to make changes to suit the specific conditions of the country. At this point, the study team has completed the

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6 Ibid. p. 3.

7 Population Division, ESCAP, *A Comparative Study on the Administration of Family Planning programmes in the ESCAP Region: Organizational Determinants of Performance in Family Planning Services in Selected ESCAP Countries*, (May 1973).

collection of field data and is in the process of data analysis. The Council members have been included in the regional study tour to familiarize members with programmes in other countries. Soon the Council will begin more frequent meetings to consider the results of the study and to draft recommendations.

Country B : The Study Advisory Council is chaired by the director of the national family planning programme, who is also the study director. In this case, it was considered that the major organizational problems did not lie in interagency boundaries or in specific problems of financial or personnel resources. Thus, the Council has been primarily an in-house unit and the study itself has been conducted by the evaluation unit of the national family planning programme. The Council has been instrumental in modifying the questionnaires to meet more closely the need of the country. The Council members are primarily the staff of the family planning programme itself, with one member drawn from the national statistical office who is to assist in the data analysis of the study. These are people with extensive responsibility and direct authority for both long-term and day-to-day management of the programme. They also seem to have sufficient informal communication among themselves to guide the evaluation unit to carry out the study.

Country C : The Study Advisory Council is chaired by the head of the civil service training and research institute, which is directly under the President of the Country. The vice-chairman of the Council is the deputy director of the national family planning programme, which is a high-level government agency designed to co-ordinate the activities of a wide variety of implementing agencies. The research team in country C has two study directors representing the public administration discipline and the national family planning programme. The study directors also act as the executive secretaries of the Council. It must be noted here that the country C research operation has, from the inception of the study, benefited from the active participation of the institute, which is to improve government machinery and the national family planning co-ordinating agency.

There are sixteen additional members of the Council, representing essentially those family planning implementing units co-ordinated by the central family planning agency. These units are the national development planning office, the department of health, the department of information, the department of defence, a private family planning organization, religious organizations and the private enterprise unit. The division chiefs of the national family planning co-ordinating agency attend the Council meetings as associate members.

The Council met several times to review and revise the study design and the research instruments to better suit the specific field situation of country C. Specifically, the Council recommended that the instruments should be simplified. The study team has concluded the clinic data collection and is now in the process of data analysis as in the case of country A. Two of the Council members were also invited to observe the national family planning programmes in a few ESCAP countries in the autumn of 1973.

The results of this experiment will be judged in two ways. We are keeping a record of such objective measures as the number of meetings, attendance at meetings, the extent to which the regional study design is altered, and the number and type of specific recommendations generrated by the Study Advisory Council on termination of the study. These are all relatively hard objective measures that will be easy to tabulate. They will not, however, be easy to evaluate. Thus it will be necessary to obtain more sensitive assessments of the utility of the Study Advisory Council. This will be done through interviews with the study directors and with other members of the Councils. This portion of the observations will be completely open or unmasked. That is, we strive to obtain the co-operation of the study directors in the experiment and in its assessment. At this point, we can report considerable co-operation.

The type of results we expect, especially from the more sensitive portions of the assessment, will not be simple success-failure statements. We have already noted, for example, that the specific governmental-administrative and social conditions of the country will determine what shape the Council is to take. Thus, the results we obtain should be the type that tell us what sort of Council (structure, membership, etc.) has the best chance of being useful under what conditions. It is this type of report we hope to be able to make on our experiement within the next half year.

FAMILY PLANNING SURVEYS AND STUDIES: CURRENT STATUS AND FUTURE NEEDS*

Introduction

This paper, in its present form, is intended as a background for discussion. It summarizes my preliminary and rather disorganized thoughts on the current status of survey research in the field of family planning. The subject is too large and complex. A large body of family planning research has been undertaken during the last decade and the inventory is increasing rapidly. It covers diverse disciplines and should outrun the grasp of any single professional. The discussion accordingly will be selective and focused from the point of view of a survey practitioner.

Part 2 attempts to classify the types of family planning surveys and studies according to programme activities and needs. The purpose is to identify the various methodological issues specific to the various classes of research needs and to serve as a framework for reviewing research findings. Part 3 examines selected research findings in some Asian countries with respect to their general relevance to programme needs and improvements. In Part 4 an attempt is made to summarize some of the main difficulties in utilizing research findings for family planing programmes management and development, and to make tentative recommendations that could serve as bases for further discussion.

Research needs and types of research in family planning

The objectives of population programmes are usually more than just the provision of family planning services. They are usually set in terms of a more general set of social criteria and national priorities. They may include, for example, information and educational activities, adjustments in the social and welfare legislation affecting the age of marriage, or improved nutrition and related activities. However, it seems that the major role of current family planning projects (or agencies) is the provision of effective family planning services not only through supply-oriented delivery system activities but also through activities designed to increase demand. Thus, the major programme efforts, defined for a given plan period and a given population, will be partly an attempt to reduce the number of unwanted births a family would have had in the absence of programme efforts, and partly an attempt to reduce the family's goal (or norm) of surviving children to a number that is compatible with the society's desired (or target) rate of population growth by motivating and recruiting additional acceptors.

