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Demographic Research in India: Has it Benefitted FW Programme**

LET me first of all thank the IASP, particularly its President Professor K. B.

Pathak for giving me honour of invitation to deliver this Third George Simmons Memorial lecture. It is my proud privilege to be here today to speak in the memory of great researcher who has made significant contribution in the field of population, health and development. I am sure quite a few of you are familiar with his work on cost-benefit analysis of family planning programme in India and the study of family planning programme in a Division of Uttar Pradesh which was one of the first large studies on the Indian programme. This was a pioneering study for strengthening managerial needs of the programme. Professor Simmons used this experience to enrich other family planning programmes internationally when he was with the School of Public Health, Michigan University, Ann Arbor. His initiatives in the family planning programme in India, particularly in Uttar Pradesh led him to make contributions, to the programmes of other countries. He wrote widely on topics related to population, health and development and worked on dynamic models relating population, health and development. I have particularly been using his unique analysis where he showed that family planning programme is the most cost-effective intervention (compared to other developmental programmes like nutrition, education and rural development) to bring about reduction in fertility. This analysis at the time when people were questioning the effectiveness of family planning programmes for achieving fertility reduction was a great support for funding the family planning

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** Third George Simmons Memorial Lecture at the Annual Meeting of IASP, Coimbatore, Feb. 12-14, 1997.

programmes by bilateral and international agencies. These are some of his studies with which I am familiar and have been using in my work.

Besides his very useful research work, I have known Dr. Simmons personally. He was a nice human being, full of ideas and a personality which infused inspiration. He has inspired several of his students and colleagues to work on the problems of family planning programme and development which is a number one problem, a mother problem to social and economic development. My personal interest in this programme and my speaking in the memory of a person who had devoted his life for family planning programmes and gives me a sorry feeling of how little we have done to solve this serious problem which is critical for all our developmental efforts.

Since the person in whose memory this lecture is being delivered has contributed immensely to research in the field of population and that too in India, I feel that it was befitting me to speak on demographic research in India and how it has benefitted family planning programme. My choice of this topic is also dictated by my feeling that we, the demographers have not done enough justice to the programme; we have not used our potential to help the country to solve our number one problem. Our contributions have gone only a half-way; we have been able to identify the problems and issues but did not go to the stage when our researches got effectively utilized. We have been assessing the status of the programme and have been identifying the issues but not gone to the stage when the government could use it for effective policy and strategy formulation. We have done researches related to the programme but have not taken them to their logical end when they could achieve its goals of strengthening the programme. We have been diagnosing the programme problems but have not been able to lead to any meaningful programme actions. I will even go to the extent of saying that the purpose of our excellent researches got defeated if we judge them from the point of view of the benefits to the programme. I know that some of you may not agree with me but I strongly feel that we have not played our full role but have limited ourselves to play only a part role. I will like to urge my fellow colleagues to think seriously how can we make sure that our programme researches help the country to solve its *numero uno* upon problem.

Demographic Research in India

India was the first country with national family planning programme. It had no experience to use from other such programmes; therefore it had to evolve gradually. Research arms of the programme thus became very important part of this evolution process. Besides encouraging individuals to undertake programme researches, the Government started full time units called Communication Action Research Centres,

later called Demographic Research Centers and now called Population Research Centres. They were created independent, outside the government programme machinery so that unbiased programme assessment can be had and enough information can be generated to strengthen the programme. Fertility reduction was the overall goal. The stalwarts like C. Chandrasekaran took responsibility of conducting the Mysore Population Study to understand factors affecting fertility, the National Sample Surveys gave a lead in collection of data on fertility behaviour; all these efforts were to benefit the programme so that right programme strategies could be evolved. With expansion of the programme in successive five year plans, need for more trained manpower was to be met through training in the Demographic Training and Research Centre, now International Institute for Population Sciences. It may thus be noted that fathers and fore-fathers (of some of you) of the programme had very rightly and aptly thought of a need for researches related to the programme and a system was developed for this purpose.

