

# **District Level Baseline Survey of Family Planning Program in Uttar Pradesh**

## **Meerut**

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## LIST OF ABBREVIATIONS

ANC	:	Ante-Natal Care
ANM	:	Auxiliary Nurse Midwife
ASFR	:	Age Specific Fertility Rate
BSUP	:	Baseline Survey in Uttar Pradesh
CBD	:	Community Based Distribution
CBR	:	Crude Birth Rate
CDR	:	Crude Death Rate
CEB	:	Census Enumeration Block
CHC	:	Community Health Centre
CHG	:	Community Health Guide
CO	:	Consultancy Organisation
Cu.T	:	Copper-T
DPT	:	Diphtheria Polio and Tetanus
FP	:	Family Planning
GFR	:	General Fertility Rate
HFWTC	:	Health and Family Welfare Training Centre
IEC	:	Information, Education and Communication
IFPS	:	Innovations in Family Planning Services
ILR	:	Ice Lined Refrigerator
IMR	:	Infant Mortality Rate
IUD	:	Intra-Uterian Device
LHV	:	Lady Health Visitor
MCH	:	Maternal and Child Health
MTP	:	Medical Termination of Pregnancy
NGO	:	Non-Government Organisation
ORG	:	Operation Research Group
PHC	:	Primary Health Centre
PPS	:	Probability Proportional to Size
PSU	:	Primary Sample Unit
SC	:	Sub-Centre
SIFPSA	:	State Innovation in Family Planning Services Agency
SPSS	:	Statistical Package for Social Science
SRS	:	Sample Registration System
TB	:	Tuberculosis
TBA	:	Traditional Birth Attendant
TFR	:	Total Fertility Rate
TV	:	Television
UIP	:	Universal Immunization Programme
USAID	:	United States Agency for International Development
VHG	:	Village Health Guide

## PREFACE

*The Innovation in Family Planning Services (IFPS) project was undertaken by the State Innovations in Family Planning Services Agency (SIFPSA) with the financial assistance provided by the United States Agency for International Development (USAID), New Dehil. The goal was to reduce the level of fertility in the State of Uttar Pradesh through efforts to expand and improve family planning services. To achieve this goal, the IFPS project will support service innovations in the public sector, non-government (NGO) sector, and through contraceptive social marketing mechanisms. IFPS has three main objectives which are: to increase access to family planning services; to improve the quality of family planning services; and to promote contraceptive use. Achievement of the project objectives will be measured by the increased level of contraceptive prevalence, more specially modern spacing methods. Most intervention in the IFPS are to be developed at the district level, suggesting the need for some district level prevalence estimates.*

*The Baseline Survey in Uttar Pradesh (BSUP) initially in fifteen selected districts was the first step in the project innovation process which would provide baseline information at the district level to assist SIFPSA in the designing of appropriate service innovations and later evaluating the project activities at appropriate intervals.*

*The SIFPSA designated the Population Council, India, as the nodal agency for providing coordination and technical assistance to the BSUP. The data collection for the BSUP was entrusted to various Consultancy Organizations (COs) in each district. The Centre for Management of Development Programmes (CMDPI), New Delhi, conducted the baseline survey in Meerut district. A sample of 2675 eligible women drawn from 925 households selected in urban areas and 1575 households in rural ares spread all over the district were interviewed to collect the required information using uniform questionnaires, sampling designs and field procedures. The data collection was carried out during December 1993 to January 1994. A preliminary report on selected important indicators was prepared and submitted to SIFPSA for their use in planning innovation service strategies for the district.*

*This final report is an outcome based on tabulation plan and estimation procedure finalized in a workshop attended by the representatives of all the participating Consultancy Organization and the Population Council held at Lucknow in April 1994. It contains invaluable information on fertility, family planning practices, status of maternal and child health, utilization of health services and fertility preferences.*

*This is the first time that the district level estimates on various indices are made available by this baseline survey. I am happy to present this report of BSUP for the district Meerut. I do hope that its findings will assist SIFPSA in designing of suitable service innovations at the district level. Also the population professionals and researchers will find in it valuable data for further analysis to be utilized in promotion of family welfare programme.*

*We are thankful to SIFPSA, especially its Executive Director, Mrs. Promila Shankar, for giving us an opportunity of working with them and for providing all help, guidance and support in completing the Baseline Survey. We are sure that SIFPSA will find this report useful for the programme and would utilize its findings.*

*The financial assistance for IFPS project in Uttar Pradesh is provided by USAID and their contribution for helping family welfare programme in the most populous state of the country is gratefully acknowledged.*

*We shall like to express our thanks to The Population Council, India, particularly the team consisting of Dr. John W. Townsend, Dr. M.E. Khan and Dr. R.B. Gupta who took the complex task of coordinating BSUP and provided technical support at various stages of the survey. Their efforts were useful in ensuring uniformity, especially in framing questionnaires, tabulation plan and procedure for presentation of report. We appreciate the efforts put in by Mr. Vasant M. Uttekar for formatting and graphic presentation of the report for publication.*

*Our thanks are due to Dr. K.B. Pathak, Director and Prof. T.K. Roy of IIPS, Bombay for their valuable help in arriving estimation procedure according to the sampling design used in the survey. Mr. K.K. Bansal of Information Systems, Baroda provided package for data entry and validation; and guidance for tabulation of data. We are thankful to him.*

*Dr. A.K. Gupta, Principal, Health and Family Welfare Training Centre, Meerut made available to us class room facilities at their training centre for carrying out three weeks training of field staff. Dr. Gupta and his faculty members assisted the faculty of CMDP by taking few sessions of special interest. We express our sincere thanks to all of them.*

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*We express our appreciation for the pains taken in the work carried out by the female interviewers, supervisors and field editors in collecting data sometimes in difficult and unsecured conditions in rural areas. All the survey teams deserve our special thanks.*

*I would also like to put on record my appreciation for the hard work of Mr. P.K. Jain, Project Director and his team of dedicated workers, especially Mr. S.M. Bhandarkar at CMDP who undertook the challenge of completion of the survey and writing report in a record time.*

*Again, I sincerely wish that the information presented in this report will find its utilization in the development of service innovations in the family planning programme of the district Meerut, Uttar Pradesh.*

*June 28, 1994  
New Delhi*

*Suresh K. Gupta  
Chairman  
Centre for Management of  
Development Programmes*

# CHAPTER I

## INTRODUCTION

### 1.1 Background

The Government of India and USAID took initiative to begin the "Innovations in Family Planning Services Project (IFPS)" in Uttar Pradesh under the executive management of the State Innovations in Family Planning Services Agency (SIFPSA). The goal of the project was to reduce the fertility rate in India's most populous State of Uttar Pradesh by accelerating family planning services at the district level through innovative approaches. These efforts seek to double the use of modern contraceptives in the area over a ten year period.

IFPS has three main objectives which are to : increase access to family planning services; improve the quality of family planning services and promote contraceptive use. The three objectives are interrelated and success in one area will be tied to accomplishments in other areas. Achievement of project objectives will be measured by the increased proportion of couples using contraceptives, especially spacing methods at the district level.

Initially fifteen districts were selected for the Baseline Survey in Uttar Pradesh (BSUP). The baseline information collected will be used to plan family planning interventions, and will be employed as the reference for the measurements in contraceptive use.

The SIFPSA designated 'The Population Council, India' as the nodal organisation, responsible for providing coordination and technical support for the BSUP. Eight Consulting Organisations (COs) were identified to cooperate with the SIFPSA in the conduct of the baseline surveys in the selected districts of Uttar Pradesh.

The Centre For Management of Development Programmes (CMDP), a non-government research organisation in New Delhi, was assigned the responsibility for conducting baseline survey in district Meerut, Uttar Pradesh. The CMDP collected data on the prescribed questionnaires and schedules from 1st December 1993 to 4th February 1994. A preliminary report based on selected indicators was written in March 1994 for the immediate use by the SIFPSA. This report is the outcome of the comprehensive analysis of the data which presents in detail current status of the programme in the district Meerut and suggests useful and effective programme measures.

### 1.2 Objectives of the Study

The general objectives of the survey are to:

- \* Provide a baseline against which the effectiveness and success of district level project activities can be assessed in the future.
- \* Provide background data at the district level to assist SIFPSA in the design of appropriate service innovations.

The specific objectives of the baseline survey include:

- \* Measurement of current levels of access to family planning services.
- \* Estimates of the quality of information, choice and follow-up provided to family planning users on specific methods and their appropriate use.
- \* Estimates of knowledge and use of contraceptive methods, as well as the level of unmet need for contraception.
- \* Measurement of the acceptability, utilization and satisfaction with the methods and services provided.

Baseline information from each of the selected district will be used to plan family planning interventions, and will be employed as the reference for the measurement of improvements in contraceptive use. Improvements will be detectable by a follow- up survey after five years.

### **1.3 Socio-Economic and Demographic Profile of the District**

District Meerut is one of the 63 districts in the State of Uttar Pradesh. It comprises of 900 inhabited villages and 26 urban towns. The district is spread over an area of 3911 sq kms and its population was 34.5 lakhs which was about 2.5 percent of the total population of the State according to 1991 census.

The basic socio-economic and demographic indicators for the district compared to the State are presented in Table 1.1. The data in the table have been collected from a variety of sources. These primarily include census of India 1991 Series-1 Volumes dealing with Final Population Totals: Brief analysis of primary census abstracts: paper 2, 1991; and Family Planning Programmes in Uttar Pradesh - Issues for Strategy Development: Tables. More specifically, sources for each item of information in the table are recorded under the table.

During the decade 1981-91, the growth rate of the population observed for the district was 23.0 percent as against 25.5 in the State, which shows a decline of 2.5 percent points. The density of population per sq kms was 882 compared to the State average 473. The proportion of urban population was 37.0 percent which was higher than the State average, 19.8 percent.

The sex ratio in the district was 852 females per 1000 males which was lower than the State level of 879. The proportion of children (0-14) in the total population of the district was in the same order as in the State. Similarly, the dependency ratio in both the district and the State was 83.8.

Literacy rates in Urban areas were always higher than literacy in rural areas in Uttar Pradesh. Similarly, male literacy was higher than female literacy in all the districts. In Meerut district the literacy rates were observed to be higher than the State as a whole the percentages of literates (aged 7 years and more) among total, males and females were 51.3, 64.5, 35.6 respectively, while in the State, these percentages were 41.6, 55.7 and 25.3. However, Meerut district occupies the 12th rank in total literacy rates amongst all districts in the State.

As a result of the National Family Welfare Programme, the effective couple protection rate in the district was 36.8 in 1992-93 which was slightly higher than the State average of 34.0 percent. The primary health care facilities are provided in the rural areas of the district through 72 Primary Health Centres (PHCs), 4 Community Health Centres (CHCs) and 410 Sub-Centres (SCs). On an average a PHC/CHC provides services to 28,570 rural population and a SC to 5,296.

**Table 1.1: Socio-economic and demographic profile of the District and State**

	District	State
Population (1991)		
Total	3448	139112
Male	1862	74037
Female	1586	65075
Growth rate (1981-91)	23.0	25.5
Population density (1991)	882	473
% of total state population	2.5	NA
% urban population	37.0	19.8
Sex ratio (1991)	852	879
Percentage of total population, 1981		
0-14 Population	41.6	41.7
65+ Population	4.0	3.9
Dependency ratio (1991)	83.8	83.8
Literacy level (1991)		
Total	51.3	41.6
Male	64.5	55.7
Female	35.6	25.3
Crude Birth Rate (SRS, 1991)	U	35.7
Contraceptive Prevalence Rate (1992-93)	36.8	34.0
Per cent workers (1991)		
Total	28.4	30.0
Male	26.6	26.2
Female	1.8	3.5
Per cent employed in non-agriculture (1991)	3.5	1.7
Per cent depending on agriculture (1991)	55.2	72.0
(% of main workers engaged in agriculture)		
Per cent of total population (1991)		
Schedule caste	16.6	21.0
Schedule tribe	--	0.2
Other Hindus	U	U
Muslim	U	U
Other religious groups	U	U
Number of PHC/CHC (1991)	76	3867
Number of Sub-centre (1991)	410	20154
Average rural population per sub-centre	5296	5533

NA = Not Applicable, U = No Information, -- = Less than 0.1%

Sources :-

- (a) Census of India 1991, Registrar General of India: For Item Nos 1 to 6, 8,11,13,14
- (b) Census of India 1991, Registrar General of India: For Item Nos 7
- (c) Sample Registration System-Selected Demographic Indicators 1991, Registrar General of India : For Item No. 9
- (d) Department of Family Welfare, U.P.: For Item No. 10
- (e) Family Planning Programmes in Uttar Pradesh-Issues for Strategy Development Tables, CPDS Hyderabad, The OPTIONS Project (USA) and University of Michigan (USA): For Item Nos. 12,15,16,17

## **1.4 Presentation of Report**

This report is intended to convey the main results of the baseline survey conducted in Meerut district. The model tables cover all of the major topics of interest. There were, however, questions included in questionnaire which were not represented in this first report, partly because choices had to be made to restrict the length of the report, and secondly the topics will require much more extensive analysis than it was appropriate here. The report is presented into ten chapters and their contents are briefly described below:

### **Chapter I Introduction**

This chapter briefly describes the general background of the Innovation in Family Planning Services (IFPS) and BSUP, objectives of the survey and how the district compares with the State on some of the main socio-economic and demographic parameters.

### **Chapter II The Survey Design**

A detailed survey methodology adopted for the BSUP is presented, such as, sample design and implementation, survey instruments, training and field work, data processing, estimation procedure and field problems.

### **Chapter III Household and Respondent Background Characteristics**

It is intended to set the stage for the fertility and family planning chapters that follow by describing the background characteristics of the household population, the eligible respondents and their dwelling conditions.

### **Chapter IV Nuptiality**

It examines marriage patterns including current marital status of women and age at effective marriage.

### **Chapter V Fertility**

This chapter describes the current and past fertility of the population. It also presents information on the initial stages of childbearing fertility behaviour.

### **Chapter VI Family Planning**

It includes data on knowledge of contraception, sources of supply, acceptability, use, attitudes towards contraception, intentions to use in future, reasons for non-use, exposure to media and variety of related topics.

## **Chapter VII Fertility Preferences**

This chapter covers fertility preferences and documents women's ideal number of children and preferred interval to next birth. It also includes information on unmet need for contraception in the population.

## **Chapter VIII Maternal and Child Health and Utilization of Health Services**

The main topics covered in this chapter are maternal care during pregnancy and delivery, immunization of children, utilization of health services, the services from where they seek medical help, client-providers' contact level of information provided and perception of women about ANM.

## **Chapter IX Community Level Variables**

This chapter describes the information collected in the Village Information Schedule which could be useful for interpretation of the survey findings.

## **Chapter X Summary and Conclusions**

Important findings of the survey are summarised and attempts are made to highlight their programme implications.

## CHAPTER II

### THE SURVEY DESIGN

The survey design for the BSUP was adopted to provide statistically adequate estimates of contraceptive prevalence at the district level, and for rural and urban areas within each district. Further, it was also required to obtain district level estimates for other important indicators, such as the use of modern spacing methods, utilisation of health and family planning services, fertility and reproductive preferences. The collection of this information was intended to assist the executive management of SIFSA in the design of appropriate service innovations and to evaluate project activities in future. With the objective to have inter-district comparisons, uniform questionnaires, sampling design, data collection and analysis were used for each of the districts under study.

#### 2.1 Sample Design and Implementation

An appropriate sampling plan and procedure was adopted to define the required sample size after examining several alternatives such as: to arrive at urban-rural district level estimates with reasonable accuracy, and at the same time minimizing the cost and time required for carrying out the survey. A multistage stratified systematic random sampling design was used for the selection of the sample and estimation of population parameters.

##### Sample Size

The overall target sample size of 2866 eligible women (ever-married women aged 13-49 years) was required to detect a change of 5 percentage point in contraceptive prevalence at the district level. It was expected that the number of ever-married women in the age group 13-49 years per household would be 1.2 and therefore, by visiting a sample of 2388 households and using a *de facto* procedure for the selection of respondents, the required number of 2866 ever-married women would be obtained. Allowing an increase of 5 percent to accommodate for non-response at the household and respondent levels due to refusal or locked houses, the target sample of eligible women consisted of 2500 households and 3000 ever-married women aged 13-49 which was more than enough to assure reliable estimates of changes in overall contraceptive prevalence at the district level.

The sample design was made self-weighted by allocating the total sample size of 2500 households into urban and rural populations according to their proportions as per 1991 census. With this procedure, an allocation of 925 households to urban and 1575 households to rural areas was done to form samples of urban and rural households in Meerut district.

##### 2.1.1 Rural Sample

For achieving the required number of sample households and eligible women in rural areas, a two-stage stratified systematic sampling procedure was adopted, the unit of selection at first stage being villages and the second stage, the households. Within each selected household, all the eligible respondents (*de facto*) - ever married women 13-49 years of age

present in the households including visitors, were considered for interviews.

A list of villages in the district with their population obtained from the 1991 census tapes available from the office of the Registrar General of India served as the sampling frame. It was decided to exclude all the villages with 50 or less population from the frame, and combine those with a population of 51 to 150 with the next immediate village as per the 1991 census. A sample size of 25 households was decided to be adequate to represent a village population and therefore, the number of villages to be covered in the district was obtained by dividing the rural sample by 25. Thus, in Meerut district,  $1575/25 = 63$  villages were included in the rural sample.

All the villages in the district were stratified into three strata, each being of equal population size. Allocation of sample villages was made equally into the three strata (21 villages in each stratum). In each stratum the required number of sample villages were selected with PPS procedure of sampling. In case of large sample village exceeding 500 households, the village was divided into 3 to 5 segments of about 150-250 households each to select two segments with PPS for house listing and for survey by selecting 13 households in one segment and 12 in other segment to have a total of 25 households to represent the village. Lastly, with systematic random sampling procedure, a sample of 25 households was selected from each of the sample villages to arrive at the required number of 1575 households in the rural sample. A list of 63 sample villages with their population according to 1991 census is enclosed at Appendix.

### **2.1.2 Urban Sample**

A three stage stratified systematic random sampling design was used to obtain urban sample of households, the towns being the unit of selection at first stage, Census Enumeration Blocks (CEBs) at the second stage and the households within the selected CEB at the third stage. Within each selected household, all eligible women were listed for interview.