The establishment of a family planning programme creates the need for answers to four sets of questions. The first is related to the setting of a target reduction in the rate of population growth in a given period. A related set of questions is to establish how much society can or should spend on a family planning programme as opposed to other competing social investments. The second set of questions is related to programme design and strategy. It attempts to specify the conditions necessary for effective fertility regulation. The third set relates to management and operation questions. It attempts to find means and ways to detect bottlenecks and minimize waste. The fourth set of questions is related to the evaluation of programme activities and achievements. Programme evaluation includes the evaluation of programme inputs, of intermediate results, of programme efficiency, and of fertility decline.

One criticism of using this four-way classification as a frame for our discussion is that the sets are too general and the types of research needs within each set are not similar enough to form homogeneous groups for purpose of classification. A more serious criticism is that the research questions included in the various sets are not unrelated. Evaluating programme results, for example, is usually done with reference to some already specified targets. And targets are set on the basis of a given programme design and its assumed level of efficiency, which may or may not materialize in actual operation. Many of the assumptions underlying programmes' operations and logistics need careful testing and study. But evaluative studies do not necessarily give adequate answers to the "why" questions needed for corrective operational planning and management. It seems, however, that reviewing findings from surveys and studies in family planning in the context of programme needs for different sets of researchable questions should give better insights into the implications of these findings for programme management and improvement than approaching the review in the context of some methodological criteria — types of surveys, e.g., cross-sectional, longitudinal, or experimental design. The latter approach could be more technically stimulating but not focused enough on the interdepedent nature of research needs on the one hand and programme management and development on the other.

Research findings and research needs in family planning

Our discussion format for each of the four sets of research and study needs will be as follows: (a) some more

* This paper was prepared by Dr. Ismail Sirageldin, Departments of Population Dynamics and Political Economy, The Johns Hopkins University, Baltimore, U.S.A., as a background paper for the Seminar. The views expressed are the author's own and do not necessarily reflect those of the ESCAP secretariat or of the United Nations.

detailed discussion of the types of research questions in each set and their administrative relevance; (b) the type of methodology appropriate for examining these questions; and (c) a review of a sample of findings in the light of the above.

Target Setting

A population growth target is most often an element in a general social and economic plan. It is one of the means designed to achieve the over-all socio-economic plan. Targets may be set in concrete, quantified and well -defined terms or in fairly loose statements (Frejka: 1973, table II). Adequate definitions of terms may be helpful but they are no guarantee for well-designed, energetic, or positive actions. Indeed, one of the important purposes of setting a population growth target is to generate social action that is aimed to achieve that target. We shall not discuss in this paper, however, the important and relevant questions of how and why a society may desire to set for itself population growth targets. Such discussion is beyond the scope of this paper. Our interest is to evaluate the demographic and social feasibility of population growth targets. It is sometimes argued that overstating the goal could generate desirable enthusiastic action. But unrealistic targets, whether high or low, could lead to disappointment or underutilization. "Targets should be able to be achieved by the best efforts of all the workers, employed or about to be added" (Keeny: 1973, p. 129). Such demand for accurate targeting requires a minimum set of data requirements.

In a recent paper, Frejka (1973) examined the demographic criteria necessary for target-setting activities and its evaluation. For example, the population growth target set in 1970 for Iran sought a reduction in the population growth to 1 per cent annum within 20 years from an initial rate of about 3 per cent per annum. What kind of basic data and studies are needed to evaluate the feasibility of this demographic target and its implied societal and behavioural changes? As a first step, some calculations of component projections of feasible trends in fertility and mortality (based on available data on past demographic trends and current demographic profile) should be compared with the defined goal and its implied trends in the demographic components. For such calculations, a minimum set of data should include the age structure of the female population, information on mortality-age specific survival rates to permit calculation of (or selection of) a life table, and age specific fertility rates to calculate gross reproduction rates, total fertility rate and the net reproduction rate. Frejka's calculations indicate that in order for Iran to reach the targeted 1 per cent per annum rate of natural increase in the early 1990's, fertility would have to be below its replacement level at that time and total fertility rate would have to fall from 6.8 to 2 in those twenty years (1970-1990). This targeted decline in fertility is faster than that experienced by countries like Japan and Finland in recent decades.

This type of target-setting evaluation is basically a pure demographic evaluation that sets limits of structural feasibility. It does not indicate administrative feasibility. Studies of under- or overutilization of a family planning programme could be stated in terms of relative attainment of targets only if the targets were set to reflect best efforts. As Figure 1 illustrates, target attainments may reflect the actual level of the target rather than relative possible achievement. For example, attainment of targets in 1970 varied from 24 per cent in Turkey to over 100 per cent in Thailand. It is evident that any comparison of target achievement must consider target levels.