Programme Benefits of Demographic Researches

A reasonable machinery had been set up to get field feedback on the programme. It was in addition to the Management Information System which the programme had developed to get regular feed back. All this was felt necessary to keep programme on the right track and efficient. But did it happen? The answer may be in between the continuum which has 'no' and 'yes' as extremes. Why the answer is not 'yes'? Why it is somewhere between 'no' and 'yes'? Did we think why our research machinery only served its part objectives; why could the programme reap only partial benefits from our researches? Was it not our responsibility to help the country by making programme successful? Where was the gap? I know answer in the minds of several of you associated with the research machinery is that there were several gaps in the machinery; machinery was not optimal. This may be right but has this sub-optimal machinery been used adequately for the programme objectives? The correct approach in such situations would have been to do the best with the existing infrastructure and then point out gaps for the limited benefits these researches could give to the programme. But it was not done; many times even resistance was shown when these Centres were requested studies on some programme issues. Though it was not always the case, yet it was difficult to justify the requirement of increased infrastructure for the Centres. Since the research studies could not provide leads to the programme, the Planning Commission and the Ministry of Health and Family Welfare were not ready to listen the arguments on the need for strengthening the Population Research Centres. Their usual answer was that why should be the budget increased when they have not

benefitted the programme. Though there may be arguments on both sides and perhaps both sides are right in their own thinking but overall result was that the programme did not get adequate inputs from the researches.

That was all in the past. The researches continued to be conducted by the Population Research Centres and by other institutes with or without funding support from the Ministry of Health and Family Welfare and various other donors. They continued to be diagnostic in nature, highlighting programme issues but never gave a package of programme action. Then came a spurt in the programme research activities in seventies and early eighties when almost all the states had Area Projects to strengthen their programme services and infrastructure. Several baseline surveys at district level were conducted; the objectives were to make inputs in planning and implementation strategies for these Area Projects. They were also to provide estimates of baseline programme parameters against which impact of the project could be assessed at the end. A very useful set of data were collected in these baseline surveys and detailed reports were prepared. Those involved in these surveys know that these surveys did not benefit the Area Projects for implementation strategies; at most they provided baseline levels of parameters.

The utility of these baseline surveys might have been limited to the programme but they did give a good deal of experience to demographers and specialists in population surveys in the conduct of large scale demographic surveys. In contrast, earlier surveys/studies were of small scale and the data analysis was limited. This period can easily be said to have contributed significantly in the family planning programme studies. But this contribution was more in methodology, much less in programme planning and strategy formulations. The utilization of the results was at most 'limited' though workshops were held to disseminate the findings.

Current State of Programme Surveys and their Potential

Now let me come to the current period of early nineties when we have at least three sets of large scale surveys, two of them in the state of Uttar Pradesh where one-sixth of the country's population lives and the third is a nationwide survey for each state of the country. The first set is baseline surveys conducted in 15 districts of Uttar Pradesh coordinated by the Population Council of India. These surveys gave a good deal of programme insights; several district specific findings emerged. Workshops were held to disseminate those findings among district and state level programme functionaries. No effort was made to translate the findings into programme actions. It is difficult to see how the programme benefitted from these district level analysis of the programme issues though a good deal of potential for such use existed.

The second set of data is that from National Family Health Surveys (NFHS) where state level demographic and health surveys have been conducted in 25 states, covering a total of 89,777 ever-married women in India. A gold-mine of programme data have been collected, analyzed and beautiful sets of reports have been printed. Dissemination exercises have been undertaken by conducting a national and state level workshops in each state. The findings are widely quoted by researchers, demographers and even programme managers at the state and national level. All parties involved in it seem to be happy; the International Institute for Population Sciences because they have completed the job of coordination given to them. Population Research Centres because they have acquired experience of data collection, analysis and report writing, USAID, East-West Population Center and MACRO International because they have conducted one more DHS successfully, programme managers at the state and national level because they have the latest picture on the status of the programme and the demographer community because they have a gold-mine of data which can be used to write/guide Ph.D. theses and publish papers in national and international journals.