A list of CEBs for 1991 census provided by the office of the Registrar General of India served as the sampling frame. To arrive at the required number of households in urban sample, all towns were classified into the following three strata:

- Stratum I : Towns with a population of 1 lakh and over
- Stratum II : Towns with a population from 20,000 upto 1 lakh
- Stratum III : Towns with a population of less than 20,000.

The urban sample of households was distributed into three strata proportionately. All towns in each strata were listed according to their population in the census 1991, and then using PPS, the towns were selected. For the selected towns, a list of Census Enumeration Blocks (CEBs) was obtained and using PPS sampling procedures, the required number of census blocks to be covered in each stratum was obtained. To ensure the adequate representation of towns in stratum-I with over 1 lakh population, a sample from a minimum of 4 census blocks (25 households per block) was taken. Similarly, in stratum II and III towns, at least 2 census

blocks and 25 households within each block were sampled. If more than 100 households were sampled in a sample town in stratum-I or more than 50 households selected in towns in stratum II and III, more census blocks were selected, with no more than 25 households per block.

In Meerut district, urban sample of 925 households or 37 Census Enumeration Blocks (25 households per block) were allocated into three strata proportionately. As there was only one town (Meerut) which falls under Stratum-I, it was selected and a sample of 25 census blocks was drawn. Similarly, sample of 3 towns each in stratum II and III was drawn with PPS and 2 census blocks from each selected towns were drawn again with PPS sampling procedure. From selected census blocks, a sample of 25 households was selected with systematic sampling procedure and thus, a total urban sample of 925 households was obtained.

A list of 37 Census Enumeration Blocks (CEBs) drawn from 7 sample towns with their population according to 1991 census is enclosed at Appendix.

### **2.1.3 Sample Implementation**

In the process of sample implementation, three aspects discussed in this section are (a) household listing and mapping, (b) household coverage, and (c) woman response.

#### **(a) Household Listing**

The household listing operation was carried out in each of the selected PSUs with the aim to generate ultimate sample frame for household coverage. The household listing in the district was done by deploying four teams, each consisting of one house lister and one mapper. Both the house listers and mappers were well trained before sending them to the field. These house listing teams visited each selected Primary Sample Unit (PSU), a village in rural and Census Enumeration Block (CEB) in urban towns, about two weeks in advance before the actual survey was undertaken. The household listing operation consisted of three types of activities undertaken simultaneously - (i) Mapping, (ii) Numbering of households and (iii) Listing of households.

**i. Mapping:** Two notional layout sketch maps were prepared: (i) Village Location Map - showing boundaries and directions and indicating major landmarks. In case of urban areas, a map for the selected census enumeration block (CEB) was obtained from census office and identified the area to be covered in accordance with the census maps. Major landmarks were shown to define the boundaries of the selected area, (ii) Household Location Map - showing household numbers and directions.

**ii. Numbering of Households:** Each inhabited household in the Primary Sample Unit (PSU) was assigned a serial number which was painted at the front door of the house/household. This helped the survey teams to identify the households at the time of the survey.

**iii. Listing of Households:** All the inhabited households in the sample unit were listed and their particulars were recorded on the prescribed Household Schedule.

In case of PSUs having less than 500 households, a complete household listing was done. If PSUs had more than 500 households, they were divided into three to five natural clusters/segments, each consisting of 150 to 250 households. Thereafter, two clusters were selected using PPS sampling procedure for household listing and mapping separately. As already mentioned in the sample procedures, in such cases, the sample size to be drawn from each cluster was 13 and 12 respectively.

**(b) Household Coverage**

The result of sample households and eligible women interviews are presented in Table 2.1. The household questionnaire was preferably canvassed to the head of household or an adult member available in the household. No replacement was made for locked houses, households where interviews were refused or households not found.

Out of total 2500 sample households, 2462 household interviews were completed which were 98.5 percent of the total. In about half percent of the cases (0.6%), the households were found absent/house locked and were not available for interviews at the time of survey. Another 0.6 percent of the households were found vacant. The household response rate - the number of households interviewed per 100 occupied households, was 99.2 percent. A slightly higher response rate for the household interviews was observed in urban areas than rural areas of the district.

**(c) Women's Response**

The ever-married women schedule was filled in by interviewing the sample women only. In the case of non-availability of a respondent, the schedule was kept unfilled and no attempt was made to fill in the schedule by asking information from any other member of the household, including her husband.

From the completed household questionnaires, a total of 2675 ever married women in the age group 13-49 years were found to be eligible for their individual interviews with Women Questionnaires. Out of these eligible women, interviews of 2622 women were completed which was 98.0 percent of the total. The main reason of non-response cases was found to be the women not at home when the survey team visited them. The individual response rate was higher in urban (99.3%) than in rural (97.3%) areas of the district.

At both the household and individual levels, the non-response was observed either due to households being absent or an eligible woman not found at home even after making repeated visits by the survey team.

**Table 2.1: Sample results for households and eligible women (Unweighted)**

	Urban		Rural		Total	
	Number	Percent	Number	Percent	Number	Percent
Households selected	925	100.0	1575	100.0	2500	100.0
Households completed (c)	919	99.4	1543	98.0	2462	98.5
Household exists but no adult respondent	1	0.1	1	0.1	2	0.1
Households absent (HA)	3	0.3	13	0.8	16	0.6
Household postponed (P)	-	-	-	-	-	-
Households refused (R)	-	-	1	0.1	1	0.0
Households vacant (DV)	1	0.1	15	1.0	16	0.6
Dwellings destroyed (DD)	-	-	-	-	-	-
Others (O)	1	0.1	2	0.1	3	0.1
Households occupied	923	100.0	1558	100.0	2481	100.0
Households interviewed	919	99.6	1543	99.0	2462	99.2
Households not interviewed	4	0.4	15	1.0	19	0.8
Households response rate (HHR) *	-	99.6	-	99.0	-	99.2
Eligible women	978	100.0	1697	100.0	2675	100.0
Women interviewed (EWC)	971	99.3	1651	97.3	2622	98.0
Women not at home (EWNH)	6	0.6	42	2.5	48	1.8
Women refused (EWR)	-	-	3	0.2	3	0.1
Women partly interviewed (EWPC)	1	0.1	-	-	1	0.0
Others (EWO)	-	-	1	0.1	1	0.0
Individual response rate (EWRR) **	-	99.3	-	97.3	-	98.1
Overall response rate (ORR) ***	-	98.9	-	96.3	-	97.3

\* Using the number of household falling into specific response categories, the household response rate (HHR) is calculated as :

$$\text{HHR} = \frac{C}{C + HP + HA + P + R}$$

\*\* Using the number of eligible women falling into specific response categories, the individual response rate (EWRR) is calculated as :

$$\text{EWRR} = \frac{\text{EWC}}{\text{EWC} + \text{EWNH} + \text{EWR} + \text{EWPC}}$$

\*\*\* The overall response rate (ORR) is calculated as :

$$\text{ORR} = \text{HHR} \times \text{EWRR}$$

## 2.2 Study Tools

Five types of study tools were developed by the Population Council in collaboration with the Consultancy Organisations (COs) in a Questionnaire Design Workshop held at Lucknow on 28th September 1993. These tools in the form of questionnaires and schedules were pretested and used to collect all the required information for BSUP. They include: (i) Household Questionnaire, (ii) Woman's Questionnaire, (iii) Village Information Schedule, (iv) Primary Health Centre/Sub-centre Schedule, and (v) House Listing Schedule. These questionnaires were largely

preceded with fixed response categories. Questionnaires/Schedules used in BSUP were bilingual, consisting of questions in both Hindi and English. Similarly, manual of instructions for each questionnaire/ Schedule was prepared in both the languages.

### **Household Questionnaire**

The household questionnaire was used to list all usual resident members of each sample household and visitors who slept in that household the night before the interview. Basic information was recorded on the characteristics of each person, such as their name, relationship with the head of household, sex, age, marital status and education. This information was used to identify eligible women respondents to be interviewed with the Women Questionnaire. In addition, the Household Questionnaire collected information on religion, caste, ownership of cultivable land of the household, basic amenities such as the electricity, source of drinking water, type of house and ownership of various household goods (radio, TV, motorcycle, refrigerator, sewing machine etc.). The household questionnaire also included separate sections to record details of all births and deaths occurred to the members of the household during the last two years reference period.

### **Women Questionnaire**

The woman's questionnaire was used to collect information from eligible women all ever-married women in the age group 13-49, usual residents as well as visitors. The broad areas covered in the Women's Questionnaire are classified in the following four sections:

#### **i. Background Characteristics of Respondent**

In this section, questions on age, marital status, age at effective marriage(Gauna), education, employment status and access to electronic media are included in order to provide information on characteristics of women likely to influence contraceptive behaviour. Few questions are also asked about the husband.

#### **ii. Fertility and Family Size Norm**

Data are collected on the survival status of all live births that a woman had during her life, information about still birth, current pregnancy and menstruation.

In addition, the information on the desire for additional children, ideal family size and sex composition of children, age at marriage for girl, minimum legal age at marriage and unwanted pregnancies is included.

#### **iii. Utilization of Health Services**

Information is collected in this section on the utilization of public and private health facilities, client-provider interaction, antenatal care, place of delivery, assistance during delivery and immunization status of children.

#### **iv. Family Planning**

In this section, questions are designed to determine knowledge of family planning methods, ever use and current use of modern and traditional methods of contraceptives, duration of use, problems experienced, perceived disadvantages of the methods, sources of supply, reach of electronic mass media for dissemination of family planning messages, unmet need and intentions to use contraceptives in future.

#### **Village Information Schedule**

The information collected in the Village Schedule was used to prepare a village inventory for all the sample villages covered in the district. The village Pradhan/Surpanch/Patwari was contacted to supply information on population, distance from main road, education and availability of medical facilities, family planning services and contraceptive methods, trained and untrained Traditional Birth Attendants (TBAs), and NGOs working for family planning in the village.

#### **CHC/PHC/SC Information Schedule**

The Community Health Centre (CHC), Primary Health Centre (PHC) and Sub-Centre (SC) Information Schedule was used to obtain information about the existing status of CHC/PHC/SC in the villages selected for the household survey to be utilized in planning the sample and interviews for the Situation Analysis.

#### **House Listing Schedule**

The House Listing Schedule was to be filled in for each selected Primary Sample Unit (PSU) - a village in rural areas and a Census Enumeration Block (CEB) in urban towns. The information includes serial number, name of the head of household, address/house number, and number of eligible women in the household. This information was used to provide necessary frame for selecting households in the primary sample units.

### **2.3 Recruitment of Investigators and Training**

#### **Recruitment of Investigators**

The selection of the field teams was done at the district headquarters of the concerned district in order to ensure that interviewers were acquainted with localities where survey was going to be conducted. All the interviewers were females and had received either a bachelor's or a master's degree. The field editors and supervisors were males and all had their bachelor's/master's degree. A total of 52 trainees (34 females and 18 males) for survey simultaneously in two districts allotted to CMDP were recruited to form nine teams - each team consisting of 4 female interviewers, one male field editor and one male supervisor.

## **Training**

Before organising the training of the newly recruited field interviewers, editors and supervisors, a Trainer's Training Workshop was organised by the Population Council and the USAID at Lucknow from 6-8 October 1993. Two senior faculty members from each Consultancy Organisations attended the workshop. In this workshop, discussions were held on the objectives of the BSUP, roles of various organisations involved in the survey, details of the questionnaires used in survey, methods of data collection and field supervision, procedures of house listing and mapping. The purpose of this workshop was to ensure uniformity in data collection procedures in different districts and therefore, the persons who were trained in the workshop were responsible to train their field staff in each district according to the standard procedures discussed in the Trainer's Training Workshop.

The training of field staff for the main survey of the two districts Meerut and Rampur was jointly conducted at the Health and Family Welfare Training Centre in the campus of Medical College, Meerut from 8-28 November 1993. The faculty members from CMDP (who attended Trainers Training Workshop) and the Population Council participated in the training programme.

The three weeks training programme of the field staff consisted of instructions on description of BSUP, demography and family planning status of the district/state, MC and immunisation, sampling procedure, role of interviewer, supervisor and field editor, techniques of interviewing and the field procedure of the survey. The detailed review of each question in the questionnaires was carried out on a overhead projector. Mock interviews between participants in the classroom and practice interviews in the field were specially arranged for giving practical exposure to the field staff. In addition, special lectures were also arranged on the topics of infrastructure facilities in health and family welfare at the district and state levels, maternal and child health care services, immunisation, and modern and traditional methods of family planning. The resource persons for these lectures were medical professionals - Principal and faculty members of the HFWTC, Meerut.

## **Data Collection**

Four survey teams, each consisting of one supervisor, one field editor and four female interviewers were deployed in Meerut district for data collection. The field work was carried out from 1st December 1993 to 4th February 1994. To supervise the field operation, a Camp Office was opened at the district headquarters, Meerut under the charge of the two CMDP staff designated as Field Coordinators. They were made responsible to assign Primary Sample Units (PSUs) to the teams and to make various other logistic arrangements as supply of questionnaires, transport, accommodation etc. Each team was allotted a fixed period of two days to complete data collection in a PSU before moving to the next PSU according to an itinerary of time schedule for field operation prepared in advance for each team. Each interviewer was instructed to conduct three interviews in a day and required to make atleast three revisits if the eligible woman in the selected household was not available at the time of household survey.

To ensure the quality of data, several measures were adopted in BSUP as described below:

- i. The field editor's role was crucial in examining the filled in questionnaires in the field itself for their completeness, consistency and ensuring all necessary corrections made legibly.  
  
The specific attention was given to missing information, filter and skip instructions, correctness of age records and completeness of birth and death events. In case of discrepancies and inconsistencies observed by the field editor, the interviewers were required to revisit the respondent to verify and correct them. In addition, the field editor was required to observe some of the ongoing interviews to ensure that the questions were asked in right manner, interpreted and recorded the answers correctly and follow skip instructions as instructed.
- ii. The supervisor conducted spot-checks on some of the addresses selected for interviewing to ensure that the right household was interviewed and the eligible woman was correctly identified. Each questionnaire was reviewed to be sure it was complete and was internally consistent. In addition, the supervisor collected information on the village schedule.
- iii. During the survey period, the senior staff of CMDP and The Population Council visited the teams in the field for spot-checks with the objective to provide support and guidance to the field staff and to enhance the quality of data and the efficiency of interviewers.
- iv. For monitoring the quality of data and identifying problem areas, the data from the field were simultaneously entered into microcomputers and field check tables provided by the Population Council were produced during the field operation. The results were discussed with the members of the teams during the field work so that they could improve their performance in future.

## **2.4 Data Processing**

All the completed questionnaires were brought from Camp Office, Meerut to Delhi office of CMDP for data processing. This process consisted of office editing, coding, data entry, cleaning and tabulation. The questionnaires were reviewed at the CMDP office by specially trained editors before putting them on computers for data entry. This process covered checking all skip and filter information and checking circle response codes. The data were processed on Micro Computers. The data entry and cleaning were done using software package provided by the Population Council. Basic cleaning included the review of illegal codes as well as logical consistency checks between items. The data were processed on SPSS for field check tables as well as final tabulation. For data analysis, SPSS and Fox-Pro software packages were used.

In order to maintain uniformity and comparability with all the districts in the State, the tabulation plan for the final report was discussed and finalised at a 'Workshop on Tabulation

Plan and Chapterisation' held at the State Institute of Health and Family Welfare, Lucknow from 5-7 April, 1994. In this workshop, results of Preliminary Reports submitted by each Consultancy Organisations (COs) were also discussed which helped in the revision of tabulation plan as well the estimation procedure for the final report.

## Preliminary Report

A preliminary report of the survey was prepared and submitted to SIFPSA in March 1994. The objective of the preliminary report was to provide important findings of the survey to assist policy-makers and programme administrators in planning the strategies for innovations in family planning programme in the state soon after data collection was completed without waiting for the detailed final report of the survey. The preliminary report presented results based on 21 tables describing briefly basic demographic indicators, health status and family planning parameters including levels of knowledge and extent of current use of terminal and spacing methods. The results of the preliminary reports were discussed in a three day workshop of all consultancy organisations organised by the Population Council at the State Institute of Health and Family Welfare, Lucknow from 5-7 April 1994.

## 2.5 Estimation Procedure

In BSUP, a multistage stratified systematic random sampling design was used. The population level estimates were generated on the basis of sample observations. In the baseline survey of the district, two separate samples were drawn, one for urban areas and the other for rural areas. A total sample of 2500 households was drawn from urban and rural areas of the district according to their proportion of population in the district according to 1991 census.

Depending on the sampling design, the sample was weighted and adjusted for non-response to estimate parameters at the household and women levels for urban and rural areas. The procedure to calculate weighting factors is described below:

### A. Weighting Factor for Rural Areas

$$\text{Household Factor} = \frac{P}{a \times p_i} \times \frac{H_i}{h_i}$$

Where :

- P = Total rural population (1991 census) of the district.
- $p_i$  = Population (1991 census) of the selected ith village/ith PSU
- a = No. of selected PSUs (villages) from the rural areas of the district
- $H_i$  = No. of listed households in the ith PSU/Village  
For segmented villages total number of households obtained from 1991 census were projected for 2.5 years to get 1993 projected/listed households for that village/PSU.
- $h_i$  = Actual number of households surveyed from the ith selected village/PSU

$$\text{EW Factor} = \text{Household Factor} \times \frac{E_i}{e_i}$$

Where:

- $E_i$  = Total numbers of eligible women existing in the selected households of the ith village/PSU.  
 $e_i$  = Number of actual eligible women covered in the ith village/PSU.

## B. Weighting Factor For Urban Areas

$$\text{Household Factor} = \frac{p_i}{a_i \times b_j \times q_{ijk}} \times \frac{H_k}{h_k}$$

Where:

- $p_i$  = Total urban population (1991 census) in the ith stratum  
 $a_i$  = Number of selected towns in the ith stratum  
 $q_{ijk}$  = Population (1991) of kth CEB in the jth town of ith stratum.  
 $b_j$  = Number of selected CEBs in the jth town  
 $H_k$  = Number of listed households in the kth CEB of jth town  
 $h_k$  = Actual number of households surveyed from the kth CEB of jth town

$$\text{EW factor} = \text{Household Factor} \times \frac{E_k}{e_k}$$

Where:

- $E_k$  = Total numbers of eligible women present in the selected households in the kth CEB of jth town of ith stratum.  
 $e_k$  = Actual numbers of eligible women covered in the kth CEB of the jth town of ith stratum.