For administrative and programme management purposes, over-all targets must be translated into more operational units (Ross : 1973). For example, fertility targets need to be translated into numbers of desired acceptors per month per clinic, number of clinic months (allowing for new clients), and required supplies and personnel. These estimates are not only based on demographic data but also on data related to expected (or past) performance of the various workers and units in the programme.

For a new family planning programme, the main task is to estimate the size of the eligible population and its subgroups, and to establish initial acceptance and continuation rates. Calculations at this stage are relatively simple. The complexity of the task increases geometrically when large numbers of the population would enter and leave the childbearing groups, and especially when a large number of those were programme acceptors who also have been switching methods. An example of such complex calculations is the Korean five year plan; 1972-1975. For a review of target calculations in six Asian countries, see Ross (1973).

Programme design and strategy

Family planning services are provided through a system that can be described in terms of four basic components:

(I) Organization, management, and administration;

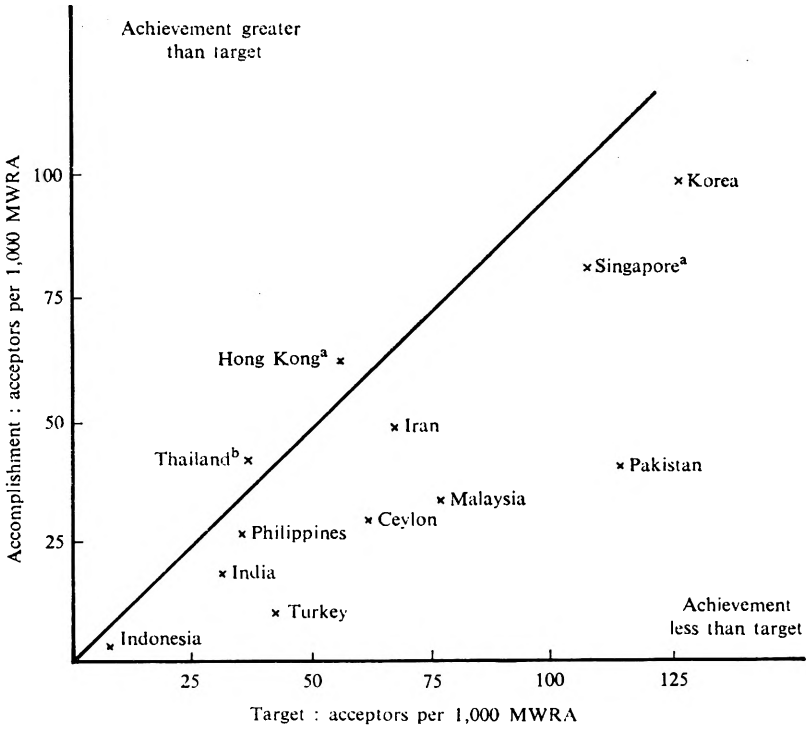
(II) The delivery system: facilities, staffing and training, supplies, and the channels through which supplies are made available to the public;

(III) Information, education, and motivation;

(IV) Evaluation and research.

The structure and mix of these basic components will depend on the basic premises and philosophy underlying the design of the programme. The mix of medical/ paramedical personnel; the extent to which home visits,

Figure 1. Comparison of 1970 Targets and Accomplishments in 14 Countries with National Family Planning Programmes



Note : Throughout these figures and tables, an acceptor is defined as a person accepting contraception for the first time, that is, a first-time acceptor.

[a]Data are for 1969.

[b]The Thailand target is unofficial and "in-house" and used only within the Central Ministry of Health as a working goal for acceptors in 1970.

Source : Studies in family planning, Vol. 3, No. 3, March 1972.

mobile clinics and social workers are used as motivators; the use of various types of incentives for workers and/or clients; the mix of contraceptive methods; and the extent of integration with health are all based on stated or unstated premises of the planners and policy makers. These are premises about the social and medical conditions necessary for effective fertility regulations, about identification of the target couples most likely to adopt contraceptive practice, about identification of the effective information, education and motivation media required to reach and influence the target families, and about identification of the combination of methods that are most likely to be accepted and used by the target couples and the best way(s) of delivering them (Sirageldin: 1972). Some of these premises are based on findings from surveys and studies done in the same country or inferred from studies done in other countries, while some premises have not been verified adequately.

There is a fundamental need to continually examine, through careful research and studies, the basic assumptions underlying programme designs, strategies, and philosophies. However, there are at least two major difficulties. The first is that many of the questions asked are not easy to test with clear-cut results. The second is that any clear-cut result implies a change in programme conventional operation which will not only be expensive to do but will probably face internal resistance, especially in programmes where research and special studies are done in a separate unit from the operation units.