There is a third set of survey conducted in Uttar Pradesh Called PERFORM survey (Project Evaluation Review for Organizational Resource Management). It has collected data from 28 districts of U.P. covering 14 divisions, five regions and the total state. A state level seminar was held at Lucknow and several district/division level seminars were held for discussions on district/division level findings. Again, it seems that all parties involved in the survey are happy and satisfied that the task has been completed.

Let me go back to the source of data, National Family Health Survey which is familiar to all of you. Though all parties seems to be satisfied, have we really completed the task for which this survey was conducted? Was the purpose only to collect data? How far have we used the findings to strengthen the programme? I do not know how many of us have, consciously or unconsciously, given some time to think on the total outcome of this survey. I have raised questions on its utilization for the programme on several fora. It is unfortunate that the demographers' community feels that their job is over after writing reports on the findings and presenting various programme issues. They feel it is now the job of the programme managers to take the next step and use these findings. The programme managers, in all humility, do not deny this as their function. They do congratulate the demographic community for having given such a useful set of programme data which they could use to strengthen the programme. But will they be able to do it? Do they have this much time and patience to go over the report and translate the findings into programme actions? Will they be able to link various findings in different sections of the report and convert them into

programme actions? Do they have this much grasp of the findings? The executive summaries produced in all these surveys may give a quick reading on the major programme findings but are these executive summary reports enough for programme managers to be able to use the findings for programme strengthening? Take an example, it was found that age at marriage is low, particularly in high-fertility states. What needs to be done that the process of raising age at marriage can be accelerated? The programme manager needs help in determining the policy and strategy measures which can help in raising age at marriage. Again, he needs assistance of researchers to suggest appropriate measures. Unless this step is taken, I feel the objective of conducting the study has not been achieved since it remained only a finding. Unless the programme findings get used in modification of programme strategies, I feel that our objective is not complete; it is only a half complete.

Some of you must be wondering what I meant by translation of survey findings into programme actions. In other words, what I mean is that (i) different findings hinging on the same phenomenon may be collected and compiled so that they can lead to some programme actions, and (ii) then suggest what specific actions/interventions could be taken/made at different levels. For example, if it was found that contraceptive prevalence (CPR) is low, then it could happen due to one or more of the following reasons: (i) contraceptive acceptance may be low because people want to have large family, they want to have more sons, their husbands or mothers-in-law are against the use of family planning methods or they themselves may be afraid of using family planning methods because of possible problems they might have to face, and/or (ii) contraceptive discontinuation may be high because of failure of contraceptive, various side effects the acceptor has faced, and/or problems of getting supplies etc. All such information should be collated if available so that they can lead to specific programme actions for making programme more effective and efficient. If information on all aspects which influence low CPR is not available in the survey, then some rapid diagnostic technique like focus group discussion may be needed to know why acceptance or continuation has been low. These collated findings then need to be translated into programme actions for overcoming the barriers so that ultimately contraceptive prevalence can be increased.

How Findings can be Converted into Programme Actions: An Example

Let me take an example where an attempt is made to use NFHS data to increase contraceptive prevalence in high fertility states in Northern India. A comparative scenario of use of family welfare programme services in the *rural areas* of the four high-fertility northern states and two low-fertility states is shown below. The choice of these states has been made to cover extreme levels of fertility.

TABLE 1: PERCENT REPORTED USE OF FW PROGRAMME SERVICES IN *RURAL AREAS* OF FOUR HIGH-FERTILITY AND TWO LOW-FERTILITY STATES

<i>Indicator of Use of services</i>	<i>States</i>					
	<i>Raj</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Total fertility rate	3.87	4.14	4.11	5.19	2.54	2.09
Crude birth rate	28.1	32.9	32.9	37.9	23.5	20.3
Infant mortality rate	73.4	93.8	106.6	126.5	71.4	28.7
Ante-natal care	29.4	33.2	47.8	40.4	93.1	97.6
Deliveries conducted by relatives	38.9	24.6	43.7	53.0	9.8	1.6
Immunization: BCG	40.9	31.3	52.5	46.0	90.1	83.6
DPT-III	25.0	26.6	38.7	30.3	83.5	72.5
Polio-III	28.1	29.0	41.1	33.5	81.6	73.2
Measles	26.1	12.7	36.4	23.5	69.5	62.9