## 2.6 Quality of Data

All efforts were made to ensure that data collected were of good quality. The choice of investigators, careful selection, their intensive training, close supervision, detailed scrutiny and in-depth validity checks of the computerised data were some of the steps to minimise the non-sampling errors. These steps and scientifically sound sample design and large enough sample size to minimize the sampling errors were undertaken to have the best possible quality of data. This is clear when the estimates obtained from this survey (BSUP) are compared with the comparable data from the census. Such validity results are discussed below :

The parameters studied include total, urban and rural population, percentage of urban population, age structure, sex ratio and the singulate mean age at marriage as shown in the table given below :

<b>District Parameters</b>		<b>Survey (BSUP)</b>	<b>Census</b>
Population ( <i>de jure</i> ) (000')	Total	3679	3682*
	Urban	1450	1448*
	Rural	2229	2234*
Percentage of urban population		39.4	37.0
Age-structure (%):	0-14	40.2	41.6 (1981)
	15-64	55.1	54.4 (1981)
	65+	4.7	4.0 (1981)
Sex Ratio		855	852
Singulate mean age at marriage	Male	23.7	22.3 (1981)
	Female	20.3	18.4 (1981)

\* Population projected to survey period.

### Estimate of Population:

The survey estimated the total population (*de jure*) of the district Meerut as 3679 thousands on 1st January 1994, middle of the survey period. The corresponding census count was 3682 thousands (which was estimated by projecting census 1991 population linearly on the basis of 1981-91 decennial growth rate). It is thus observed that the survey count is very close to the census count.

### Percentage of Urban Population:

As expected, the percentage of urban population to total in the district was slightly higher in survey than the census 1991. The survey estimated 39.4 percent population living in urban areas while this percentage was 37.0 in the census.

### Age-Sex Distribution of Population:

The age-sex distribution of population (*de jure*) by five years age-groups shows as expected, a smooth and systematic decline in proportions from lower to higher age-groups (Table 3.1). In the broad age-groups, 0-14, 15-64 and 65+, the age structure is, by and large, similar to that of the census (1981). Slightly lower population in 0-14 is due to decline in fertility (40.2% in BSUP compared to 41.6% in census 1981).

### Sex Ratio:

It is observed that the sex ratio estimated in the survey (855) was quite close to the 1991 census figure (852).

## **Singulate Mean Age at Marriage**

As expected singulate mean age at marriage, both for males and females are higher in baseline survey than the census estimates.

## **2.7 Field Problems**

In a large survey, it is obvious to encounter a variety of field problems which cannot be anticipated in advance but may have bearing on the quality of data. The survey teams comprising a total of 16 female and 8 male members in Meerut district experienced some problems during field operation and the major problems encountered are highlighted below:

### **Transportation**

Each survey team was provided a vehicle (jeep) to visit selected PSUs. However, some of the teams faced difficulties in reaching sample villages due to breakdown of their vehicles on the way. In such cases, the members of team used public transport which took more time in reaching the sample PSU resulting to work in odd hours.

### **Security of Teams**

Sometimes the teams faced difficulties in finding suitable accommodation, especially for female members for their safe night stay in rural areas.

Incidence of dog-bite to one of the female interviewer took place while making visits to the households in one of the villages.

### **Supervision**

In few cases, supervision/spot check could not be held due to: (i) the team left the sample unit before the person reached for spot check, (ii) the team could not be located in the sample unit, though it was at work in one of the corners, of the village, (iii) non-cooperation of the respondent in allowing field editor (male) to observe ongoing interviews.

## CHAPTER III

### HOUSEHOLD AND RESPONDENT BACKGROUND CHARACTERISTICS

This chapter describes the characteristics of households by urban/rural residence. The major characteristics particularly covered are age-sex distribution, literacy/education, household arrangements (headship, size and type) and housing facilities (water supply, sanitation and electricity etc.). It also describes socio-economic and demographic background characteristics of the sampled respondents. The characteristics covered are age, marital status, educational level, religion and caste. The idea of this chapter is to be able to relate nuptiality, fertility, mortality, family planning practice and coverage by different MCH services with the background characteristics of the population.

#### 3.1 Age-Sex Distribution of the Household Population

Table 3.1 shows age-sex distribution of population by urban/rural residence. The normally resident population has been shown separately from the visitor population. The following picture emerges:

- i About 40 percent (40.2%) normally resident population is below age 15 years. It is so both for urban and rural areas as well. This shows that the age distribution is typical of high fertility populations, with higher proportion of the population in the younger age groups (Table 3.1)
- ii Though sex ratio for normally resident population (females per thousand males) for the district as a whole is 855, there are relatively more females in urban areas than rural. The sex ratio in these two areas is 879 and 840 respectively.
- iii More than two percent (2.4%) population at the time of survey was composed of visitors. Details by age and urban/rural residence is given in Table 3.3.
- iv The sex ratio of visitors is very much favourable to females; there are 1989 females per 1000 males (almost two times). This ratio is much higher in urban areas (2598) than rural (1798). This strange phenomenon is partly explained by very high percentage of infants (less than one year of age) and reproductive age-group women among visitors. Such high percentages of infants and women in reproductive ages suggests the tendency for women to come for delivery to Meerut district from outside the district.

**Table 3.1: Household population of de jure and visitors by age and sex**

Age	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>de jure</b>									
< 1 yrs	2.3	2.9	2.6	2.7	2.7	2.7	2.5	2.8	2.6
1-4	9.8	10.9	10.3	9.5	11.6	10.5	9.6	11.3	10.4
5-9	13.9	15.0	14.4	13.6	14.0	13.8	13.7	14.4	14.0
10-14	13.8	11.7	12.8	14.3	12.3	13.4	14.1	12.1	13.2
15-19	11.5	10.2	10.9	11.9	11.0	11.5	11.7	10.7	11.2
20-24	9.0	9.8	9.4	8.8	7.9	8.4	8.9	8.7	8.8
25-29	7.0	8.1	7.5	6.5	6.8	6.7	6.7	7.3	7.0
30-34	6.5	6.5	6.5	5.1	6.0	5.5	5.6	6.2	5.9
35-39	6.0	5.8	5.9	5.0	5.5	5.2	5.4	5.6	5.5
40-44	4.6	4.8	4.7	4.2	4.3	4.2	4.4	4.5	4.4
45-49	3.9	3.4	3.7	3.9	3.3	3.6	3.9	3.3	3.6
50-64	7.4	7.5	7.5	8.8	10.0	9.4	8.3	9.0	8.6
65 +	4.1	3.4	3.8	5.8	4.6	5.3	5.1	4.2	4.7
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total N	771475	678291	1449766	1211271	1017508	2228779	1982746	1695799	3678545
Sex Ratio	-	-	879	-	-	840	-	-	855
<b>Visitor</b>									
< 1 yrs	19.1	9.5	12.2	6.0	7.9	7.3	9.2	8.4	8.7
1-4	30.6	21.7	24.2	23.2	18.6	20.3	25.0	19.6	21.4
5-9	11.8	5.5	7.3	14.4	4.5	8.0	13.8	4.8	7.8
10-14	12.1	1.3	4.3	11.0	4.8	7.0	11.2	3.7	6.2
15-19	7.7	11.4	10.4	8.2	14.8	12.4	8.1	13.7	11.8
20-24	-	24.1	17.4	10.7	18.8	15.9	8.1	20.4	16.3
25-29	7.8	14.7	12.8	9.5	11.2	10.6	9.1	12.3	11.2
30-34	-	4.2	3.0	7.4	6.7	7.0	5.6	6.0	5.9
35-39	-	-	-	2.9	4.0	3.6	2.2	2.8	2.6
40-44	-	-	-	1.0	1.2	1.1	0.8	0.8	0.8
45-49	3.3	1.6	2.1	1.8	1.0	1.3	2.2	1.2	1.5
50-64	4.1	1.3	2.1	4.0	4.3	4.2	4.0	3.4	3.6
65 +	3.5	4.7	4.3	-	2.2	1.4	0.8	3.0	2.2
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total N	6956	18074	25030	22205	39933	62138	29161	58007	87168
Sex Ratio	-	-	2598	-	-	1798	-	-	1989

### 3.2 Household Composition

Table 3.2 shows some important characteristics of the head of the households such as sex, age, marital status, religion, caste and number of usual members of the households.

About 22 percent of the household heads were Muslims and 77 percent Hindus. There were more Muslims in urban areas (27.1%) than rural (18.1%).

Among Hindu households, the percent distribution of scheduled castes, scheduled tribes, backward castes and higher castes were estimated as 23.0, 0.9, 17.6 and 35.5 respectively. This distribution were similar in both rural and urban areas.

The average size of the household was 6.3 members. The modal sizes of households were 5-6

and more than 9 members. This bimodal distribution of the number of household members needs further investigations to determine the uniqueness of the households with more than 9 members.

**Table 3.2: Housing composition**

<b>Housing composition</b>	<b>Residence</b>		
	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
<b>Sex of the household head</b>			
Male	95.6	96.1	95.9
Female	4.4	3.9	4.1
<b>Age of household head</b>			
Less than 30	14.0	13.7	13.8
30 - 44	41.8	34.8	37.7
45 - 59	27.9	29.2	28.7
60 +	16.2	22.3	19.8
Median age	41	45	43
<b>Marital status of household head</b>			
Never married	2.9	2.2	2.5
Currently married	88.7	88.7	88.7
Widowed	8.1	8.5	8.3
Divorced	-	0.2	0.1
Separated	0.4	0.3	0.3
<b>Religion</b>			
Hindu	70.2	81.7	77.0
Muslim	27.1	18.1	21.8
Other	2.7	0.2	1.3
<b>Caste</b>			
Scheduled caste	19.5	25.4	23.0
Scheduled tribe	0.8	0.9	0.9
Backward caste	13.8	20.3	17.6
Higher caste	36.2	35.0	35.5
Other religious groups	29.8	18.3	23.0
<b>Number of usual members</b>			
1	1.8	1.5	1.7
2	5.4	5.0	5.1
3	7.8	6.3	6.9
4	13.9	10.2	11.7
5	18.1	14.8	16.2
6	17.5	16.3	16.8
7	11.5	15.8	14.0
8	7.2	10.7	9.2
9 +	16.9	19.5	18.4
<b>Mean</b>	6.1	6.5	6.3
Total %	100	100	100
Number of households	238072	340984	579056

Note: Table is based on *de jure* members, i.e., usual residents.

**Table 3.3: Usual residents and visitors**

<b>Characteristics</b>		<b>Usual resident</b>	<b>Visitor</b>	<b>Total %</b>	<b>Total N</b>
<b>Male Age</b>					
< 1		94.9	5.1	100.0	52735
1 - 4		96.3	3.7	100.0	197924
5 - 14		98.7	1.3	100.0	559035
15 - 19		99.0	1.0	100.0	235172
20 - 24		98.7	1.3	100.0	178208
25 - 29		98.1	1.9	100.0	136003
30 - 34		98.5	1.5	100.0	113295
35 - 39		99.4	0.6	100.0	106985
40 - 44		99.7	0.3	100.0	86917
45 - 49		99.2	0.8	100.0	78131
50 - 59		99.5	0.5	100.0	109087
60 +		99.4	0.6	100.0	158415
<b>Residence</b>	<b>Rural</b>	99.1	0.9	100.0	778431
	<b>Urban</b>	98.2	1.8	100.0	1233475
	<b>Total</b>	98.6	1.4	100.0	2011907
<b>Female Age</b>					
< 1		90.6	9.4	100.0	51730
1 - 4		94.4	5.6	100.0	203753
5 - 14		98.9	1.1	100.0	453436
15 - 19		95.8	4.2	100.0	188597
20 - 24		92.5	7.5	100.0	158654
25 - 29		94.6	5.4	100.0	131602
30 - 34		96.8	3.2	100.0	108809
35 - 39		98.3	1.7	100.0	96997
40 - 44		99.4	0.6	100.0	76361
45 - 49		98.8	1.2	100.0	56992
50 - 59		98.8	1.2	100.0	106226
60 +		98.0	2.0	100.0	120648
<b>Residence</b>	<b>Rural</b>	97.4	2.6	100.0	696365
	<b>Urban</b>	96.2	3.8	100.0	1057441
	<b>Total</b>	96.7	3.3	100.0	1753807
<b>Total Age</b>					
< 1		92.8	7.2	100.0	104465
1 - 4		95.4	4.6	100.0	401677
5 - 14		98.8	1.2	100.0	1012471
15 - 19		97.6	2.4	100.0	423770
20 - 24		95.8	4.2	100.0	336862
25 - 29		96.4	3.6	100.0	267604
30 - 34		97.7	2.3	100.0	222104
35 - 39		98.9	1.1	100.0	203982
40 - 44		99.6	0.4	100.0	163278
45 - 49		99.0	1.0	100.0	135123
50 - 59		99.2	0.8	100.0	215313
60 +		98.8	1.2	100.0	279064
<b>Residence</b>	<b>Rural</b>	98.3	1.7	100.0	1474796
	<b>Urban</b>	97.3	2.7	100.0	2290917
	<b>Total</b>	97.7	2.3	100.0	3765713

### 3.3 Educational Attainment

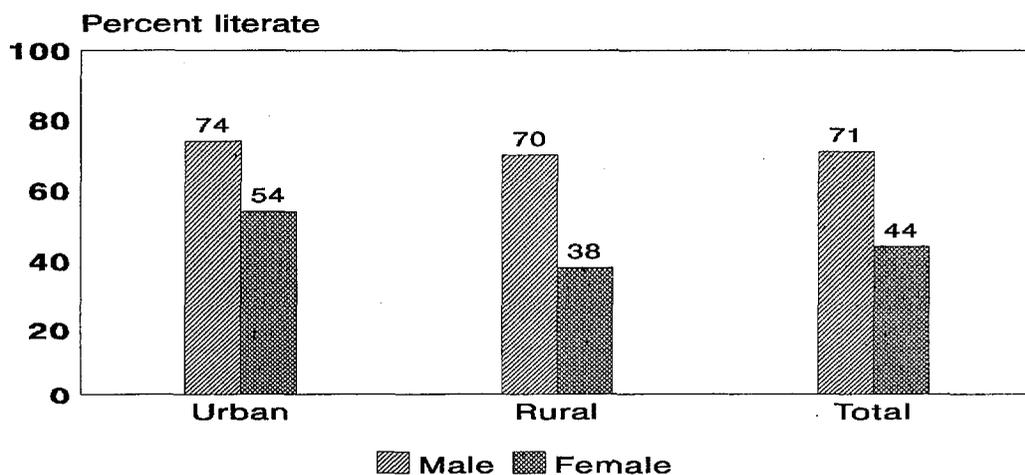
The educational level of household members is one of their important characteristics because it greatly affects reproductive behaviour, use of contraceptives, health of children and proper hygienic characteristics. Table 3.4 and Table 3.5 present the extent of literacy level of education and whether children aged 6 and above are attending schools or not by sex and residence.

The illiteracy in Meerut district was very high (Table 3.4). About 41 percent of the household population aged 6 and above was illiterate and 57.6 percent below primary. These percentages for females were 55.5 and 70.7 respectively.

About 67 percent children in the age group 6-14 years were in schools at the time of survey. The difference in urban and rural areas was not substantial - 68.5 percent children in urban and 66.4 percent in rural areas were in schools. When the children were grouped in age-groups 6-10 and 11-14, then a dropout of 9 percentage points was observed from the first age group to second age group (Table 3.5). This dropout was substantially higher in case of rural females (15.4 percentage points) than urban females (6.4 percentage points)- Figure 3.2.

The percentage of male/female children aged 6-14 attending schools showed almost similar trend for urban and rural areas. However, the sex differences were large within urban areas (72.6% males against 64.0% females) as well as within rural areas (70.7% males against 61.0% females). Lagging behind of females in both urban and rural areas definitely needs some well planned strategy.

**Figure 3.1: Education Level of Household Population**



Meerut, UP, 1993-94

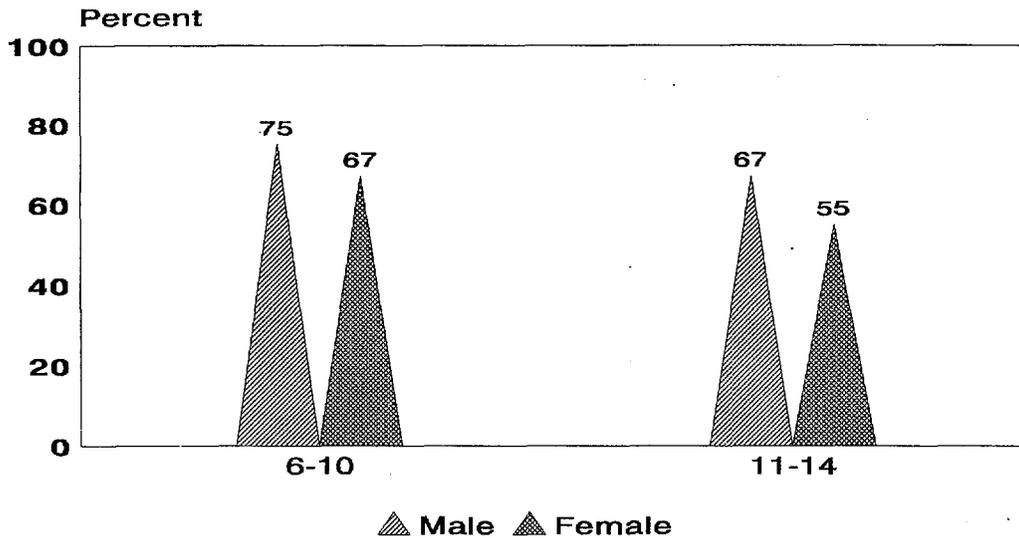
**Table 3.4: Educational level of household population**

Education level	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Illiterate	26.4	46.2	35.6	30.3	61.8	44.5	28.8	55.5	41.0
Upto class 4	17.3	16.0	16.7	18.1	14.6	16.5	17.8	15.2	16.6
Primary	6.9	5.6	6.1	6.7	6.9	6.8	6.8	6.3	6.6
Upto middle	14.9	11.2	13.2	15.7	8.4	12.4	15.4	9.5	12.7
Upto high	15.3	8.2	11.9	16.2	4.6	11.0	15.9	6.0	11.4
Above high school	19.3	12.9	16.3	12.9	3.7	8.8	15.4	7.4	11.7
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total N	647087	566169	1213256	1027355	840888	1868243	1674441	1407057	3081499
Median no. of years	5.0	1.0	4.0	5.0	0.0	1.1	5.0	0.0	2.0

**Table 3.5: Percentage of children attending school by age, sex and residence**

Age	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
6 - 10	74.5	66.3	70.4	74.9	67.5	71.6	74.8	67.0	71.1
11 - 14	69.9	60.1	65.7	65.6	52.1	59.9	67.2	55.1	62.0
6 - 14	72.6	64.0	68.5	70.7	61.0	66.4	71.4	62.2	67.3

**Figure 3.2: School Attendance by Age and Sex**



Meerut, UP, 1993-94

### 3.4 Housing Characteristics

Table 3.6 provides information on housing characteristics by residence.