Changes are usually tried on experimental bases under controlled conditions. Main criticisms are: (i) the success of the experiment is probably due to the extra care and the high quality of personnel involved, which was made feasible only because of the small scale of the operation. It is impossible to generalize to the total population; (ii) experiments are made in localized areas that have unique characteristics; (iii) experiments take a long time before concrete results become apparent, while the national programme efforts have to continue and expand, thus making it more difficult to change; (iv) there is no complete controlled social experiment, with the result that no definite conclusions can be deduced; (v) they are usually expensive to conduct; and finally (vi) social science experimentation is so new that no major experiment has been completed. As a consequence, judgement on their value must be very tentative at this time. However,

there are a number of advantages associated with the experimental approach to programme design and planning: (i) it permits collection of information that cannot be obtained in any other way, whether from existing data sources or experiences; (ii) well designed experiments could help clarify directions of causality. In naturally occuring social processes, it is often very difficult to determine anything beyond correlation between the situational and treatment variables and the outcomes of the process. Because policy variables can overtly be manipulated in an experiment, the direction of causality can frequently be determined; and (iii) experiments have a demonstration effect. They are highly visible and could receive the attention of decision-makers, especially if they are administratively and operationally successful (Glennan: 1972).

There are few experiments in family planning that are currently in progress, mainly on incentives (Finningan: 1972), but it is too early to examine their possible success or potential impact on programme design and development. Other experiments (e.g., Gandhigram in India) have shown successful results but have had little impact on the national programme.

There are many small studies and research findings that are related to programme design and strategy and have an apparent influence on programme management. In a recent report, Ross and associates (1972) made a comprehensive review of findings from family planning research which did not include experimental research. We shall attempt to summarize from Ross (1972) some selected findings relevant to this discussion :

(i) The use of field workers :
   a. Acceptance rates and a decline in fertility by district are correlated more with the number of field workers operating in the district than with the availability of doctors trained in IUD insertion;
   b. Field workers appear to motivate directly or indirectly the majority of acceptors (Hong Kong, Republic of Korea);
   c. Targets for field workers could act as a means of motivation (Republic of Korea);
   d. Failure to pay field workers adequately may result in declining performance or high worker turnover with increased training cost;
   e. Age, marital status of field workers are more positively correlated with performance than academic education;
   f. The worker's own knowledge, attitude, and family planning practice may be important to her performance;
   g. Organized scheduled home visits to target women by field workers are better than random visits (Hong Kong, Pakistan).

(ii) Paramedical Personnel:
   a. Paramedical personnel could perform IUD insertions in some areas (Pakistan, Bangladesh, Republic of Korea);
   b. Paramedical personnel, if adequately trained, could compare favourably with physicians in terms of IUD retention rates (Pakistan, Bangladesh, India, Republic of Korea).

(iii) Mass communication :
   a. Mass media can be an important source of family planning awareness. The relative importance of mass media and personal communication varies among studies (India, 1967; India, 1970; Republic of Korea, 1967);
   b. Word-of-mouth diffusion can be very effective; the optimal combination of inputs and densities of coverage can be experimentally determined to capitalize on this diffusion (Thailand, 1966; Thailand, 1967; Pakistan, 1962-65);
   c. Radio can significantly increase knowledge and acceptance (Pakistan, 1971; India, 1968).

(iv) Contraceptive continuation and acceptor characteristics:
   a. IUD continuation rests most heavily upon the removal rate, less upon the expulsion rate, and least upon the pregnancy rate;
   b. Continuation varies with type and size of the IUD and is influenced by both physiological and social factors;
   c. Continuation rates for the IUD and the pill run higher in clinical studies than in mass programmes;
   d. IUD continuation generally increases with parity, age at acceptance, and rural residence. It is higher for those with low education and for those who say they are stopping childbearing;
   e. Couples terminating use of the loop or pill often employ alternative contraceptive methods, sterilization or induced abortion;
   f. Most acceptors are between 25 and 24 years of age;
   g. Acceptance rates rise with parity.

Some of these findings have clear programme implications although it could be country or even region (within country) specific. For example, the findings that setting targets for field workers could act as a means of motivation in the Republic of Korea may not have the same effect in another country with a different social setting. There was no evidence that targets for field workers in Pakistan (1965 -69) were a means of motivating workers. However, the

findings may have important implications for programme management in the Republic of Korea. An important finding for programme planning and management is the success of paramedical personnel in IUD insertion. This is the type of research finding that stems from the countries' basic constraints and needs and probably had a very high marginal return. Another finding that should have programme implication is that couples terminating a programme contraceptive method often employ another on their own outside the programme. The implication is that programme manpower resources could be shifted from follow-up activities to new recruits. Information about acceptors' characteristics could indicate the type of people that need additional motivational efforts.