Three important observations, which emerge from the table, are: (i) levels of total fertility rates in northern states are 50 to 100 percent higher than in low-fertility states. Among the high-fertility states, it is lowest in Rajasthan (3.9) and highest in UP (5.2), (ii) though fertility in Tamil Nadu has come down but IMR is still high—almost equal to that in Rajasthan; it may suggest that decline in IMR may not be a pre-requisite for fertility decline, and (iii) use of MCH services in the northern states is much lower than the low-fertility states. It is highest in MP and lowest in Bihar.

With this range in the level of TFR, a natural question which arises in mind is why is fertility in northern states high? An answer to this question can be had by looking at the values of the proximate determinants of fertility in these states vis-à-vis in the states where fertility is low. The data on these variables is also available in NFHS and has been shown in Table 2.

A few important observations from this table of proximate determinants are:

- (i) Length of post-partum amenorrhoea (PPA) is longer in high-fertility states compared to low-fertility states. It means that fertility in these states may have tendency to increase in future. There is need to ensure that this happens minimally and its effect on fertility is minimum. The programme action in this respect is to promote breast-feeding by IEC activities (including counselling). The advantages of breast-feeding in terms of morbidity, mortality and growth of children should be publicized. The right pattern of breast-feeding, exclusive breast-feeding for first four months maybe emphasized. A policy decision may be needed to enable working mothers breast-feed their children in work place. More ideas on

programme actions may be had by initiating discussions with social scientists working on related issues.

TABLE 2: LEVELS OF PROXIMATE DETERMINANTS OF FERTILITY IN FOUR NORTHERN STATES COMPARED TO TWO LOW-FERTILITY STATES (RURAL AREAS)

<i>Levels of proximate determinants</i>	<i>States</i>					
	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Singulate female mean age at marriage	17.9	17.6	16.7	17.9	20.0	21.7
% pregnancies ended in foetal loss	7.0	6.5	4.8	7.7	13.4	9.3
Median duration of breast feeding (months)	7.4	7.9	5.9	5.8	3.4	2.1
Median duration of PPA (months)	8.5	10.2	8.8	9.2	6.4	5.5
Contraceptive prevalence rate (CPR by modern methods)	27.0	18.5	32.5	15.8	45.5	53.2
% CPR due to sterilization	92.6	89.7	94.5	78.5	92.7	89.3

- (ii) The age at marriage of females in high-fertility states is lower by two to three years than the low-fertility states. Though age at marriage will gradually increase with more education and more women going for work, but the process can be accelerated by spreading information on (a) minimum legal age at marriage, awareness of which is low in rural areas, and (b) disadvantages of early age at marriage.

	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
% of women aware of minimum legal age at marriage	20.5	13.5	15.0	19.4	31.2	64.8

- (iii) Low-fertility states have overall higher incidence of foetal loss because of higher incidence of induced abortions. This finding is quite similar to the experience of countries which have gone through the process of demographic transition. Though the data on foetal loss may not be very accurate, the trend is obvious; the demand for induced abortions (termed as medical termination of pregnancy (MTP) in India) will rise in high-fertility states. This demand has to be met, both for reducing morbidity and mortality associated with unsafe induced abortions as well as fertility. The NFHS data show that women are getting burdened with unwanted pregnancies to the extent of 15 to 25 percent. The MTP services should be made accessible so that unwanted pregnancies can be reduced. This will have negative effect on fertility as well.