Analysis of various basic amenities available in the households reveals that poverty abounds in rural areas. Four indicators showing such a situation are: (a) 43 percent households were landless and 31.9 percent had only 1-3 acres of land, (b) Only 21.4 percent houses were pucca, (c) Only 36.2 percent households possessed radio and (d) about 59 percent households were with electricity. The situation in regard to drinking water was not so bad compared to urban areas if the handpump water supply was safe and comparable with piped water. More than 95 percent households possessed piped water or handpump water.

The situation in urban areas in regard to basic amenities was not very encouraging either. Forty six percent of houses were not pucca, about 14 percent households did not possess electricity and 46 percent did not have radio and 43 percent did not have TV of their own.

*Table 3.6: Housing characteristics*

<i>Housing characteristic</i>	<i>Residence</i>		
	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
% households with electricity	85.7	58.5	69.7
<b>Source of drinking water</b>			
Piped			
Handpump	45.0	2.9	20.2
Well water	53.9	92.3	76.5
Other	0.4	0.5	0.5
	0.7	4.3	2.8
<b>Type of house</b>			
Hut			
Kutchra	1.6	3.9	3.0
Mixed	8.9	20.6	15.8
Pucca	35.0	54.2	46.3
	54.4	21.4	35.0
<b>Agricultural land ownership</b>			
Landless			
1-3 acres	86.0	43.0	60.7
4-5 acres	8.5	31.9	22.3
6 or more acres	1.6	10.6	6.9
	3.9	14.4	10.1
<b>Consumer durable goods</b>			
Radio			
Television	53.9	36.2	43.4
	55.8	27.7	39.3
Total %			
Number of households	100.0	100.0	100.0
	238072	340984	579056

### 3.5 Respondent Background Characteristics

Whereas the previous tables considered characteristics of households, based on results of the BSUP Household Questionnaires, this section examines the selected background characteristics of primary respondents (ever-married women aged 13-49 years), based on the BSUP Women's Questionnaire. A description of background characteristics of the women interviewed in the survey provides a basis for interpreting findings presented in the report.

All ever-married women aged 13-49 were interviewed in the selected households. Table 3.7 gives background characteristics of the respondents by urban/rural residence. In this table both the weighted and unweighted number of cases (women) for each category are shown. In all subsequent tables only the weighted number of cases will be shown. The highlights of the characteristics are as follows:

- i The modal age groups were 20-24 and 25-29 which together cover more than 40 percent respondents.
- ii Ninety seven percent respondents were currently married in both urban and rural areas.
- iii Almost sixty four percent of respondents were illiterate. This percentage even in urban area was very high (52%). The situation was bad in rural areas as almost 72 percent respondents were illiterate. Even the picture of husband's education was not good because 25 percent were illiterate even in urban areas.
- iv Most of the respondents were not working.

**Table 3.7: Background characteristics of the respondents**

Background characteristic	Residence			Total number of women	
	Rural	Urban	Total	Weighted N *	Unweighted N
<b>Age</b>					
13 - 14	0.0	0.0	0.0	-	-
15 - 19	2.4	7.6	5.5	34536	147
20 - 24	20.2	20.5	20.4	127995	534
25 - 29	21.9	19.3	20.4	127876	533
30 - 34	18.3	16.3	17.1	107014	443
35 - 39	15.6	16.0	15.8	99318	421
40 - 44	12.8	12.4	12.5	78715	330
45 - 49	8.8	7.9	8.3	51812	214
<b>Marital status</b>					
Currently married	97.0	97.7	97.4	610839	2555
Previously married	3.0	2.3	2.6	16428	67
<b>Education</b>					
Illiterate	51.8	71.5	63.6	398640	1687
Upto class 4	6.2	3.9	4.8	30382	124
Primary	5.8	8.3	7.3	45599	192
Upto middle	9.5	7.6	8.3	52317	213
Upto high	9.9	4.4	6.6	41353	169
Above high school	16.8	4.4	9.4	58975	237
<b>Religion</b>					
Hindu	68.0	81.9	76.3	478674	1996
Muslim	29.1	17.8	22.3	140037	594
Sikh	1.0	.2	.5	3125	13
Other	2.0	.1	.9	5430	19
<b>Caste</b>					
Scheduled caste	19.8	23.3	21.9	137369	569
Scheduled tribe	.9	.7	.8	4955	21
Backward caste	12.0	20.2	16.9	106192	442
Higher caste Hindu	35.3	37.6	36.7	230159	964
Other religious groups	32.0	18.1	23.7	148592	626
<b>Work status</b>					
Not working	96.3	95.9	96.1	602655	2523
Working in family farm/business		1.3	0.8	4815	20
Employed by someone else	3.2	2.2	2.6	16358	65
Self-employed	0.2	0.2	0.2	1228	5
Other	0.3	0.4	0.4	2211	9
<b>Husband's education</b>					
Illiterate	25.2	27.5	26.6	166688	703
Upto class 4	6.5	5.3	5.8	36081	149
Primary	5.0	6.4	5.9	36839	154
Upto middle	13.4	13.5	13.5	84649	353
Upto high	20.2	22.9	21.8	136987	572
Above high school	26.7	21.9	23.8	149595	624
Not Applicable *	3.0	2.3	2.6	16428	67
<b>Total %</b>	100.0	100.0	100.0	-	-
<b>Number of ever married women</b>	251857	375410	627266	627266	622

\* Not Applicable (In case of Widowed/Divorced/Seperated)

### 3.6 Mass Media Access to Respondents

To know which type of women are likely to be reached by the media for diffusing family planning, health and other information, an assessment of respondents exposure/access to mass media was made by asking them how many times in a week they read or listen to newspaper, listen to radio, see television and see cinema (in a month). The reference period was chosen to minimise recall lapse error. The responses were categorised into never, less often, (if access was with frequency of upto two exposures in a week/month (for cinema)), and frequent (if access was for more than two exposures in the reference period). Besides, tabulation was also made of respondents who never got exposed to any media (Table 3.8). The analysis shows the following results:

- i Very large percentage of respondents had reported no exposure to these four channels of mass media during the reference period. Eighty five percent women did not read or listen to newspapers, 62 percent did not watch television, 74 percent did not listen to radio and 91.5 percent did not go to cinemas. Thus, though overall exposure to mass media is very poor, two media with the maximum exposure are radio and television.
- ii The situation of exposure to TV is much better in urban areas - almost 55 percent respondents reported exposure to this media in urban areas compared to 26 percent in rural areas. For other media, situation is bad both for urban and rural areas.
- iii Almost 54 percent respondents reported no exposure to any of the four mass media considered here. This percentage reduces to 37.9 in urban areas compared to 64 percent in rural areas.
- iv More Muslims (72.5%) reported no exposure to any media than Hindus (48.6%). But no difference was found in scheduled castes and backward castes.
- v There is positive association between educational level and exposure to the media.

**To sum up**, there were about 2.3 percent visitors in the population of Meerut district -- a very high fraction of them were infants and women in reproductive ages. Among Hindus, the percent distributions of scheduled castes, scheduled tribes, backward castes and higher castes were estimated as 23.0, 0.9, 17.6 and 35.5 respectively. The educational level of the population was quite low. Evidence of poverty in rural areas was clear from four indicators considered in the survey. Exposure to major sources of media was very poor to the respondents except TV in urban areas.

Table 3.8: Access to mass media

Background Characteristic	Reads or listens to newspaper			Watches television			Listens to the radio			Visits cinema or theater			% not exposed to any media	Number of women
	Never	Less often	Frequent	Never	Less often	Frequent	Never	Less often	Frequent	Never	Less often	Frequent		
<b>Age</b>														
13 - 19	91.4	6.0	2.7	66.4	15.3	18.3	75.1	14.2	10.7	87.4	11.1	1.4	34536	55.3
20 - 24	84.3	12.8	2.9	58.9	17.1	24.0	71.8	17.2	11.0	90.9	8.0	1.1	127995	51.3
25 - 29	82.7	13.0	4.3	59.6	14.3	26.0	70.1	18.7	11.2	88.6	10.3	1.1	127876	49.8
30 - 49	84.8	10.7	4.4	64.1	13.9	22.1	76.3	15.6	8.1	93.3	5.5	1.2	336860	55.6
<b>Residence</b>														
Rural	78.3	14.0	7.8	45.2	17.2	37.6	64.1	23.7	12.2	86.0	12.3	1.7	251857	37.9
Urban	88.9	9.6	1.5	73.6	13.0	13.3	80.7	11.6	7.7	95.2	4.0	0.8	375410	64.0
<b>Education</b>														
Illiterate	97.3	2.3	0.4	78.2	11.1	10.7	85.1	10.8	4.1	97.3	2.0	0.8	398640	69.8
Upto class 4	87.0	11.1	1.8	63.4	17.2	19.3	78.1	18.7	3.2	95.6	3.0	1.4	30382	52.6
Primary	84.0	16.0	-	46.7	20.4	32.8	71.7	18.2	10.1	92.3	5.9	1.9	45599	36.7
Upto middle	70.6	26.0	3.3	38.1	20.2	41.7	59.3	27.5	13.2	86.6	11.0	2.4	52317	24.9
Upto high	51.3	35.0	13.6	22.9	27.3	49.8	44.8	28.2	27.0	78.7	18.9	2.4	41353	14.7
Above high school	34.1	39.4	26.5	14.4	19.7	65.8	33.0	34.1	32.9	63.5	35.1	1.4	58975	9.4
<b>Religion</b>														
Hindu	82.6	12.8	4.6	57.4	16.8	25.8	71.2	18.3	10.5	90.4	8.2	1.4	478674	48.6
Muslim	94.9	4.4	0.7	80.9	7.8	11.2	86.0	9.3	4.6	96.8	2.8	0.5	140037	72.5
Other	31.0	44.6	24.4	23.8	10.3	65.8	38.0	31.1	30.9	67.3	32.7	-	8555	15.2
<b>Caste</b>														
Scheduled caste	93.4	5.8	0.8	71.6	12.8	15.6	83.2	10.7	6.1	94.2	3.6	2.2	137369	61.2
Scheduled tribe	95.3	4.7	-	74.9	20.1	5.0	80.5	14.8	4.7	100.0	-	-	4955	74.9
Backward caste	92.3	6.3	1.4	68.0	13.3	18.7	82.7	12.3	4.9	93.0	6.1	0.9	106192	61.5
Higher caste Hindu	71.4	20.1	8.5	43.7	20.7	35.6	58.5	25.7	15.8	86.8	12.1	1.2	230159	34.6
Other reli. groups	91.3	6.7	2.1	77.7	8.0	14.4	83.3	10.6	6.2	95.1	4.5	0.4	148592	69.2
Total %	84.7	11.3	4.0	62.2	14.7	23.1	74.1	16.5	9.5	91.5	7.3	1.2	627266	53.5

Note: Less often = 1-2 days exposure in a week for newspaper/TV/radio or 1-2 days exposure in a month for cinema

Frequent = more than 3 days exposure in a week for newspaper/Tv/Radio or more than 3 days exposure in a month for cinema

## CHAPTER IV

### NUPTIALITY

This chapter presents findings on marriage pattern in Meerut district of Uttar Pradesh. It is important in its own right, besides its influence on health, morbidity/mortality, fertility and population growth. This chapter starts with marital status distribution of the population. Thereafter, it analyses the singulate mean age at marriage of males and females and then discusses the cohabitation pattern of females. It also reports knowledge of women on minimum legal age at marriage.

#### 4.1 Current Marital Status of Women

Table 4.1 shows the current marital status of distribution of the female population. The marriage is universal as almost all women in urban areas got married by the age they were of 30 years. In rural areas they were married by the age of 25 years. About 25 percent women were married in the age group of 15-19 years in rural areas; this percentage in urban areas was only 10. It is also evident that divorce and separation was a rare phenomenon, both in rural and urban areas of the district.

*Table 4.1: Current marital status*

Age	Marital Status					Total %	Total N
	Never Married	Currently married	Widowed	Divorced	Separated		
Urban	13-14	100.0	-	-	-	-	29785
	15-19	90.4	9.6	-	-	-	71146
	20-24	27.9	71.1	0.3	-	0.7	70923
	25-29	2.3	97.7	-	-	-	57779
	30-34	0.6	96.7	1.7	0.4	0.5	44609
	35-39	-	96.8	3.2	-	-	39566
	40-44	0.7	93.8	4.7	-	0.8	32555
	45-49	-	85.9	14.1	-	-	23117
Total	31.3	66.5	1.9	0.1	0.3	369479	
Rural	13-14	100.0	-	-	-	-	47812
	15-19	74.7	25.3	-	-	-	117451
	20-24	12.6	87.2	-	0.3	-	87731
	25-29	0.6	99.1	0.3	-	-	73823
	30-34	2.0	96.2	1.5	0.3	-	64200
	35-39	0.7	96.4	2.5	0.4	-	57431
	40-44	-	94.4	5.6	-	-	43806
	45-49	-	90.4	8.3	-	1.3	33875
Total	28.3	70.0	1.5	0.1	0.1	526131	
Total	13-14	100.0	-	-	-	-	77597
	15-19	80.6	19.4	-	-	-	188597
	20-24	19.4	80.0	0.2	0.1	0.3	158654
	25-29	1.3	98.5	0.2	-	-	131602
	30-34	1.4	96.4	1.6	0.4	0.2	108809
	35-39	0.4	96.6	2.8	0.2	-	96997
	40-44	0.3	94.1	5.2	-	0.3	76361
	45-49	-	88.6	10.6	-	0.8	56992
Total	29.5	68.5	1.7	0.1	0.2	895610	

The singulate mean age at marriage is shown in Table 4.2; its value in the present baseline survey (1993-94) has been compared with such figures from censuses of 1961, 1971 and 1981. There is evidence that singulate mean age at marriage for females has been going up since 1961; it was 16.2 year in 1961 and then increased to 17.8, 18.4 and 20.3 in 1971, 1981 and 1993-94 respectively. The age at marriage for males was about 4 years higher in 1981 and 3.5 years higher in 1993-94 compared with females.

**Table 4.2: Singulate mean age at marriage**

<i>Source (District Level)</i>	<i>Singulate mean age at marriage</i>		
	<i>Male</i>	<i>Female</i>	<i>Difference</i>
1961 Census	NA	16.21 *	NA
1971 Census *	NA	17.76 *	NA
1981 Census *	22.34	18.38	3.96
1992-93 BSUP	23.73	20.26	3.47

Source: Inter district, inter regional and inter censal changes in mean age marriage in Uttar Pradesh, March 1991 by Dr. J.N. Srivastava, Population Research centre, Lucknow.

\* Meerut and Ghaziabad combined. NA Not Available

## 4.2 Knowledge of Minimum Legal Age at Marriage

According to the Child Marriage Restraint Act of 1978, the legal minimum age at marriage in India is 18 years for women and 21 years for men.

Ever married women in the survey were asked about the minimum legal age at marriage for males and females. The extent of their correct knowledge has been reported in Table 4.3. Only almost 45 percent women knew the correct legal age at marriage. Male's correct legal age at marriage was known to only 40 percent of the female respondents.

More urban women knew their own correct legal age at marriage than rural women. Similarly, more urban women knew male's correct age at marriage, though, only about 30 percent of women knew male's legal age at marriage.

There is a positive association of correct legal age at marriage and educational level of the respondents. This is, of course, an expected pattern. It may also be noted that more Hindu women knew correct legal age at marriage than Muslims but almost half the percentage of Hindus had this knowledge correct than other religious groups. This is perhaps because of relatively lower average socio-economic status of Muslims than Hindus and Hindus than of the other religious groups. This is obvious when the figures on caste are considered - much higher percentage of higher caste Hindus had this information correct compared to scheduled caste and backward caste respondents.

**Table 4.3 Knowledge of minimum legal age at marriage**

<b>Background Characteristics</b>	<b>Percentage who correctly know legal minimum age at marriage</b>		
	<b>For males it is 21 years</b>	<b>For females it is 18 years</b>	<b>Number of women</b>
<b>Age</b>			
13 - 19	35.9	35.7	34536
20 - 29	43.9	48.7	255870
30 - 39	37.7	42.1	206333
40 - 49	40.0	44.4	130528
<b>Residence</b>			
Urban	57.0	62.0	251857
Rural	29.6	33.5	375410
<b>Education</b>			
Illiterate	26.5	30.1	398640
Upto class 4	42.7	48.0	30382
Primary	49.3	53.5	45599
Upto middle	59.7	69.2	52317
Upto high	77.2	83.3	41353
Above high school	85.6	88.7	58975
<b>Religion</b>			
Hindu	42.5	47.0	478674
Muslim	31.3	35.3	140037
Other	84.3	89.0	8555
<b>Caste</b>			
Scheduled caste	33.6	34.9	137369
Scheduled tribe	57.0	44.1	4955
Backward caste	32.9	37.3	106192
Higher caste Hindu	52.1	58.6	230159
Other religious groups	34.4	38.4	148592
<b>Total</b>	<b>40.6</b>	<b>44.9</b>	<b>627266</b>

### 4.3 Age at Effective Marriage

Tables 4.4 and 4.5 show the age pattern of cohabitation; this aspect is important because formal marriage does not always coincide with cohabitation with the husband. This particularly happens in the case of earlier marriages - a formal function of "gauna" is celebrated before cohabitation takes place. Two findings which emerge from Table 4.4 are that (i) Modal age at cohabitation for both urban and rural women was 17-18 years, and (ii) There was no trend observed in this age at cohabitation.