There is a general weakness, however, in many of these findings. They give administrators some sense of the type of difficulty encountered in their operation but with no indication as to what causes what or what should be the next step. Part of that could be a combination of how the study was formulated and how the results were reported. For example, the findings that organized scheduled home visits to target women by field workers were better than random visits could be meaningless or misleading without more elaboration and explanation. Scheduled visits could be more effective depending on their frequency, the type of field workers, and the area of field work. We cannot talk about averages here since there must be some relevant interactions. The same is true of the finding that failure to pay field workers adequately may result in declining performance.

Another interesting observation in Ross's review is the lack of reported findings on the quality of the delivery system and its efficient operation.

Management and programme operations

Most family planning programmes are faced with a large administrative structure, have to handle an extremely complex operation that involves continuous supplies of medical and non-medical goods and services, an educational and motivational compaign (without a clear curriculum), a maintenance programme, a training programme, an information system, and a complex national and international financial arrangement – all within the pressure of a tightly engineered time schedule and some given target. And most programmes with national and international co-operation were able to meet most of these challenges. There have been recent attempts to introduce sophisticated operation research techniques and efficient information data-handling and supplies control into the management of family planning programmes. It seems, however, that case studies which attempt to examine major bottlenecks within programme operation in its various levels are lacking. Such studies are needed in order to develop some criteria of efficiency that could be used as guidelines for programme improvement. It is possible that solutions need be neither expensive nor complex, although a study design that would yield simple and clear conclusions itself may be complex.

Evaluation

The frame for the evaluation of programme activities and achievements is built upon defining a set of programme objectives and the appropriate criteria to judge achievements after allowing for the appropriate time lags needed for the diffusion process. Programme evaluation will accordingly include the evaluation of programme inputs, evaluation of intermediate results, evaluation of programme efficiency (e.g. cost-effectiveness), and the evaluation of fertility decline. Indeed, evaluation could go beyond examining changes in fertility to examining whether fertility reduction had its desired social impact (the ultimate goal). It is evident that the evaluation process is not independent of the size, design and strategy of the programme and is basically an integral part of the deduction-induction process of developing, testing and modifying methodological and operational tools in the field of family planning programme management and development. There have been various reviews of family planning programme evaluation and no attempt is made in this paper either to repeat or to update such efforts (e.g. Ross, 1967; Sirageldin, 1972; Nortman, 1973; Mauldin *et al* 1970). Our purpose will be to examine some general themes and puzzles in the evaluation process.

Most programmes operate roughly as follow: clinics (stationary and/or mobile), maternal and child health clinics and hospitals offer sterilization, IUD insertion, dispense other contraceptives and provide some form of post-partum programme. Field staff make home visits, hold group meetings and provide general educational and motivational material. Mass media and other forms of publicity are used depending on the social setting and the level of literacy. And efforts to follow up acceptors are made to encourage continuation. These are also the various levels of evaluative effort. Almost all such efforts are subject to serious methodological and conceptual difficulties, which have not been solved completely thus far. The discussion, however, could centre around four sets of criteria, or yardsticks, for general programme evaluation, namely, fertility change, activity levels, administrative matters, and costs. The emphasis will be on findings and their limitation to programme management and development.

Fertility change. The examination of programme effects on fertility encounters well-known measurement, methodological, and analytical problems. First, there is the problem of poor data quality, which obscures the real change in fertility. Because fertility changes are relatively small during a plan period, high quality data with large samples are needed to assess such changes (Seltzer: 1971).

The main sources of fertility data include census data, vital statistics, sample surveys and special studies. Censuses provide valuable data for the calculation of fertility measures through the applications of special demographic techniques. But census measurements of population growth (and fertility change), given their accuracy, occur too infrequently to be adequate for purposes of programme management and guidance. Furthermore, census estimates of growth are averages over ten-year periods. They do not indicate the pattern of change within the census period, and accordingly do not indicate whether most of the change occurred during the "impact period" of the family planning programme. And in some instances, a family planning "impact period" may cut across two census periods. However, for many countries, censuses taken around 1970 are probably the main source of information for establishing changes in fertility and mortality that have taken place during the decade 1960-1970.

The registration of vital statistics is grossly incomplete over most of the developing world. In recent years, special efforts have been made to remedy this situation by carrying out special surveys and studies both to collect more reliable estimates of fertility levels and trends among other population statistics and to be used as a basis for improving the permanent registration system of the country (e.g. Afghanistan, Bangladesh, India, Indonesia, Pakistan). Many of these efforts have succeeded in providing more reliable estimates for fertility levels, and the general pattern of the findings indicate that fertility has been higher than what other data sources indicated. But most of the findings did not give concrete conclusions about changes in fertility during the short plan periods of the family planning programmes.

Special retrospective national surveys to estimate trends in fertility have been conducted recently in some Asian countries (e.g. Bangladesh, Republic of Korea, Malaysia, Pakistan). In most of the cases, the findings of these surveys indicate an apparent declining fertility trend. The similarity of the general conclusions of these surveys raise suspicions whether such apparent decline is partly a result of inherent biases in the data collection procedure, i.e. memory bias, which tends to push events forward in the early but not in the latter years (Som: 1973). Some methodological studies are currently in progress to examine the extent and direction of biases in pregnancy history surveys through matching and the application of some probability distribution functions.