	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
% women reporting last pregnancy unwanted	15.2	23.0	15.2	24.2	24.7	19.6

- (iv) The next proximate determinant is use of contraceptives or contraceptive prevalence rate (CPR), a determinant which has great potential for reduction in fertility. Except MP where CPR is about 33 percent, other states have levels almost half that of the low-fertility states. Almost 90 percent of the prevalence is due to sterilization. Though sterilization is very effective method, its demographic effectiveness is determined by the age at which it is accepted. In the case of six states under consideration, the data on median age at sterilization (given below) shows that high fertility states have higher age at sterilization by about one to two years. This difference of one to two years in peak fertility age group (25-29) indicates that demographic effectiveness of acceptance of sterilization which is the main method in high-fertility states is also low.

	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Median age at acceptance of sterilization	27.6	28.1	27.3	29.6	26.2	26.7

Thus not only acceptance of family planning methods is low in high fertility states but their effectiveness is also low. Measures are needed at both fronts of increasing CPR and making it demographically more effective by bringing younger couples in the programme. It can be done both by increasing acceptance of temporary methods at younger ages and making sterilization accepted at younger ages—at earlier stage of family building.

The NFHS has given information on why couples do not accept FP methods and also why they tend to discontinue their use after acceptance. Table 3 shows those reasons and suggest several programme actions to bring about greater acceptance and increase continuation rates of temporary methods. The following are the major reasons for either non-use or for discontinuation:

- (a) Most important reason given in high-fertility states (compared to low-fertility states) for non-use and discontinuation is that couples 'want children'. This reason is particularly responsible for non-use of family planning methods. This is so because couples in high fertility states have expressed desire for a larger family, particularly because their desired family composition shows much higher son preference. The data in this regard is shown below:

	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Ideal family size	2.8	3.1	2.8	3.1	2.1	2.4
Son preference (Ratio of male per female in reported ideal family composition)	1.7	1.6	1.6	1.6	1.1	1.2

TABLE 3: PERCENT WOMEN BY REASONS FOR NON-USE OF FP METHODS *Reasons/or*

<i>non-use</i>	<i>States</i>					
	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Want child	62.6	50.4	65.6	53.3	43.8	33.8
Fear of side effects	10.9	11.3	11.2	10.8	8.2	8.6
Against religion	1.4	6.7	0.5	5.6	0.4	7.3
Opposition by family members, particularly husband	5.2	4.9	3.8	5.7	3.9	9.0
Not suited	15.1	19.8	12.4	13.8	26.9	29.0
Others	4.8	6.9	6.5	10.8	16.8	12.3

Thus the programme has to emphasize advantages and disadvantages of planned and limited family size. The preference for sons has to be reduced. A focus group discussion can help us to know whether there are any special reasons (other than those known) for the desire for larger family size. Son preference in high-fertility states has to be brought to the level of low-fertility states.

TABLE 4: PERCENT WOMEN BY REASONS FOR DISCONTINUATION *Reasons for*

<i>discontinuation</i>	<i>States</i>					
	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Method failure	3.5	19.9	9.2	7.2	2.6	1.4
Lack of sexual satisfaction	3.5	0.4	5.9	2.5	1.0	1.4
Created problems (side effects) 18.6	13.6	19.9	27.1	30.8	8.9	
Did not like method	8.8	2.8	6.8	5.8	5.7	4.6
Want to have child	44.2	38.1	25.6	27.1	27.1	25.0
Accepted terminal method	—	—	—	—	11.3	6.6
Not needed	—	—	—	3.3	—	35.6
Others	21.4	25.2	32.6	27.0	21.5	16.5

- (b) Second most important reason given for non-use or discontinuation is fear of side effects or their actual occurrence. This can be overcome by proper counselling. Potential clients need to be informed of (i) risks of planned and unplanned family, (ii) possible side effects which might appear while using contraceptives and short-lived nature of these side effects, (iii) how to deal with side effects, and (iv) availability of choice of methods so that if one method does not suit, women can switch to other method. Follow up of acceptors of family planning methods will be reassurance against any side effects. Unless these elements are built into counselling and it is made a part of the programme activity, such fears cannot be overcome.
- (c) The reasons cited in the categories 'not suited', 'did not like the method' and 'lack of satisfaction' clearly indicate that couples still have not understood benefits of planned family; they have not understood the risks involved in having an unplanned birth. Definitely more discussion needs to be held with them on issues of planned and unplanned family. This might require preparation of our field workers in this task and their greater inter-personal contact with women.
- (d) Two more reasons which have been highlighted in these tables are: (i) 'against religion'; this reason has higher reporting in states where percentage of a particular community is higher, and (ii) 'opposition by family members'; there is need to understand why this opposition exists. A series of focus group discussions in different population groups will throw some light on these factors which, then, the programme can address by appropriate strategy.