**Table 4.4: Age at which respondent started living with husband**

Current Age	Percentage who started living with husband by exact age								Total %	Number of women	Mean age when started living with husband
	< 13	13-14	15-16	17-18	19-20	21-22	23-25	26+			
<b>Urban</b>											
15-19	-	-	24.6	58.8	16.6	-	-	-	100.0	6098	17.2
20-24	0.9	6.9	16.1	34.2	27.3	11.6	3.1	-	100.0	50888	18.1
25-29	0.5	3.7	22.7	28.5	23.3	15.4	6.0	-	100.0	55261	18.4
30-34	0.6	6.6	26.9	27.6	21.1	9.2	4.8	3.2	100.0	45969	18.1
35-39	-	3.5	28.5	31.5	15.5	11.4	5.0	4.5	100.0	39393	18.4
40-44	1.7	9.0	14.0	18.8	37.5	8.6	8.2	2.2	100.0	32202	18.7
45-49	-	3.7	23.9	27.8	26.7	11.5	3.8	2.5	100.0	22045	18.5
20-49	0.6	5.6	22.0	28.7	24.6	11.6	5.1	1.8	100.0	245759	18.3
25-49	0.5	5.2	23.6	27.2	23.9	11.6	5.6	2.3	100.0	194871	18.4
<b>Rural</b>											
15-19	0.8	7.8	38.5	40.4	12.4	-	-	-	100.0	28438	16.7
20-24	1.2	6.7	24.0	33.2	27.0	7.3	0.6	-	100.0	77106	17.6
25-29	1.2	7.0	25.3	30.8	25.5	7.1	2.8	0.3	100.0	72614	17.7
30-34	1.6	6.0	27.3	33.7	22.8	7.2	0.4	1.2	100.0	61045	17.5
35-39	0.7	7.7	28.4	35.0	17.4	5.9	4.8	-	100.0	59925	17.5
40-44	2.1	4.1	25.0	31.1	26.6	8.1	2.5	0.5	100.0	46513	17.8
45-49	0.8	3.6	29.9	32.2	24.3	5.5	3.0	0.7	100.0	29767	17.7
20-49	1.3	6.2	26.2	32.7	24.0	7.0	2.2	0.4	100.0	346972	17.6
25-49	1.3	6.1	26.9	32.6	23.1	6.9	2.7	0.5	100.0	269865	17.6
<b>Total</b>											
15-19	0.7	6.4	36.1	43.6	13.2	-	-	-	100.0	34536	16.8
20-24	1.1	6.8	20.9	33.6	27.1	9.0	1.6	-	100.0	127995	17.8
25-29	0.9	5.6	24.2	29.8	24.5	10.7	4.2	0.2	100.0	127876	18.0
30-34	1.1	6.2	27.1	31.1	22.1	8.1	2.3	2.0	100.0	107014	17.7
35-39	0.4	6.1	28.5	33.6	16.6	8.1	4.9	1.8	100.0	99318	17.8
40-44	1.9	6.1	20.5	26.1	31.1	8.3	4.8	1.2	100.0	78715	18.2
45-49	0.5	3.7	27.3	30.3	25.3	8.1	3.4	1.4	100.0	51812	18.0
20-49	1.0	5.9	24.5	31.0	24.3	8.9	3.4	1.0	100.0	592731	17.9
25-49	1.0	5.7	25.5	30.3	23.5	8.8	3.9	1.3	100.0	464736	17.9

The current age groups include ever-married women.

**Table 4.5: Median age at which respondent started living with husband by selected background characteristics**

Background Characteristics	Current Age						
	20-24	25-29	30-34	35-39	40-49	20-49	25-49
<b>Residence</b>							
Urban	18.0	18.0	18.0	18.0	19.0	18.0	18.0
Rural	18.0	18.0	17.0	17.0	18.0	18.0	18.0
<b>Education</b>							
Illiterate	18.0	17.0	17.0	17.0	18.0	17.0	17.0
Upto class 4	18.0	17.0	17.0	17.0	19.0	17.0	17.0
Primary	18.0	18.0	17.0	17.0	19.0	18.0	18.0
Upto middle	18.0	18.0	18.0	18.0	19.0	18.0	18.0
Upto high	19.0	19.0	18.0	18.0	20.0	19.0	19.0
Above high school	20.0	20.0	20.0	20.0	20.0	20.0	20.0
<b>Religion</b>							
Hindu	18.0	18.0	18.0	17.0	18.0	18.0	18.0
Muslim	17.0	17.0	17.0	17.0	18.0	17.0	17.0
Other	19.0	21.0	20.0	15.0	18.0	20.0	20.0
<b>Caste</b>							
Scheduled caste	18.0	16.0	17.0	17.0	18.0	17.0	17.0
Scheduled tribe	20.0	18.0	10.0	17.5	16.0	17.0	16.0
Backward caste	18.0	18.0	17.0	17.0	18.0	18.0	18.0
Higher caste Hindu	19.0	19.0	18.0	18.0	18.0	18.0	18.0
Other religious groups	18.0	18.0	17.0	17.0	18.0	18.0	17.0
<b>Total</b>	18.0	18.0	18.0	17.0	18.0	18.0	18.0

The median age at cohabitation both in urban and rural areas is 18 years (Table 4.5). There is a positive association between age at cohabitation and educational level. It may be noted that age at cohabitation among Muslims is about one year lower than Hindus. Also scheduled castes start living with their husband one year earlier than backward castes or higher caste.

**To sum up**, the female age at marriage in Meerut district is low and women start living with their husbands at about 18 years of age. This clearly means that legislation on minimum age at marriage is not being followed. This is going to continue like this unless more and more women know about this legislation and follow it. Currently, only 45 percent women have correct knowledge on this legislation and still fewer know correct legal age at marriage of men. Since nuptiality has influence on all aspects of living, there is need to publicise minimum legal age at marriage widely. It is necessary that people should know that it is a cognisable offence.

## CHAPTER V

### FERTILITY

One major objective of the BSUP is to estimate fertility levels and differentials. These estimates are derived from the cross-sectional data on births in the last two years and cohort data on birth histories of women aged 13 to 49 years. The cross-sectional measures of fertility computed were crude birth rate, general fertility rate, age-specific fertility rates and total fertility rate. For cohort fertility, two main indicators were the number of children ever born and number of children currently living. For the study on differentials, background characteristics of women considered were place of residence (urban/rural), education, religion and caste. Various procedures were adopted to ensure that quality of data was reliable and the levels of indicators were reasonable. The details of these procedures are discussed in an earlier chapter.

#### 5.1 Current Fertility Levels and Trends

##### Crude Birth Rate

The current level of fertility is the most important topic in this chapter because of its direct relevance to population policies and programmes. Table 5.1 is designed to provide estimates of current levels of fertility for the district as a whole and for urban and rural areas. Here, comparisons are also made between different measures of fertility from the BSUP and the Sample Registration System (SRS). A two-year rate is chosen for the BSUP rates to get the most current information, to reduce sampling error, and to minimize problems with displacement of births from years immediately preceding the survey to earlier years. These estimates are based on *de jure* population.

Table 5.1: Current fertility

Age	Urban	Rural	Total
13-14	-	-	-
15-19	7.30	36.89	25.80
20-24	198.89	284.17	244.97
25-29	285.26	297.0	290.42
30-34	213.00	217.89	214.98
35-39	86.47	103.18	95.99
40-44	33.02	34.65	33.81
45-49	6.07	7.17	6.71
TFR 15-44	1.12	4.87	4.53
TFR 15-49	4.15	4.91	4.56
GFR	131.82	150.27	142.07
BSUP CBR based on household birth record ( <i>De jure</i> )	29.97	30.49	30.29

Note: Rates from BSUP are based on births that occurred to usual residents of the households during the last two years preceding survey (October 1991 to September 1993). Rates for the age group 45-49 might be slightly biased due to truncation.

TFR : Total fertility Rate for age 15-49, expressed per woman.

GFR : General Fertility Rate (birth/number of women 15-49), expressed per 1000 women.

CBR : Crude Birth Rate, expressed per 1000 population

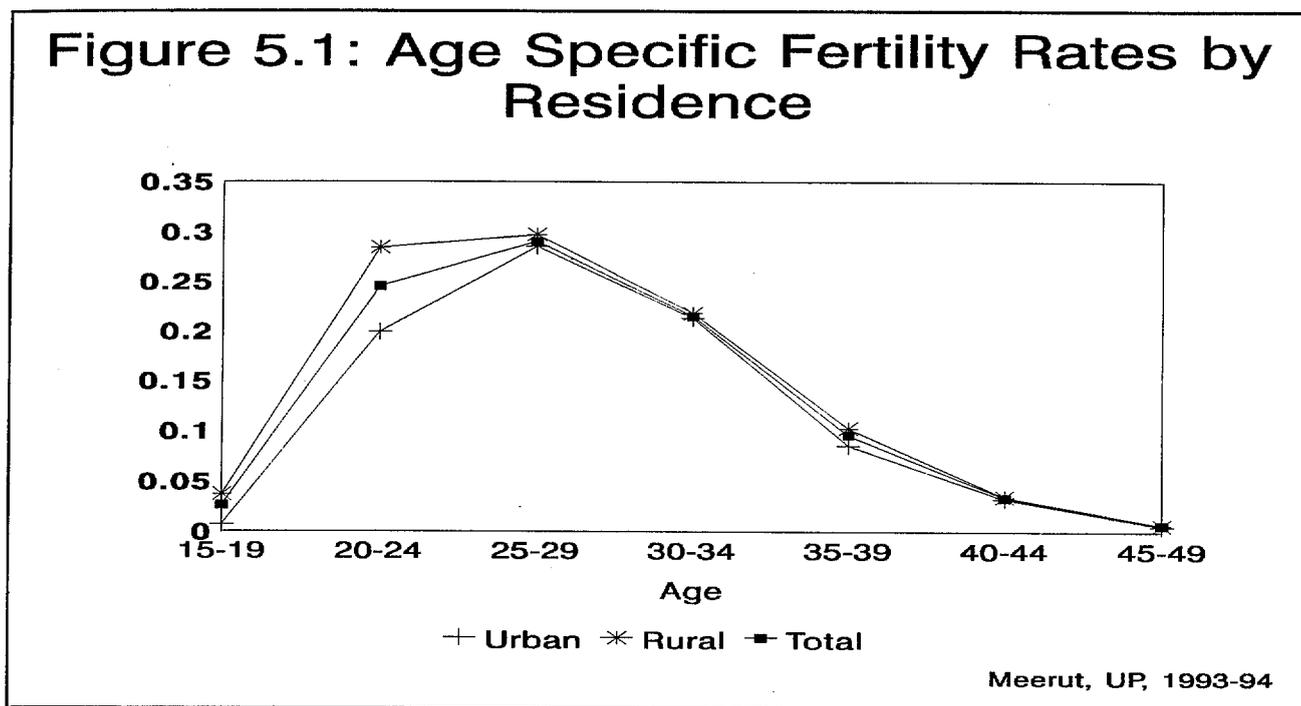
The measures of current fertility computed in this report are crude birth rate, general fertility rate, age specific fertility rates and total fertility rate. The level of crude birth rate was found to be 30.3 in 1991-93 (i.e. two years period preceding the survey) (Table 5.1). This is much lower than the Sample Registration System (SRS) estimate for the State of Uttar Pradesh where the level was 35.7 in 1991. Not much differences were observed in urban and rural areas.

The total fertility rate (aged 15-49) was 4.56 compared to its level in Uttar Pradesh where its level in 1991 was 5.1 (SRS). Thus fertility in Meerut district was low. There existed small urban/rural differentials as TFR in rural areas was 4.91 compared to 4.15 in urban areas.

### Age-Specific and Total Fertility Rate

The age-specific pattern of fertility showed the following characteristics: (Table 5.1 and Figure 5.1)

Peak fertility age group was 20-24 years. The level of fertility in ages 15-19 and 25-29 was very high. It may be noted that in rural areas of the district, fertility in 15-19 was exceptionally high. This has implications on maternal and infant mortality in the area because of high risk births in this young age group.



The fertility in all age groups in rural areas was higher than urban areas though difference was only marginal except for the age group 15-19 where it is almost 1 1/2 times than urban areas. This increase in 15-19 got reflected in the total fertility rate in rural areas which is 4.9 compared to 4.15 in urban areas for the ages 15-49.

## Differentials in Current Fertility

Table 5.2 shows differentials in the current fertility by different characteristics of women. As stated earlier, rural fertility (TFR = 4.91) was found to be slightly higher than urban fertility (TFR = 4.15). Negative relationship of fertility with the educational level of the respondents was noticed. Though, it is an expected trend but two facts which came out very strongly from the table were (i) the decline was very sharp for women who went beyond primary grade, and (ii) it again noticed a sharp fall for those who went beyond high school (Figure 5.2).

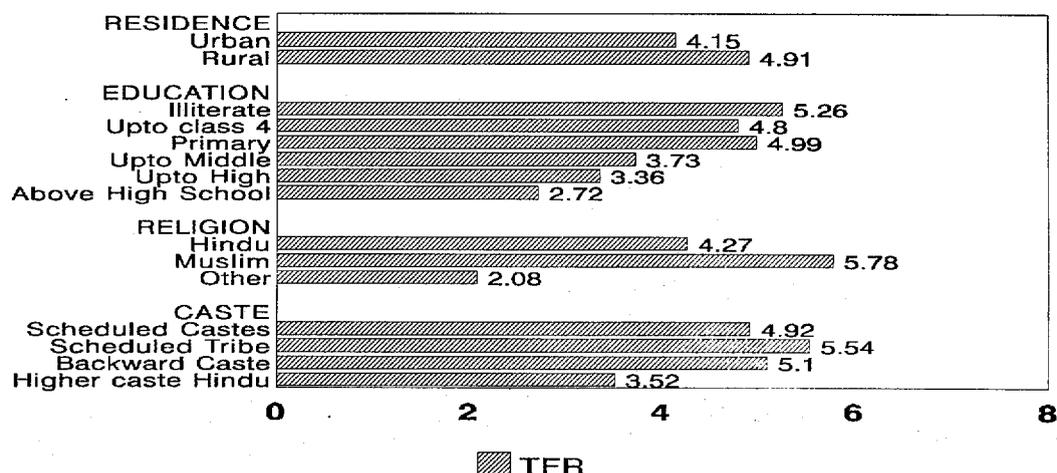
*Table 5.2: Fertility by background characteristics*

<i>Background characteristic</i>	<i>Total fertility rate*</i>	<i>Mean number of children ever born to women aged 15-49 years</i>
<b>Residence</b>		
Urban	4.15	5.14
Rural	4.91	5.93
<b>Education</b>		
Illiterate	5.26	6.10
Upto class 4	4.80	5.35
Primary	4.99	5.03
Upto middle	3.73	4.02
Upto high	3.36	3.88
Above high school	2.72	3.68
<b>Religion</b>		
Hindu	4.27	5.37
Muslim	5.78	6.85
Other	2.08	3.57
<b>Caste</b>		
Scheduled caste	4.92	6.41
Scheduled tribe	5.54	5.88
Backward caste	5.10	5.96
Higher caste Hindu	3.52	4.64
<b>Total</b>	4.56	5.60

\* Rate for women aged 15-49 years

Muslims had about 1.5 births more than Hindus -- their total fertility were 5.78 and 4.27 respectively. But both these religious groups had fertility much higher than other religious groups. Here it may be stated that fertility did not seem to be related to the religion as such, it was more a function of socio-economic status as fertility of scheduled castes and scheduled tribes was quite high compared to high caste Hindus.

## Figure 5.2: Total Fertility Rate (TFR) by Background Characteristics

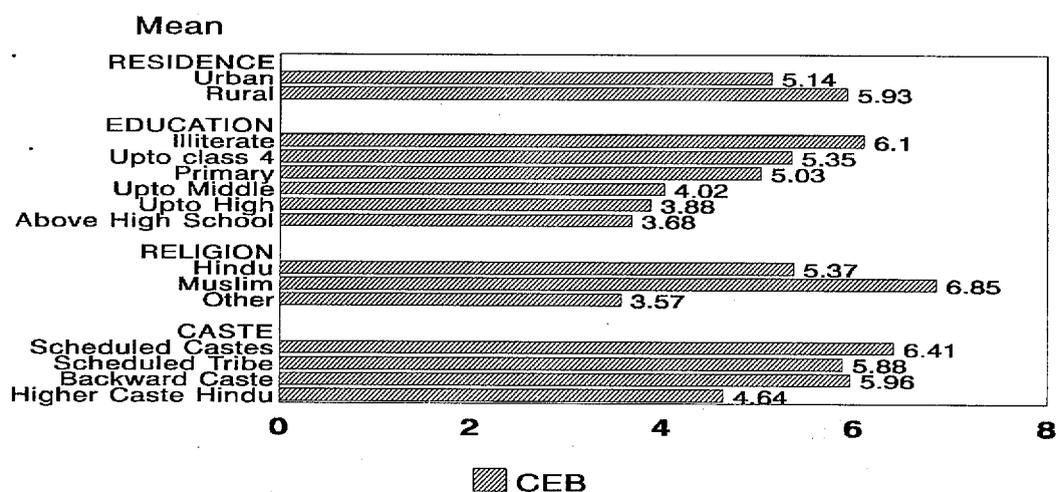


Meerut, UP, 1993-94

### 5.2 Outcome of Pregnancies

Data were also collected from ever-married women on the outcome of pregnancies in the last two years and the results are shown in Table 5.3. About 2.5 percent of pregnancies in urban areas and 4.2 percent in rural areas ended up in foetal losses. This incidence of foetal losses seems to be much lower than the figure of 10 to 12 per cent reported in literature. The distribution of early and late foetal losses for urban and rural areas is shown below:

## Figure 5.3: Mean Number of Children Ever Born (CEB)



Meerut, UP, 1993-94

	<i>Early foetal loss</i>	<i>Late foetal loss</i>	<i>Total foetal loss</i>
Urban	1.8	0.7	2.5
Rural	2.3	1.9	4.2
Total	2.1	1.4	3.5

More foetal losses were reported in the early stages because of contribution of medical termination of pregnancies (induced abortion). It is strange that incidents of induced abortion were almost similar in rural and urban areas which is different from what is normally expected. Reported incidents of still birth rate in rural areas are more than twice that of urban areas. It is because of good ante-natal services in urban areas.