But even when good fertility data exist, there is a second set of serious problems related to their use for sensitive family planning programme evaluation and for making efficient administrative decisions. These problems are related to the general area of time lags and include :

(i) The nine-month lag from adoption of contraception to apparent changes in fertility. There is also the existing but unknown time lag between the beginning of programme activities and the anticipated changes in the behavioural indicators such as acceptance rates and the pattern of their time path;

(ii) Time lags do not refer only to programme input-output relations. They refer equally to other factors influencing fertility behaviour. Fertility behaviour is a social phenomenon affected by a complex set of socio-economic factors. And, in the context of social change and social engineering, many of these socio-economic factors, their levels and relative mix have also been changing either by design or by nature. For example, in many Asian countries there have been recent changes in fertility-related laws such as those governing abortion practices and the age at marriage. There have also been noticeable changes in the rates of industrialization, education, especially for girls, urbanization, and indeed in health and morbidity. The "impact period" of such changes on fertility behaviour may procede, overlap or supercede the "impact period" of the family planning programme. Accordingly, the question of separating programme impact from the action of other factors becomes an exceedingly difficult question and raises many analytic and statistical problems some without adequate solutions. Recently, there have been some empirical attempts, including the use of multivariate techniques to estimate the net effects of family planning programmes. For example, using areas as units of observation, results from multiple regression analyses indicate that areas with higher acceptance rates or with more programme activities tend to have larger decreases in fertility, after allowing for the effects of other factors. The same pattern of relationship was apparent when examining fertility differentials between experimental areas and control areas in experimental-type studies; and between family planning programme areas and non-family planning programme areas in general (Ross: 1972). Many of these findings are gross and provisional at best. However, the fact that they all tend to give similar conclusions in spite of their use of different methodologies indicates that there is an element of truth in the finding that family planning programmes do have a net effect on fertility decline beyond the effect of other socio-economic forces;

(iii) Another lag which is mainly administrative rather than purely methodological is that it takes a relatively long time to process and analyse fertility data so as to be useful and timely for programme management. Most of the reported fertility data, in their final form are usually at least three to five years old. This delayed response does not mean

that such information is not useful. On the contrary, they are essential ingredients for programme planning and development and enter as basic data for population projections.

A third set of problems refers to the dynamics of individual behaviour and to the influence of non-programme inputs. Even if the family planning programme was the only source of family planning services in the country, i.e. no private sector, it would still be possible for couples to practice outside the programme delivery system since there are methods that need no outside inputs and that could be used efficiently if couples were motivated enough, e.g. withdrawal. And when using birth as a criteria for programme evaluation, illegal bortiaon should be an important factor to be considered. But there is usually a significant non-programme sector which provides various family planning services. Programme achievement accordingly could be overstated if no account was taken of both the level and structure of non-programme activities, as well as the past practice history of new programme-acceptors to account for those who substituted non-programme methods for programme methods. Indeed, substitution need not be a one-way street. As discussed earlier, findings indicate that many acceptors who terminated a programme method have continued to practise some method outside the programme delivery system. Furthermore, programme achievement may be underestimated to the extent that family planning practice outside the programme is partly the result of the programme's motivational and educational efforts.

Various studies have addressed themselves to the problem concerning substitution : to what extent programme achievement is overstated by the possibility that new programme acceptors have been past users. The findings, as summarized in table 1, indicate that the percentage of couples who had not used contraception before acceptance is high, ranging from 66 to 86 per cent. This suggests that the programmes may be servicing many couples who might otherwise not have practised contraception (Ross: 1972).

The studies and their findings presented in table 1 indicate some apparent bias in family planning research objectives (Sirageldin: 1972). The bias seems to be towards defending programme activities and justifying their existence. An analysis parallel to that of table 1 should have indicated the percentage of acceptors outside the national programme who did not use contraception before as well as examined the flow pattern of acceptors between the programme and the non-programme delivery systems. The purpose is to maximize total acceptance over time and not necessarily to maximize programme activities. Such information is lacking in spite of its apparent importance for programme management and planning. These issues, however, are part of our discussion on the use of acceptance rates and programme activity levels to evaluate programme effectiveness.