It may be stressed that there is enough information in NFHS to suggest that people in northern states, like low-fertility states, have demand for the family planning programme services (Table 5). They have expressed desire for a planned and small family. Many of them did not want the number of children they were burdened with; several of them reported that their last child was unwanted.

Though couples in high fertility states want fewer children but they have desire for larger (relative to low-fertility states) family size and also they report higher unmet need, particularly for spacing their births. The extent of reporting last pregnancy unwanted is similar in both the high-fertility and low-fertility states.

It is therefore necessary that the programme should be tailored to meet their needs. This survey has not collected information on the perception of clients on quality of family planning services but other studies point out this as one important factor that the programme is not meeting their need for family planning.

The above example suggests that we have not analyzed the data adequately. Several bits of information need to be collated in order to get strategy leads for the

programme. Therefore I feel that the NFHS Phase-1 is still not over. A big step which can ensure utilization of the information collected for the programme has still to be taken. The programme findings are still to be translated into programme actions for each state. The dissemination activity which has been carried out is only the first step in this process. We have to sit with programme managers to convert survey findings into programme actions. It requires joint efforts of those who know the data well and those who know the programme well. The first group consists of those who were involved in report writing as they know the data well and the programme manager form the second group as they know how the programme needs to be changed/modified to take care of the issues which have emerged. Thus there is need to team with the programme managers to carry out next step of converting findings into programme actions. The programme should benefit from the findings. Was this not one important goal of conducting the NFHS? Some of us may think that it is too late to go into such programme analysis of the findings at this stage. Though I do not subscribe to this view, I would urge all those involved in NFHS Phase-1 to ensure that atleast this stage is built into the next phase of the NFHS. The NFHS-II should not end with report writing and dissemination activities but should go to its logical end of translating findings into programme actions.

TABLE 5: INDICATORS SUGGESTING DESIRE FOR PLANNED FAMILY

<i>Indicator of planned family</i>	<i>States</i>					
	<i>Raj.</i>	<i>Bihar</i>	<i>MP</i>	<i>UP</i>	<i>TN</i>	<i>Kerala</i>
Total fertility rate	3.87	4.14	4.11	5.19	2.54	2.09
Total wanted fertility rate ¹	2.94	3.31	3.44	4.1	1.76	1.90
Unmet need for family planning ²	20.9	25.9	20.2	31.0	14.0	11.9
Spacing	11.7	14.8	13.3	17.7	7.4	7.8
Limitation	9.2	11.1	6.9	13.3	6.6	4.1
% reporting last pregnancy unwanted	15.2	23.0	15.2	24.2	24.7	19.6

¹ The wanted fertility rate is calculated in the same way as total fertility rate, except that unwanted births are excluded from the numerator. A birth is considered unwanted if the number of living children at the time of conception was greater than or equal to the current ideal number of children, as reported by the respondent.

² Currently married women who say that they either do not want any more children (unmet need for limitation) or that they want to wait for two or more years before having another child (unmet need for spacing) but are not using contraception are defined as having an unmet need for family planning.

In the case of Uttar Pradesh, we have another large survey completed. Though objectives of this survey were different than NFHS but still a good deal of useful data are available which can lead to useful programme actions. Therefore I will urge, USAID, Evaluation Project of University of North Carolina which conducted the survey, SIFPSA and the Population Research Centre of UP to utilize this data to fully take benefit of this survey to strengthen the programme in UP.