*Table 5.3: Outcome of pregnancy*

<i>Current Age</i>	<i>Outcome of pregnancy</i>			<i>Total %</i>	<i>Number of pregnancies</i>	
	<i>Live birth</i>	<i>Induced abortion</i>	<i>Still birth</i>			
<b>Urban</b>						
13-19	-	-	-	100.0	100.0	1901
20-24	0.8	-	0.7	98.5	100.0	35920
25-29	1.3	0.9	0.7	97.1	100.0	35545
30-39	1.0	1.8	0.9	96.3	100.0	27957
40-49	-	-	-	100.0	100.0	2604
Total	1.0	0.8	0.7	97.5	100.0	103926
<b>Rural</b>						
13-19	-	-	-	100.0	100.0	10862
20-24	1.8	0.8	2.6	94.7	100.0	59754
25-29	1.0	2.2	1.4	95.4	100.0	47654
30-39	-	1.1	1.6	97.3	100.0	43960
40-49	6.7	-	6.9	86.4	100.0	3545
Total	1.1	1.2	1.9	95.8	100.0	165775
<b>Total</b>						
13-19	-	-	-	100.0	100.0	12763
20-24	1.4	0.5	1.9	96.1	100.0	95674
25-29	1.2	1.6	1.1	96.1	100.0	83199
30-39	0.4	1.4	1.3	96.9	100.0	71916
40-49	3.9	-	4.0	92.1	100.0	6149
Total	1.1	1.0	1.4	96.5	100.0	269702

### 5.3 Children Ever Born and Living

The number of children ever born and living is presented in Table 5.4 for ever-married women. In the BSUP questionnaire, the total number of children ever born and living was ascertained by a sequence of questions designed to minimize recall lapse.

The data on children ever born is helpful in determining the completed family size (if number of children ever born is considered for currently married women aged 45-49 years) and the pattern of family building. It may be noted that completed family size for women aged

45-49 in 1993 was 5.4 in urban areas and 6.2 in rural areas. Thus rural completed family size was found to be higher. If this indicator of fertility was compared with the similar indicator developed from the current level of fertility (TFR), then the picture was as follows:

	<i>Urban</i>	<i>Rural</i>
Completed family size	5.4	6.2
TFR	4.15	4.91

These figures showed that though fertility has declined both in urban and rural areas, but magnitude of the decline is similar.

The pattern of family building in urban and rural areas for those groups of women who have completed their family is shown below:

<i>Age</i>	<i>Urban</i>	<i>Rural</i>
15-19	0.4	0.5
20-24	1.6	1.7
25-29	3.0	3.3
30-34	4.2	4.6
35-39	4.7	5.2
40-44	5.0	5.8
45-49	5.4	6.2

It may be noted that reproduction was very high in ages 20- 24, 25-29, and even 30-34. It was much slower (almost half) in the other age groups.

The total number of children surviving for those who had completed family size (aged 45-49) are shown against the total number of children ever born for rural and urban areas below (Table 5.4).

<i>Women aged 45-49</i>	<i>Urban</i>	<i>Rural</i>
Children ever born	5.4	6.2
Children living	4.6	5.0

It may be noted that though about 6.2 children were ever born in rural areas only 5.0 survive. That is, about 19 percent children die. In the urban areas the incidence of mortality is only about 15 percent.

Table 5.4: Number of live births and living children by age of the mother

Number of live births and living children	Age of the mother								Total %	Number of women
	13-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
<b>Urban</b>										
<b>Number of live births</b>										
0	—	20.7	59.2	10.5	4.6	3.9	1.1	-	100.0	21323
1	—	4.8	55.9	26.9	5.4	1.0	5.0	1.0	100.0	25699
2	—	1.0	26.8	38.1	15.6	9.9	6.1	2.6	100.0	44287
3	—	—	16.5	26.9	25.1	13.5	10.5	7.5	100.0	43923
4	—	—	9.3	22.9	19.1	18.3	14.5	15.9	100.0	38745
5	—	—	2.6	10.7	27.5	30.4	20.0	8.7	100.0	27840
6	—	—	1.6	16.5	12.8	31.5	25.5	12.1	100.0	17620
7	—	—	1.4	14.5	29.0	18.7	21.8	14.6	100.0	12981
8	—	—	—	2.5	36.0	25.1	24.8	11.6	100.0	10718
9	—	—	—	10.2	10.4	14.7	23.4	41.3	100.0	5066
10 or more	—	—	—	—	6.0	27.2	27.8	39.0	100.0	3655
Mean	—	0.4	1.6	3.0	4.2	4.7	5.0	5.4	3.6	
SD	—	0.6	1.4	1.7	2.1	2.1	2.2	2.4	2.4	
<b>Number of living children</b>										
0	—	18.4	58.9	12.2	5.1	3.3	2.0	-	100.0	25058
1	—	5.3	48.1	28.0	7.6	2.9	5.5	2.7	100.0	27891
2	—	—	25.7	36.7	17.8	11.6	5.7	2.5	100.0	50232
3	—	—	14.2	26.1	23.1	15.8	12.1	8.7	100.0	52163
4	—	—	4.8	19.0	22.6	18.3	19.8	15.4	100.0	40611
5	—	—	1.0	9.6	18.6	40.0	19.4	11.5	100.0	26082
6	—	—	1.5	7.2	25.3	23.0	21.9	21.2	100.0	12603
7	—	—	—	8.8	33.7	13.6	26.7	17.2	100.0	10738
8	—	—	—	8.5	7.4	30.1	38.3	15.8	100.0	3190
9	—	—	—	—	17.1	15.4	34.8	32.7	100.0	1615
10 or more	—	—	—	—	13.1	15.0	28.6	43.3	100.0	1674
Mean	—	0.2	1.4	2.6	3.7	4.2	4.3	4.6	3.1	
SD	—	0.4	1.2	1.4	1.8	1.8	2.0	2.0	2.0	
<b>Rural</b>										
<b>Number of live births</b>										
0	—	49.1	36.4	5.9	1.3	3.2	3.4	0.7	100.0	35273
1	—	20.5	54.3	17.0	3.0	2.5	2.2	0.5	100.0	42510
2	—	4.5	46.9	23.6	10.0	9.1	4.0	1.9	100.0	49457
3	—	0.3	24.1	34.7	20.0	11.6	7.0	2.2	100.0	59640
4	—	—	5.3	30.9	22.5	23.5	10.7	7.1	100.0	52689
5	—	—	1.9	20.6	26.7	26.8	12.4	11.6	100.0	44370
6	—	—	—	10.1	24.0	21.5	27.8	16.5	100.0	35589
7	—	—	—	6.5	29.1	20.1	25.7	18.7	100.0	24897
8	—	—	—	2.1	12.9	24.4	33.6	27.0	100.0	13429
9	—	—	—	—	15.2	20.8	36.2	27.8	100.0	7768
10 or more	—	—	—	—	—	45.5	34.8	19.6	100.0	9789
Mean	—	0.5	1.7	3.3	4.6	5.2	5.8	6.2	3.8	
SD	—	0.7	1.1	1.5	1.8	2.5	2.4	2.2	2.6	

<i>Number of live births and living children</i>	<i>Age of the mother</i>								<i>Total %</i>	<i>Number of women</i>
	<i>13-14</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45-49</i>		
<b>Number of living children</b>										
0	—	43.6	39.6	7.3	2.7	3.3	2.9	0.6	100.0	40776
1	—	17.9	48.5	19.0	4.1	5.4	3.7	1.3	100.0	48432
2	—	3.5	42.4	26.2	12.2	8.6	4.4	2.8	100.0	57018
3	—	—	15.6	32.9	21.0	15.3	9.5	5.7	100.0	70505
4	—	—	3.7	24.6	23.5	27.1	12.3	8.8	100.0	62756
5	—	—	—	11.7	25.8	23.3	22.4	16.8	100.0	45948
6	—	—	—	4.7	23.3	24.6	32.8	14.6	100.0	27289
7	—	—	—	1.8	19.6	21.9	29.6	27.1	100.0	11713
8	—	—	—	—	9.5	29.1	36.1	25.3	100.0	6967
9	—	—	—	—	10.0	17.6	37.1	35.3	100.0	2449
10 or more	—	—	—	—	—	56.0	25.7	18.3	100.0	1557
Mean	—	0.4	1.5	2.8	3.9	4.2	4.7	5.0	3.2	
SD	—	0.6	1.1	1.3	1.6	1.9	2.0	2.0	2.1	
<b>Total</b>										
<b>Number of live births</b>										
0	—	38.4	45.0	7.6	2.6	3.5	2.5	0.4	100.0	56596
1	—	14.6	54.9	20.7	3.9	2.0	3.3	0.7	100.0	68209
2	—	2.8	37.4	30.5	12.6	9.5	5.0	2.2	100.0	93744
3	—	0.2	20.9	31.4	22.2	12.4	8.5	4.5	100.0	03563
4	—	—	7.0	27.5	21.1	21.3	12.3	10.8	100.0	91433
5	—	—	2.2	16.8	27.0	28.2	15.4	10.5	100.0	72210
6	—	—	0.5	12.2	20.3	24.8	27.1	15.0	100.0	53208
7	—	—	0.5	9.2	29.1	19.6	24.4	17.3	100.0	37878
8	—	—	—	2.3	23.2	24.8	29.7	20.1	100.0	24147
9	—	—	—	4.0	13.3	18.4	31.2	33.1	100.0	12834
10 or more	—	—	—	—	1.6	40.6	32.9	24.9	100.0	13445
Mean	—	0.5	1.6	3.1	4.4	5.0	5.4	5.8	3.7	
SD	—	0.7	1.2	1.6	1.9	2.4	2.4	2.3	2.5	
<b>Number of living children</b>										
0	—	34.0	46.9	9.2	3.6	3.3	2.6	0.4	100.0	65834
1	—	13.3	48.4	22.3	5.4	4.5	4.4	1.8	100.0	76322
2	—	1.8	34.5	31.1	14.8	10.0	5.0	2.6	100.0	07250
3	—	—	15.0	30.0	21.9	15.5	10.6	7.0	100.0	22668
4	—	—	4.1	22.4	23.2	23.6	15.3	11.4	100.0	03367
5	—	—	0.4	10.9	23.2	29.3	21.3	14.9	100.0	72030
6	—	—	0.5	5.5	23.9	24.1	29.4	16.6	100.0	39892
7	—	—	—	5.1	26.4	18.0	28.2	22.3	100.0	22452
8	—	—	—	2.7	8.8	29.4	36.8	22.3	100.0	10157
9	—	—	—	—	12.8	16.7	36.2	34.3	100.0	4064
10 or more	—	—	—	—	6.8	34.7	27.2	31.3	100.0	3231
Mean	—	0.4	1.5	2.7	3.8	4.2	4.6	4.8	3.2	
SD	—	0.6	1.1	1.4	1.7	1.9	2.0	2.0	2.1	

The mean number of children born and currently living by sex is shown by background characteristics of currently married women in Table 5.5. The differentials in this indicator with respect to the background characteristics of respondents were quite similar to those shown in Table 5.2 from cross-sectional data on fertility. Therefore, all the observations made in regard to Table 5.2 hold true for this table as well.

**Table 5.5: Mean number of children ever born and living by background characteristics**

<b>Background characteristics</b> <i>Currently married</i>	<b>Children ever born</b>			<b>Children living</b>		
	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
<b>Age</b>						
13-19	0.23	0.23	0.46	0.20	0.21	0.41
20-24	0.81	0.82	1.63	0.71	0.74	1.45
25-29	1.67	1.48	3.15	1.45	1.28	2.73
30-39	2.54	2.17	4.71	2.16	1.83	3.99
40-49	3.06	2.60	5.66	2.61	2.14	4.75
<b>Residence</b>						
Urban	1.70	1.51	3.21	1.49	1.30	2.79
Rural	1.93	1.67	3.59	1.62	1.39	3.02
<b>Education</b>						
Illiterate	2.03	1.77	3.80	1.72	1.46	3.18
Upto class 4	1.99	1.68	3.67	1.76	1.32	3.09
Primary	1.60	1.55	3.15	1.35	1.40	2.74
Upto middle	1.61	1.21	2.82	1.44	1.09	2.53
Upto high	1.28	1.11	2.40	1.15	1.06	2.21
Above high school	1.14	1.00	2.14	1.06	0.94	2.01
<b>Religion</b>						
Hindu	1.75	1.57	3.26	1.50	1.27	2.77
Muslim	2.20	2.02	4.22	1.90	1.72	3.61
Other	1.00	1.07	2.06	0.89	0.96	1.85
<b>Caste</b>						
Scheduled caste	2.07	1.84	3.92	1.72	1.46	3.19
Scheduled tribe	2.29	1.32	3.60	2.16	1.26	3.42
Backward caste	1.93	1.59	3.52	1.62	1.30	2.92
Higher caste Hindu	1.50	1.28	2.79	1.32	1.14	2.45
Other religious groups	2.12	1.96	4.08	1.83	1.67	3.46
<b>Total</b>	1.97	1.72	3.69	1.69	1.45	3.14

Note: For age standardization of mean number of children, the age distribution of currently married women of Uttar Pradesh for the year 1981 is used as 'Standard'.

Additional information available in this table was on the distribution of children ever born and living by sex. The survival ratios for females were always slightly lower than males. For most of the background characteristics, the sex specific survival ratios did not differ and thus almost the same proportion of children died irrespective of the background characteristics.

**To sum up**, the fertility in Meerut district was lower than of Uttar Pradesh (SRS estimates for 1991 is 35.7). Rural/urban differentials are not very large. The current level of fertility (TFR) is much lower than the number of children ever born to women in the age group 45-49 (completed fertility). It is hoped that this trend will expand. About 12 to 14 percent children died by the time a woman completed her reproductive life.

## CHAPTER VI

### FAMILY PLANNING

This chapter begins with an assessment of the knowledge of family planning methods and source of their supply. This information is closely associated with current or ever practice of the family planning methods. Therefore, after appraisal of knowledge, the chapter goes on to discuss aspects related to practice of the methods. Special attention has been given to reasons for non-use, reasons for discontinuation and future intentions in regard to use of the methods. For this purpose, aspects like exposure to media, attitude and perception of respondents, their husbands and parent-in-laws have been discussed. For understanding continuation/discontinuation, various related factors have been discussed in the later part of the chapter in order to remove the obstacles and increase continuation rates. This chapter also goes into the aspects of unmet family planning needs of the population.

#### 6.1 Knowledge of Family Planning Methods and Sources of Supply

The respondents were asked about their awareness of different family planning methods through spontaneous reporting (without any probe), and reporting by probe. They were further asked whether they knew correct use of the methods. Seven modern methods (vasectomy, tubectomy, IUD, oral pills, condoms, foam tablets and injectibles) as well as two traditional methods (withdrawal and rhythm/safe period) were included for the query. For each method known to the respondent, she was asked if she knew where a person could go to get the method. Table 6.1 presents the analysis of this information.

Major highlights of the findings of Table 6.1 are as follows:

- i More than 95 percent women in urban and 87 percent in rural areas were aware of tubectomy being a terminal method (spontaneous and probing approach). Awareness for other modern family planning methods given in Indian programme was 88-99 percent in urban and 70-87 percent in rural areas except for injectibles which are relatively new introduction. In rural areas, awareness was about 20 percentage points less than urban. Obviously, promotional activities were reaching less in the rural areas.
- ii While 99 percent women in urban areas were aware of atleast one modern method, in rural areas this percentage was only 90. In rural areas, 84 percent women were aware of atleast one spacing method, this figure for urban area was more than 96 (Figure 6.1).
- iii Though majority of currently married women were aware of the methods, but correct knowledge or even partly correct knowledge of how to use the contraceptive methods is available to much lower percentages. Thus, though awareness may be reasonable but knowledge on how to use the method is much lower. Promotional activities should focus on this dimension of family planning methods.

**Table 6.1: Knowledge of family planning methods**

**(Percentage)**

<i>Method</i>	<i>Spontaneous</i>	<i>Spontaneous + Probing</i>	<i>Knows how to use correctly</i>	<i>Knows how to use correctly &amp; to some extent</i>	<i>Knows a source</i>
<b>Urban</b>					
Vasectomy	74.8	96.7	62.5	82.3	80.3
Tubectomy	85.5	98.6	74.6	86.3	88.3
Loop/CUT	73.4	91.7	67.2	79.0	81.6
Pills	76.3	92.5	74.8	85.1	84.2
Condom	71.3	87.6	71.7	79.6	80.4
Foam Tab/Jelly	1.0	2.5	1.2	1.9	1.4
Injection	13.0	31.5	22.2	25.0	25.6
Withdrawal	2.0	7.8	5.5	6.9	-
Rhythm/Safe period	15.0	35.8	30.2	34.1	-
Knows at least one modern method	92.5	99.0	90.8	95.2	94.9
At least one modern <b>spacing</b> method	83.7	96.4	84.7	91.4	90.7
Mean of modern methods known	4.0	5.0	3.7	4.4	2.4
Mean of modern spacing methods known	2.4	3.1	2.4	2.7	2.3
Number of women	244208	244208	244208	244208	244208
<b>Rural</b>					
Vasectomy	33.5	71.5	33.8	53.3	67.0
Tubectomy	62.3	86.6	57.0	74.8	85.0
Loop/CuT	36.3	72.9	35.6	59.6	68.9
Pills	48.6	78.4	43.7	65.9	74.9
Condom	40.3	69.9	41.0	59.2	65.9
Foam Tab/Jelly	0.7	4.6	0.7	3.5	3.0
Injection	6.6	32.4	16.8	25.4	28.0
Withdrawal	1.7	15.5	5.2	14.0	-
Rhythm/Safe period	6.8	32.5	16.3	31.0	-
Knows at least one modern method	77.0	89.9	75.6	87.0	88.9
At least one modern <b>spacing</b> method	61.5	84.4	64.2	81.0	82.2
Mean of modern methods known	2.3	4.2	2.3	3.4	2.6
Mean of modern spacing methods known	1.3	2.6	1.4	2.1	2.5
Number of women	366631	366631	366631	366631	366631

\* For modern methods the source refers to a place that a person could go to get the method.