Activity levels or programme intermediate effects. Surveys and studies of programme intermediate effects usually attempt to link contraceptive use to births prevented and fertility change. To end with conclusions that translate programme efforts into births averted and to link the latter to changes in the national birth rates depend on a wide variety of research findings and data sources and on extensive analytic developments, some of which are still problematic. Account must be taken of the methods-specific acceptance rates, methods-specific continuation rates, acceptors fertility-related characteristics, and the degree of substitution or replacement effects. Each of these areas opens a Pandora's box of analytic problems and research questions that cross boundaries of related (and unrelated) disciplines. A lot of progress has been done already although the area of doubt or ignorance is

Table 1* Percentage of acceptors who had not used contraception before acceptance, for six countries: recent data. (figures refer only to acceptance within the national programmes)

Country	Year of data	Sample size (in thousands)	Percentage with no previous use of contraceptive
India	1968	2.3	86
India, Haryana	1967-1968	1.7	66
Korea, Republic of	1965	2.7	73
Malaysia, West	1969	70.6	74
Philippines	1970	6.1	68
Thailand	1969-1970	9.1	80

Sources: India: India, Programme Evaluation Organization, 1970: 82
India, Haryana: Simmons, 1971; 199, table 11-9
Korea, Republic of: Republic of Korea, Ministry of Health and Social Affairs, 1967: 49, table 9
Malaysia, West: Ariffin bin Marzuki & Peng, 1970: 6, Table 2
Philippines: Laing, 1971 a
Thailand: Rosenfield *et al*, 1971: 185

* Based on Ross: 1972 p. 16.

still large. Much of the needed information is based on special studies and surveys in order to supplement the limited scope and quality of the information generated within the routine collection of programme statistics.

For example, monthly acceptance rates are usually taken as a convenient administrative index of programme effectiveness although, by themselves, they tell nothing about the quality of client management and follow-up care, both important determinants or continuation rates. Nor do they tell about programme indirect effects upon non-clients. The development of the life table method and its wide use in calculating continuation rates have facilitated comparisons among methods and enabled programme management and planning to make better decisions concerning contraception strategy. It is evident that an understanding of the social effectiveness of any method is a function of at least four sets of factors:

(i) the general socio-demographic characteristics of the population,

(ii) Acceptors characteristics;

(iii) The "biological" effectiveness of the method;

(iv) The extent and adequacy of the programme and non-programme delivery systems.

It is clear that the social effectiveness of any method cannot be taken as a constant parameter. Understanding the determinants of the social effectiveness of the various programme methods and of their movements over time is clearly important for adequate programme management and development.

Translating acceptance rates into births prevented to indicate programme movement towards its target could be misleading if based on erroneous or outdated information (or assumptions) about the social effectiveness of the various programme contraceptives. Field studies of IUD retention rates have indicated in some cases that they were below the rate assumed by the programme in calculating its impact on fertility (Pakistan: 1968). Also, field studies have shown that the social retention rates for the pills are far below their biological effectiveness, a finding that probably discouraged the introduction of the pill as an early programme method in some countries. There has been a large number of studies that examined the retention rates of the IUD and the pill in various Asian countries. A discussion of some of these findings and their implications to programme management has been given earlier in the paper.

Estimates of births averted through the use of the various family planning methods are only valid for a given country (or region within that country), for a given time, and for a given quality and type of method and of the service delivery system. However, they are useful as benchmarks and baselines for comparative purposes. For the IUD, estimates varied between 0.33 to 0.94 births averted per IUD insertion in various countries (Chang, Lui and Chow 1969, Potter 1969, Simmons 1971, Repetto 1968, Haynes 1969, Wolfers 1971). For sterilization, estimates varied between 2.35 to 2.50 births averted per sterilization. These estimates, when applied to programme performance (acceptance rates) in order to calculate the total births averted through programme efforts, and after adjusting for acceptors' characteristics, must be reconciled with estimated movements in national fertility indicators, estimated from sources other than the programme's own statistics. Table 2, based on Ross *et al.* (1972), gives information for six Asian countries indicating what portion of the birth rate decline is due to: (a) change in the age structure of the population, (b) change in the per cent of women married, and (c) change in marital fertility. Also, data on the per cent of married women using contraception (including sterilization) are given by programme and non-programme supplies to indicate the relative role of programme efforts.

It is evident from Table 2 that the apparent decline in marital fertility must have had an important role in the decline of the crude birth rate. Part of the decline in martial fertility must be a result of programme efforts as indicated by programme acceptance rates. This latter conclusion needs to be supplemented by other findings mentioned above about method effectiveness. As a result, it was possible for researchers to make statements about the effect of family planning programmes on national fertility. For example, it is estimated that the IUD programme was responsible for reducing the national crude birth rate in the Republic Korea by 10 per cent from 1964 to 1970, that about half of Singapore's decline in crude birth rates from 1966 to 1969 was the direct result of the family planning programme started in 1966, and that about 4 per cent of all the expected births in India in 1967 was prevented by the national family planning programme (for references, see Ross 1972). These estimates are not given as exact figures but rather to indicate the order of magnitude of family planning programme impact.

Administrative matters. Evaluation of family planning administration and management could be important for detecting bottlenecks and internal inconsistencies as discussed above. Such evaluation is usually one of the objectives of the international evaluation missions invited by various countries, e.g. the United Nations teams to India, Pakistan, Bangladesh, the World Bank teams to India, Jamaica, Indonesia. Recommendations of these teams are usually based on an examination of the accumulated research and programme output evidence and to a large extent on site visits through interviews and field observations. In many instances, some of the recommendations have been adopted by the local family planning programmes.