Need to Orient Our Researches to FW Programme

In other words, what I have suggested above is that a good deal of focus of demographic research in India needs to be related to the FP programme which is addressing our number one problem. Unless we are able to control our rapidly growing population, our efforts towards social and economic development and improvement of quality of life are not going to be successful. We, the population scientists should contribute our best in this regard. It is high time that we should ensure use of our researches for programme strengthening. This will not only fulfil our obligations towards our country but it will give us also professional satisfaction. I want to emphasize that there is no greater satisfaction than to see application of our research findings into the programme. Our researches should be oriented to a goal and the goal is strengthening the programme.

The real challenge is to carry out research which finds application in the programme. Such application will depend on the need and demand of the policy makers and programme managers who need information on policy issues and programme strategies and the package in which the findings are supplied to them. There has to be a match in the demand and supply of information. On the demand side, it is necessary that the policy makers/programme managers should feel that the results of the study are useful for the programme. On the supply side, the researcher should supply them in a feasible package useful for implementation in the programme. It should give enough detail on 'what to do' and 'how to do'.

Need to Supply Findings in Demand Mode

Two determinants which can affect utilization of the results are demand (on the part of programme managers) and supply (the package in which results are presented). The challenge to the demographic community is to match demand and supply. It is desirable that any study we undertake should be preceded by an analysis of the demands of programme managers. A discussion with the key programme managers can be done to determine issues which are of special interest to them. Information

related to those issues may be collected along with other information on the specific objectives which we may have for the study. Sending a questionnaire to programme managers for comments, as was done in the case of NFHS, is not enough. The advantage of the approach of discussion on the issues with programme managers is that they will feel involvement in the study which is desirable both for smooth conduct of the study and acceptance/utilization of results. After completion of the study, the communication (written and oral) with programme managers should start with results related to those issues in which they had shown particular interest. In case such discussion was not done before the study, discussion may be held before undertaking exercise of translating the findings into strategies/actions. The idea is to get to know the issues in which policy maker have interest. The exercise of translation of findings into programme activities should keep in view their interest and formulate recommendation about them. The packaging of results of the study should be so done that whenever communication is done with programme managers, findings on the issues they raised should get highlighted first so that they feel interested in the results.

On the supply side it is a moral duty of the researcher that he should package the findings in such away that they are feasible and implementable. They should translate the findings into programme strategies/activities in such a way that it should be clear what activities to undertake and in what form. This can be done by going through the following five steps:

- (i) Identify the variables, which we wish to influence by changes in the programme. In this category will fall, keeping in mind the example I took, variables like age at marriage, practices of breast feeding, contraceptive practices, unfavourable attitude towards FP programme, reasons for discontinuation and other such variables which affect achievements of the programme goals.
- (ii) Disaggregate these variables by cross-tabulating them by rural/urban, religious groups, scheduled caste/scheduled tribe or other such population groups to determine whether these variables have greater influence in some population groups than others. The programme activities will focus on those population groups, which has unfavourable disposition (for the programme) of the variables which ultimately affect the programme goals.
- (iii) After determining unfavourable nature of variables in some population groups, the next stage is to determine why the behaviour is unfavourable. All the related information in the report may be collated to get programme leads. If enough information is not available then some rapid assessment technique may be used to get reasons which programme should address to.

(iv) Factors determined in the above step 3 have to be maneuvered in order to improve the levels of variables (for programme goals) which the programme wishes to influence. The strategy/action plan has to be formulated to influence these determined factors in step 3. For this purpose a team of those who collected data and the programme managers should be formed who will decide programme strategy/actions to influence those variables one by one. Their recommendations on programme actions may be formulated and a discussion paper is prepared. (v) The discussion paper prepared in step 4 above may be discussed in a workshop with participation from key programme managers from the Centre and the states. Each recommendation in the discussion paper may be deliberated upon for feasibility and modus of implementation. This workshop may come up with final recommendations and the modus which could be adopted to incorporate recommendations in the programme. The overall purpose is to influence the variables (identified in 1 above) to make them more favourable to the programme.

If we go through these steps, I feel that our studies will be able to benefit the programme immensely. We will be able to help the country to solve our number one problem.