- iv Sources where family planning methods could be obtained were known to only 80 to 88 percent women in urban areas and 65 to 85 percent women in rural areas.
- v Mean number of modern spacing methods currently known (spontaneous and probing) in urban areas was 3.1 and that in rural areas 2.6.

Knowledge of any modern method of contraception as well as the average number of modern methods known are good indicators of knowledge because of its relevance for programme publicity, which is usually confined to modern methods. Similarly, knowing at least one modern spacing method gives an idea about the efforts put in for promoting spacing methods. Table 6.2 shows the differentials in the level of knowledge of modern contraceptive

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methods and source of supply of methods among currently married women. The differentials are shown according to background characteristics such as age and education of women, residence, religion and caste.

**Table 6.2: Knowledge of methods and source by background characteristics**

<b>Background Characteristics</b>	<b>Knows at least one modern method</b>	<b>Knows at least one modern spacing method</b>	<b>Average number of modern methods known</b>	<b>Average number of sources for modern method *</b>	<b>No. of women</b>
<b>Age</b>					
13-19	86.8	81.4	4.0	2.1	34536
20-24	92.8	89.9	4.5	2.5	127467
25-29	95.6	93.2	4.8	2.6	127605
30-49	93.8	88.1	4.5	2.5	321230
<b>Residence</b>					
Urban	99.0	96.4	5.0	2.4	244208
Rural	89.9	84.4	4.2	2.6	366631
<b>Education</b>					
Illiterate	91.3	85.2	4.2	2.4	386987
Upto class 4	97.7	96.9	4.8	2.6	28964
Primary	97.7	94.2	4.8	2.8	44800
Upto middle	96.4	95.3	5.0	2.7	51028
Upto high	97.6	96.4	5.1	3.0	41092
Above high school	98.2	97.7	5.4	2.7	57968
<b>Religion</b>					
Hindu	94.2	90.2	4.6	2.6	467003
Muslim	91.1	85.4	4.2	2.4	135844
Other	96.6	93.9	5.3	2.6	7992
<b>Caste</b>					
Scheduled caste	93.1	87.0	4.3	2.4	132471
Scheduled tribe	89.7	84.9	3.9	1.8	4751
Backward caste	91.4	86.4	4.3	2.4	104936
Higher caste Hindu	96.3	94.0	4.9	2.8	224845
Other religious groups	91.4	85.8	4.3	2.4	143836
<b>Total</b>	<b>93.6</b>	<b>89.2</b>	<b>4.5</b>	<b>2.5</b>	<b>610839</b>

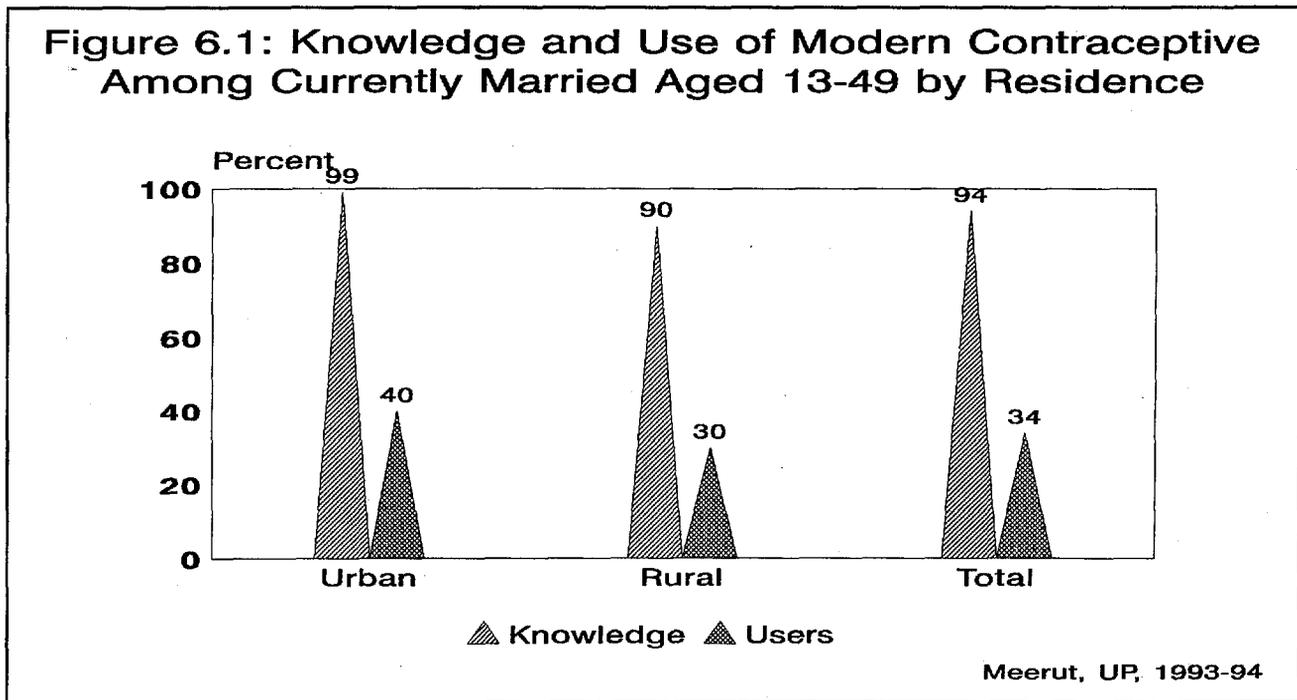
\* Includes female sterilization, male sterilization, IUD/CuT, Oral Pill, Condom, foam tablets/Jelly and injectible.

Regarding level of knowledge of modern methods and modern spacing methods, the differentials by various background characteristics were only marginal (except rural/urban where difference was of about 10 points). Even among illiterate women, 91 percent knew atleast one modern method, this percentage reduced to 85 in the case of atleast one modern spacing method. Almost all categories of population knew two to three sources of supply of the modern methods.

## 6.2 Contraceptive Use

### 6.2.1 Ever Use of Contraception

All respondents who knew atleast one method of family planning were asked whether they had ever used each of the method they knew. Table 6.3 presents the pattern of ever use of contraception by age and residence for currently married women. This is a straightforward descriptive table which looks at the extent to which women have had experience with the use of different contraceptive methods. Differences between age group may reflect life-time effects and/or genuine cohort change.



The following are the highlights of the findings:

- i Only 47 percent currently married women reported to have ever used family planning methods. This percentage in urban areas was 56 and in rural areas 41. When asked about ever use of any modern method, the percentages in urban and rural areas were 50.2 and 36.4 respectively. In other words, about five to six percent of women had used only traditional methods.
- ii Ever use of traditional methods was quite high (9.7%). Periodic abstinence was the main method used under traditional methods. The percentage use of traditional method in urban areas was 12.6 compared to 7.7 in rural areas.
- iii By far, the most commonly accepted method was female sterilisation which was ever used by 20.6 percent women. In urban and rural areas, most commonly used

methods were condom (22.8%) and female sterilisation (20.9%) respectively. Oral pill was also used by quite a large percentage of respondents.

- iv About 52 to 63 percent of currently married women in ages 25 to 45 years in urban areas had ever used a modern method of family planning. Such percentages in rural areas were 34 to 53.
- v The modal age group of ever contraceptive users in urban areas was 30-34. Such age group in rural areas was 35-39 and even 40- 44.

## 6.2.2 Current Use of Contraception

The level of current use is the most widely used indicator for assessing the success of the family planning programme. Furthermore, it can be used at a later stage of analysis, to estimate the reduction in fertility attributable to contraception. The percentage distribution of currently married women by contraceptive method currently used, according to age and residence is given in Table 6.4.

Current use of family planning methods in Meerut district was low. Only 33.9 percent women (aged 13-49) were practising any modern family planning method. These percentages in urban and rural areas were 39.7 and 30.1 respectively. In addition, about 5 percent of currently married women were practising traditional methods, particularly periodic abstinence (Table 6.4 and Figure 6.2). This high percentage of traditional methods used is different from what was found in Third All India Survey (ORG) where practice of traditional methods in Uttar Pradesh was only three percent.

### Method-Mix among Current Users

The current method-mix for currently married women 13-49 years in urban and rural areas is shown below:

<i>FP Method</i>	<i>Method-mix</i>	
	<i>Urban</i>	<i>Rural</i>
Sterilization	46.7	61.4
IUD/CuT	5.5	5.2
Oral pill	8.0	7.2
Condom/Nirodh	27.8	12.4
Other modern methods	0.0	0.6
Traditional methods	12.0	13.2

It may be noted that practice of (i) oral pills and traditional methods among all users in rural and urban areas was similar, (ii) condom use was much higher in urban areas, and (iii) sterilisation use was higher in rural areas than urban (61.4% against 46.7%). As expected, family planning practice increased with age upto 40 years in both urban and rural areas. The peak age group was 35-39. It may also be noted that female sterilization was the most popular modern method in Meerut district followed by condoms. If traditional methods are also considered, then position of use of traditional methods comes to second.

Table 6.3: Ever use of contraception

Method	Any method	Any modern method	Male sterilization	Female sterilization	Cu-T/IUD	Pill	Condom or Nirodh	Foam Tablet	Injections	Traditional method	Withdrawal	Periodic abstinence	Other methods used any	Never used any method	Number of women
<b>Urban</b>															
13-19	12.6	8.4	-	-	-	4.5	8.4	-	-	4.3	-	4.3	-	87.4	6098
20-24	35.3	28.9	-	0.9	3.5	7.8	20.8	-	0.7	13.2	-	12.4	1.2	64.7	50361
25-29	59.5	52.1	-	9.1	9.8	15.5	32.6	0.5	0.9	12.2	2.6	10.9	-	40.5	55261
30-34	65.5	62.7	-	28.9	7.1	14.2	26.9	-	-	11.0	0.6	10.0	0.5	34.5	45010
35-39	70.8	61.1	0.7	38.3	9.9	8.0	20.7	-	-	16.3	0.7	15.5	0.8	29.2	38090
40-44	63.7	57.0	4.9	31.6	7.2	8.3	13.4	-	-	14.8	-	13.1	1.7	36.3	30060
45-49	55.0	52.6	5.8	34.4	2.1	5.0	13.7	-	-	7.7	1.1	6.2	1.4	45.0	19328
Total	56.4	50.2	1.2	20.1	6.9	10.5	22.8	0.1	0.4	12.6	0.9	11.5	0.8	43.6	244208
<b>Rural</b>															
13-19	14.1	11.1	-	-	-	4.1	9.3	-	-	3.7	-	3.7	-	85.9	28438
20-24	21.5	18.0	0.3	2.6	1.2	7.5	9.6	-	0.3	5.8	1.5	5.2	0.3	78.5	77106
25-29	39.7	33.7	-	14.1	6.1	7.6	12.6	0.3	-	9.0	2.5	7.8	1.0	60.3	72344
30-34	54.7	49.7	0.3	26.6	9.9	9.9	13.4	-	0.8	10.1	1.9	7.9	0.8	45.3	59894
35-39	56.3	52.7	0.7	39.6	5.0	7.5	8.6	-	1.1	6.6	0.4	6.2	0.4	43.7	58247
40-44	54.3	50.3	3.6	0.2	2.6	4.8	4.9	-	1.0	9.8	3.1	9.3	-	45.7	43439
45-49	41.0	35.2	1.7	30.0	1.9	0.9	1.8	0.8	-	7.8	2.5	6.9	0.8	59.0	27162
Total	40.8	36.4	0.8	20.9	4.3	6.8	9.5	0.1	0.5	7.7	1.7	6.8	0.5	59.2	366631
<b>Total</b>															
13-19	13.9	10.6	-	-	-	4.2	9.2	-	-	3.8	-	3.8	-	86.1	34536
20-24	26.9	22.3	0.2	1.9	2.2	7.6	14.1	-	0.5	8.7	0.9	8.0	0.6	73.1	127467
25-29	48.3	41.7	-	11.9	7.7	11.0	21.3	0.4	0.4	10.4	2.5	9.1	0.6	51.7	127605
30-34	59.4	55.3	0.2	27.6	8.7	11.7	19.2	-	0.4	10.5	1.3	8.8	0.6	40.6	104904
35-39	62.0	56.0	0.7	39.0	7.0	7.7	13.4	-	0.7	10.5	0.5	9.9	0.6	38.0	96337
40-44	58.1	53.1	4.2	36.7	4.5	6.3	8.4	-	0.6	11.8	1.9	10.9	0.7	41.9	73499
45-49	46.8	42.4	3.4	31.8	1.9	2.6	6.8	0.5	-	7.7	1.9	6.6	1.1	53.2	46490
Total	47.0	41.9	0.9	20.6	5.3	8.3	14.8	0.1	0.4	9.7	1.4	8.7	0.6	53.0	610839

**Table 6.4: Current use of contraception**

Age	Any method	Any modern method	Male sterilization	Female sterilization	CuT/IUD	Pill	Condom or Nirodh	Injectable	Any traditional method	Withdrawal	Periodic abstinence	Other methods	Not using any method	Number of women
<b>Urban</b>														
13-19	8.1	3.8	-	-	-	-	3.8	-	4.3	-	4.3	-	91.9	6098
20-24	23.7	20.1	-	0.9	1.6	3.5	14.2	-	3.6	-	3.2	0.4	76.3	50361
25-29	47.8	40.3	-	9.1	5.8	6.0	19.4	-	7.5	1.6	5.9	-	52.2	55261
30-34	51.7	48.6	-	28.4	2.2	4.0	14.1	-	3.0	-	2.6	0.5	48.3	45010
35-39	62.3	54.1	0.7	38.3	1.5	2.3	11.4	-	8.2	-	7.3	0.8	37.7	38090
40-44	51.5	44.2	4.9	31.6	1.8	3.3	2.7	-	7.3	-	6.4	0.8	48.5	30060
45-49	46.0	44.6	4.6	34.4	-	-	5.5	-	1.4	-	-	1.4	54.0	19328
15-44	45.0	39.3	0.8	18.8	2.7	3.9	13.2	-	5.7	0.4	4.9	0.4	55.0	224880
15-49	45.1	39.7	1.1	20.0	2.5	3.6	12.6	-	5.4	0.4	4.5	0.5	54.9	244208
13-49	45.1	39.7	1.1	20.0	2.5	3.6	12.6	-	5.4	0.4	4.5	0.5	54.9	244208
<b>Rural</b>														
13-19	10.0	7.7	-	-	-	1.6	6.1	-	2.3	-	2.3	-	90.0	28438
20-24	14.0	10.5	-	2.6	0.9	2.7	4.2	-	3.5	0.3	3.2	-	86.0	76899
25-29	31.1	25.5	-	14.1	2.3	3.0	6.1	-	5.5	0.3	4.9	0.3	68.9	72344
30-34	49.6	42.3	0.3	26.3	4.6	3.7	7.3	-	7.3	1.5	5.4	0.4	50.4	59894
35-39	50.9	46.0	0.4	39.2	2.2	2.0	1.5	0.8	4.9	0.4	3.5	0.9	49.1	58247
40-44	51.1	47.1	2.1	40.2	-	2.1	2.2	0.6	4.0	0.5	3.6	-	48.9	43439
45-49	35.0	32.6	1.7	30.0	-	-	0.9	-	2.4	0.9	0.7	0.8	65.0	27162
15-44	34.7	29.9	0.4	20.1	1.9	2.7	4.6	0.2	4.8	0.5	4.0	0.3	65.3	339262
15-49	34.7	30.1	0.5	20.8	1.8	2.5	4.3	0.2	4.6	0.6	3.7	0.3	65.3	366423
13-49	34.7	30.1	0.5	20.8	1.8	2.5	4.3	0.2	4.6	0.6	3.7	0.3	65.3	366423
<b>Total</b>														
13-19	9.7	7.0	-	-	-	1.3	5.7	-	2.7	-	2.7	-	90.3	34536
20-24	17.8	14.3	-	1.9	1.2	3.0	8.2	-	3.5	0.2	3.2	0.1	82.2	127260
25-29	38.3	31.9	-	11.9	3.8	4.3	11.9	-	6.4	0.9	5.3	0.2	61.7	127605
30-34	50.5	45.0	0.2	27.2	3.5	3.8	10.2	-	5.5	0.9	4.2	0.4	49.5	104904
35-39	55.4	49.2	0.5	38.8	1.9	2.1	5.4	0.5	6.2	0.3	5.0	0.9	44.6	96337
40-44	51.3	45.9	3.3	36.7	0.7	2.5	2.4	0.3	5.4	0.3	4.7	0.3	48.7	73499
45-49	39.6	37.6	2.9	31.8	-	-	2.8	-	2.0	0.5	0.4	1.1	60.4	46490
15-44	38.8	33.6	0.5	19.6	2.2	3.1	8.0	0.1	5.2	0.5	4.3	0.3	61.2	564141
15-49	38.9	33.9	0.7	20.5	2.1	2.9	7.6	0.1	4.9	0.5	4.0	0.4	61.1	610632
13-49	38.9	33.9	0.7	20.5	2.1	2.9	7.6	0.1	4.9	0.5	4.0	0.4	61.1	610632

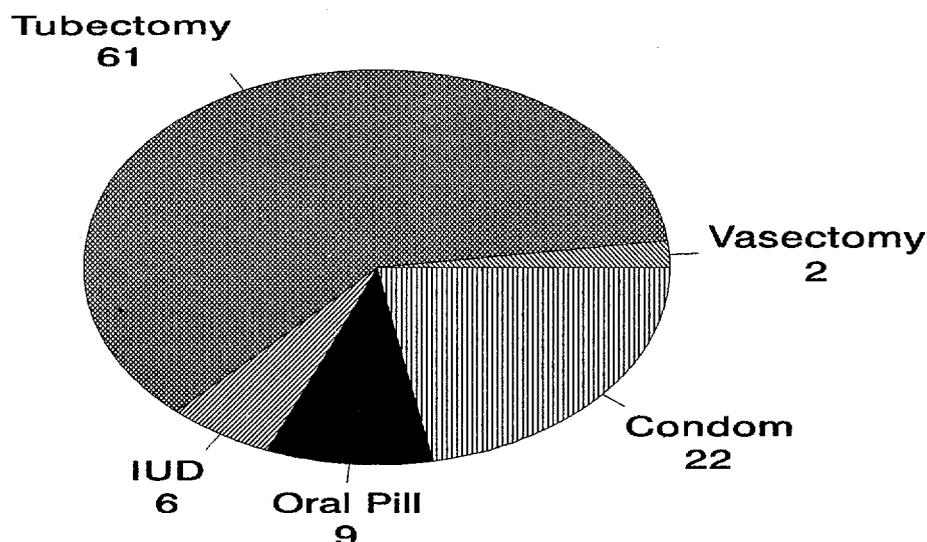
Note: Foam tablet is not shown in the above table as there was no current user of this method of contraception.