One must mention, however, that there are extremes in introducing innovations. Computer data processing for

Table 2. Crude birth rate decline, factors in the decline, and current contraceptive use by source of supply, for five Asian countries

Country, year programe began & year of data	Crude birth rate' CBR (at base year)	Change in CBR (percentage)	Percentage change in CBR due to change in				Percentage of married women using contraceptives			
			All factors	Age structure	Percent married	Marital fertility	Total	Public	Private	Year
Sri Lanka 1968-70	32.1	–8.5	100	–21	30	89	8	7	1	(1970)
Hong Kong 1961-65	35.5	–18.9	100	79	10	1[1]				
1965-67	28.8	–10.4	100	13	0	87	50	17	33	(1970)
Republic of Korea 1957-61-62/66	43.0	–20.7	100	6	33	61	32	28	4	(1970)
Malaysia, West 1975-62/66	46.2	–17.1	100	–20	41	79	13	5	7	(1970)
Singapore 1957-66	42.7	–33.0	100	0	63	37	45	27	18	(1970)

Source: Ross (1972) p. 8.

efficient handling of service statistics, but not for detecting supply bottlenecks, and modern techniques of operation research as applied to management-information-decision processes have been suggested and introduced in family planning programmes (e.g. India). Such innovations are indeed useful and could yield significant improvements. It seems to be, however, that a large part of the management-administrative problem is in the human element. Are we attempting to introduce modern big corporation techniques into essentially a traditionally-oriented small business enterprise. Perhaps the real challenge to the "business" of family planning is to find ways to make the work intrinsically interesting, given the cultural constraints and the deadline nightmares. Perhaps that is a more urgent demand than moving the business into a relatively highly sophisticated structure that may end up ahead of its time and reality. There must must be a trade-off somewhere between efficiency and creativity, where the various workers of the organization are deeply involved in the problem-solving approach. It seems to me that an effective family planning programme must tackle both types in terms of studies and research priorities.

Costs. It is fair to say that so far no major programme has given adequate attention to cost or to cost-effectiveness analysis. There have recently been various comparative studies of the cost per acceptor in various programmes, of the cost-effectiveness in terms of the relative contribution of the various inputs based on insufficient and inadequate data. But if programmes attempt to establish sensitive programme analysis, they must identify for every programme effort the appropriate cost estimate. Such a step requires a new look into the whole area of service statistics. We must mention, however, that in the absence of adequate measures, simple cost analyses on regular intervals can go a long way toward improving efficiency and effectiveness.

Studies that help in reducing cost could be related to workers' time and programme strategy. For example, it was shown that a group meeting in every other neighbourhood as opposed to every neighbourhood could help the cost without affecting effectiveness. ESCAP has been conducting a comparative study of service statistics and programmes information systems. There should be conclusions drawn by each country which could reduce cost, improve efficiency and effectiveness.

Summary and conclusions

In this paper, we have attempted to examine over a large and complex area the role and need for research and studies in family planning programmes. To make the discussion more manageable and focused, it has been organized around four sets of questions fundamental to programme management and improvement. It is evident that the field of family planning is not short of research and evaluative studies although there are serious gaps in current knowledge about answers to various action-oriented questions. It is not clear from this rather *ad hoc* survey how much planning and programme management have been influenced by research findings. It is tempting to say there has been diffusion, although not enough.

A serious gap seems to be the lack of a coherent research-evaluation programme designed for programme needs in a dynamic way. In other words, there is a tendency for the research and evaluation programmes not to learn from their previous findings and accordingly to lose touch with the programme's real needs.

There is an important and continuous role for research and evaluation in family planning programmes. But past efforts have not been sufficiently influential :

Research and evaluation findings did not have an adequate predictive potential in order to gain relevance with programme management and administration;

Conclusions were usually passive (maybe too scientific) and without many ranked options;

Management and planning questions are usually not formulated in a researchable framework;

Research areas are not finally linked to show the interdependence of the family planning programme operation.

It is an interesting exercise and probably a very useful one if an attempt is made to develop an input-output scheme, where the initial input stems from management in terms of relevant questions and the research output feeds back as input in the programme operations and so on.

The problem is to develop a five year plan of such dialogue, with some expectations about time lags involved both in research completion and findings utilization.

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Asian Population Programme News: Regional Quarterly Population Newsletter (vol. 1, Nos. 1, 2, 3; vol. 2 Nos. 1, 2 and 3 (combined); vol. 3, Nos. 1 and 2 (combined), Nos. 3 and 4 (combined); vol. 4, Nos. 1, 2 and 3 (combined), No. 4; vol. 5, No.1)

F. Population Headliners

G. Asian and Worldwide Documents on Population Topics (ADOPT)

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