Table 6.5: Current use by background characteristics

Background characteristics	Any method	Any modern method	Male sterilization	Female sterilization	Cu-T/IUD	Pill	Condom or Nirodh	Foam Tablets	Any traditional method	Withdrawal	Periodic abstinence	Other methods	Not using any method	Number of women
<b>Residence</b>														
Urban	45.1	39.7	1.1	20.0	2.5	3.6	12.6	-	5.4	0.4	4.5	0.5	54.9	244208
Rural	34.7	30.1	0.5	20.8	1.8	2.5	4.3	0.2	4.6	0.6	3.7	0.3	65.3	366423
<b>Education</b>														
Illiterate	32.2	27.6	0.6	19.4	0.9	2.5	4.2	0.1	4.6	0.5	3.6	0.4	67.8	386780
Upto class 4	35.3	25.2	2.5	11.8	1.3	4.2	5.4	-	10.1	-	9.0	1.1	64.7	28964
Primary	51.1	44.8	0.6	34.1	2.2	3.0	4.9	-	6.3	-	5.3	-	48.9	44800
Upto middle	50.2	46.0	1.3	24.8	4.5	2.4	12.9	-	4.2	0.5	3.3	0.4	49.8	51028
Upto high	51.5	49.2	0.6	24.4	6.0	5.3	12.2	0.6	2.3	1.0	1.3	-	48.5	41092
Above high school	56.5	50.4	0.6	15.7	5.2	3.5	25.5	-	6.1	0.4	5.3	0.3	43.5	57968
<b>Religion</b>														
Hindu	44.8	39.6	0.8	25.3	2.3	2.8	8.1	0.1	5.2	0.5	4.3	0.4	55.2	467003
Muslim	17.2	13.1	0.2	4.1	0.8	3.4	4.6	-	4.2	0.3	3.3	0.5	82.8	135637
Other	59.4	59.4	4.1	19.2	7.0	-	29.1	-	-	-	-	-	40.6	7992
<b>Caste</b>														
Scheduled caste	33.7	27.4	1.5	18.0	0.8	2.4	4.6	0.2	6.3	1.0	4.7	0.5	66.3	132471
Scheduled tribe	45.0	45.0	-	35.7	-	-	9.4	-	-	-	-	-	55.0	4751
Backward caste	36.2	29.7	0.6	20.3	1.4	2.1	5.3	-	6.5	0.2	5.5	0.7	63.8	104936
Higher caste Hindu	55.3	51.2	0.6	31.8	3.7	3.4	11.5	0.2	4.1	0.4	3.6	0.1	44.7	224845
Other reli. groups	19.6	15.6	0.4	5.0	1.1	3.2	6.0	-	3.9	0.3	3.1	0.5	80.4	143629

Modern Methods : Male sterilization, Female sterilization, IUD/CuT, Oral Pill, Condom/Nirodh. Foam tablets/Jelly and injectibles  
 Traditional Methods : Withdrawal, Periodic abstinence and others.

## Figure 6.2: Share of Contraceptive



Meerut, UP, 1993-94

### 6.2.3 Socio-economic Differentials in Current Use of Contraception

The comparison of levels of current contraceptive use among major groups of population is presented in Table 6.5. It also examines differences in the method-mix among current users in the various sub-groups of selected background characteristics, namely, residence, education of currently married women, religion and caste.

It may be seen that practice in urban areas was more by about 10 percentage point than in the rural areas. The practice of modern family planning methods increased with educational level of the respondent. The contraceptive prevalence among Hindus was higher than Muslims but lower than other religious groups. In this context it may be noted that Muslims in general have lower socio-economic level than Hindus and therefore lower prevalence of contraceptive may be mainly due to lower socio-economic level than religion as such. This is obvious from the findings of the next panel where it is obvious that higher caste Hindus have much higher prevalence than scheduled castes or backward castes.

Another feature which is worth noting is that practice of traditional methods was not associated with either urban/rural residence or level of education. Almost four to six percent women practised traditional methods of family planning irrespective of any population group.

### 6.2.4 Family Composition and Current Use of Contraception

A positive relationship exists between size of the family and practice of family planning method upto family size of three children (Table 6.6). It increased from about ten percent with no children to 48 percent with 3 children. It may also be noted that women did not feel that

their family was complete unless they had two surviving sons. The practice of spacing methods might start but only very few women/couples accepted sterilization unless they had two surviving sons. Even in the family of 4+ children, only 18.9 percent couples accepted sterilization if they had only one son. As soon as they had two sons or more, the acceptance of sterilization went up to more than 30 percent.

**Table 6.6: Current use of contraceptive by sex composition of surviving children**

<i>Number and sex of living children</i>	<i>Sterilization</i>	<i>Modern spacing</i>	<i>Any traditional method</i>	<i>Not using any method</i>	<i>Total percent</i>	<i>Number of women</i>
<b>None</b>	-	7.9	1.9	90.2	100.0	65343
<b>1 child</b>	3.2	11.9	3.9	81.0	100.0	75033
1 son	4.6	8.4	4.9	82.0	100.0	41796
No son	1.5	16.2	2.6	79.7	100.0	33237
<b>2 children</b>	16.5	20.6	6.4	56.5	100.0	104292
2 sons	33.3	17.0	6.5	43.2	100.0	33266
1 son	11.5	22.8	7.6	58.2	100.0	50568
No son	1.6	21.0	3.5	73.9	100.0	20458
<b>3 children</b>	27.4	16.7	3.4	52.5	100.0	120115
3 sons	41.5	15.0	4.0	39.4	100.0	19544
2 sons	36.9	15.1	4.1	43.9	100.0	51886
1 son	13.9	21.0	2.3	62.8	100.0	40272
No son		10.3	2.8	87.0	100.0	8413
<b>4+ children</b>	31.4	8.9	4.9	54.8	100.0	1245848
3+ sons	33.2	6.6	4.5	55.6	100.0	128745
2 sons	36.1	7.6	4.2	52.0	100.0	75092
1 son	18.9	17.3	6.8	56.9	100.0	37471
No son	5.8	22.8	10.4	61.0	100.0	4540
<b>Total</b>	21.3	12.7	4.4	61.6	100.0	2610632

### 6.2.5 Problems in the Current Use of Family Planning

Table 6.7 deals with the problems faced by women in using the oral pills, IUD and sterilization, may be useful in identifying real problems if any to take corrective measures.

The satisfaction and continuation with the family planning methods depends on the degree of problems faced by the current users. It is therefore necessary to collect data on the extent of problems which the users report with the specific method so that efforts can be made to minimise them.

**Table 6.7: Percent reporting problem(s) faced with the method currently used**

<i>Method use</i>	<i>Percent faced problem with the method used</i>			<i>Total Number</i>
	<i>Urban</i>	<i>Rural</i>	<i>Total</i>	
Vasectomy	27.4	11.2	20.8	4422
Tubectomy	28.3	27.5	27.8	125339
Cu-T/IUD	8.0	25.6	17.1	12552
Pill	16.1	20.7	18.4	17727
Injectable	-	-	-	679

Almost 28 percent of tubectomy acceptors both in rural and urban areas reported problems with the method. These percentages with oral pills and IUD use were about 17 and 18 respectively.

In the case of vasectomy acceptors, only 11.2 percent in rural areas and 27.4 percent in urban areas reported problems. There is need to understand why such a high percentage in urban areas reported problems with vasectomy. Such understanding may help in revival of this method whose acceptance has greatly reduced recently.

Those who had reported problems with the method were further asked the type of problem they had faced. These problems have been reported in Table 6.8.

**Table 6.8: Problems with the current method**

<i>Problem faced</i>	<i>Male sterilization</i>	<i>Female sterilization</i>	<i>Cu-T/IUD</i>	<i>Pills</i>
<b>Percent faced problem with the method</b>	20.8	27.8	17.1	18.4
Number of women	(920) 4422	(34866) 125339	(2142) 12552	(3263) 17727
<b>Type of problem faced</b>				
Sepsis	-	7.8	-	-
Abdominal/gastric pain	-	36.6	-	7.8
Backache/body pain/headache	27.3	35.2	49.3	15.3
Weakness	27.3	23.6	10.2	41.7
Excessive or irregular bleeding	-	30.0	39.4	21.0
White discharge	-	4.6	9.5	-
Fear of failure	22.1	-	-	8.6
Problem in disposing	-	-	-	7.1
Loss of sexual desire	50.6	-	-	-
Weight gain	-	7.8	-	-
Others	-	1.5	9.8	7.0
Don't know	-	0.7	-	-
<b>Number of women who faced problem(s)</b>	920	34866	2142	3263

Note: Percentages may add to more than 100 because of multiple responses of problems.

Three major problems reported by vasectomy users were loss of sexual desire, weakness and backache/bodyache/headache. There is need to take concrete steps to reduce these problems whether real or psychological. Three most important problems, in order, reported with other methods have been listed below:

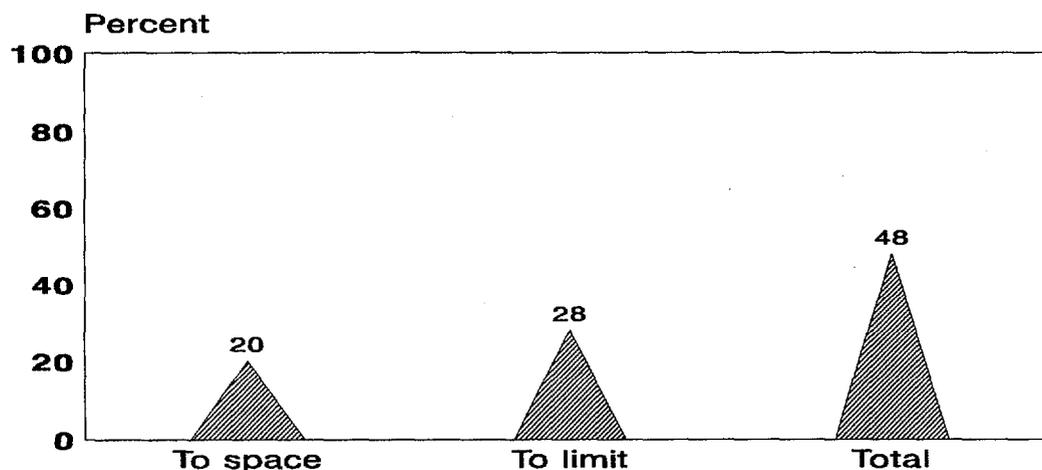
- Tubectomy* : Abdominal pain, backache/bodyache/headache, excessive or irregular bleeding
- IUD/CuT* : Backache/bodyache/headache, bleeding, weakness
- Oral Pills* : Weakness, bleeding, backache/bodyache/ headache

Again, there is need to ensure that the problems are minimised by suitable counselling.

### 6.3 Level of Unmet Need

Family planning programme services are expected to meet the needs of planning the family of the population. It is therefore necessary to know what percentage of couples wish to delay or even not to have children and still do not use contraceptives. If one can determine reasons for their not using contraceptives, then efforts can be made to overcome their reservations with regard to contraceptives. Such step will help increase acceptance of family planning methods by meeting contraceptive needs of couples. This study analyzed data to determine unmet need of couples for spacing children and unmet need of couples for limiting the family size (Table 6.9). The reasons for unmet need were also determined (Table 6.10).

**Figure 6.3: Level of Unmet Need for Family Planning Services**



Meerut, UP, 1993-94

The unmet need of couples for spacing children includes those couples whose wife is non-pregnant and she is not using any method of family planning though she wishes to wait for one or more years for their next birth. Also included in this category are couples who are unsure whether they wanted another child. The unmet need of couples for limiting family refers to those couples whose wife is non-pregnant and she is not using any method of family planning, though she wants no more children.

**Table 6.9: Level of unmet need for family planning services**

<b>Background Characteristics</b>	<b>* To space</b>	<b>** To limit</b>	<b>Total</b>	<b>No. of women</b>
<b>Age</b>				
13 - 19	57.1	1.9	59.0	34536
20 - 29	32.7	18.4	51.1	255072
30 - 39	9.0	30.5	39.5	201241
40 - 49	2.5	49.1	51.6	119989
<b>Residence</b>				
Urban	18.2	25.7	43.9	244208
Rural	21.8	28.6	50.5	366631
<b>Education</b>				
Illiterate	21.4	32.0	53.4	386987
Upto class 4	31.7	20.5	52.1	28964
Primary	17.3	19.7	37.0	44800
Upto middle	20.6	17.5	38.1	51028
Upto high	18.3	17.7	36.1	41092
Above high school	11.2	22.3	33.4	57968
<b>Religion</b>				
Hindu	17.8	25.7	43.4	467003
Muslim	30.1	34.2	64.3	135844
Other	7.4	17.0	24.4	7992
<b>Caste</b>				
Scheduled caste	22.9	27.9	50.8	132471
Scheduled tribe	9.8	35.0	44.9	4751
Backward caste	23.4	27.5	50.9	104936
Higher caste Hindu	12.3	23.3	35.6	224845
Other religious groups	28.8	33.3	62.1	143836
<b>Number of living children</b>				
0	46.8	2.7	49.5	65343
1	47.5	10.9	58.4	75033
2	26.1	17.2	43.4	104499
3	14.0	29.8	43.8	120115
4+	5.7	42.3	48.0	245848
<b>Total</b>	<b>20.4</b>	<b>27.5</b>	<b>47.8</b>	<b>610839</b>

\* Unmet need for spacing includes currently married women:

- (a) Non-pregnant,
- (b) Not using any method of family planning,
- (c) Want to wait for more than one year for their next birth,
- (d) Unsure whether they want another child.

\*\* Unmet need for limiting refers to women

- (a) Non-pregnant,
- (b) Not using any method of family planning,
- (c) Want no more children.

**Table 6.10: Reasons of Unmet Need**

<i>Reasons of unmet need</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>		<i>Total</i>
			<i>&lt; 30 years</i>	<i>&gt; 30 years</i>	
<b>Percent face problem with the method</b>					
Going to use a FP method	26.5	26.1	42.5	14.9	26.2
Do not like existing method	3.7	3.8	4.3	3.4	3.8
Services are not available	1.4	1.7	1.2	1.9	1.6
After operation one can't work	-	1.0	0.8	0.5	0.6
Fear of operation	0.8	4.3	3.0	3.1	3.0
Health does not permit	4.2	3.9	3.5	4.3	4.0
Operation may fail	-	0.2	-	0.2	0.1
Fear of after effects of methods	2.8	1.9	2.4	2.1	2.2
Unaware of any FP method	0.3	3.0	1.4	2.4	2.0
Opposition from husband or other family members	2.3	3.9	5.6	1.8	3.4
Against religion	13.9	12.0	10.9	13.9	12.7
Natural sterility	22.7	17.9	3.6	31.1	19.6
Attained menopause/MC stopped	18.2	11.9	0.2	23.8	14.1
Others	15.4	15.4	22.1	10.7	15.4
DK/Can't specify	3.5	4.6	5.3	3.5	4.2
<b>Number of Women *</b>	<b>75414</b>	<b>138168</b>	<b>87619</b>	<b>125963</b>	<b>213582</b>

Multiple responses : Percentages may add to more than 100.

\* Currently married, non-pregnant women who are :

(a) Not-pregnant

(b) Want to wait for more than one year (13+ months) for their next birth, or want no more children,

(c) Not using any method of family planning.

The important findings on level of unmet need are:

- i Twenty percent currently married women felt their need for spacing was unmet. That is, this percentage of women should be using spacing methods but they were not using (Table 6.9).
- ii Twenty seven percent currently married women felt their need for limiting family was unmet. This percentage of couples should accept terminal methods but they were not accepting (Table 6.9)
- iii Fifty seven percent respondents in the age group 13-19 and 33 percent in the age group 20 -29 reported that their need for spacing (planning) is not being met. In the case of unmet need for family limitation the percentages in 40-49 and 30-39 were 49.1 and 30.5 respectively (Table 6.9).
- iv More women in the category of illiterates and below primary reported unmet needs for spacing and limitation than other category of educational level.
- v More Muslims reported unmet needs than Hindus.

- vi Though some of these non-users (who should be using the contraceptive because either they wished to space the next child or they did not want any more children) might start using contraceptives soon or might not need contraceptives, yet most of these had reported reasons which went against contraceptives and family planning programme. Some important reported reasons for non-use were 'against religion', 'opposition from family members', 'health does not permit', 'services are not available', 'do not like existing methods,'unaware of family planning methods' (Table 6.10).

If most of the unmet-need-group could be brought into the programme, contraceptive prevalence in Meerut district will exceed 60 percent and programme will achieve its goal. Therefore all efforts need to be made to bring this group into the fold of the programme.

## **6.4 Hindrances to the Acceptance of Family Planning**

### **6.4.1 Perceived Disadvantages of the Methods**

The currently married women who were aware of the spacing methods were asked what they perceived as disadvantages of the methods and whether they believed them to be of permanent nature. These perceived disadvantages were tabulated for each modern family planning method in Table 6.11. More women in urban areas reported disadvantages of spacing methods than terminal methods. The ranking of the methods in order of reported disadvantages were tubectomy/laparoscopy, IUD, oral pills, condoms and vasectomy. In the case of rural women maximum percentage of women (32.1%) reported disadvantages of tubectomy/laparoscopy, followed by IUD and oral pills.

It was a relief that though more women felt that spacing methods had more disadvantages but they were reported to be of temporary nature. In contrast, though fewer women reported disadvantages of terminal methods but they were perceived of permanent nature. Two most important disadvantages reported for different family planning methods, by women in urban areas were:

Vasectomy:	Loss of sexual desire, backache/ bodyache/ headache
Tubectomy:	Abdominal/gastric pain, backache/bodyache/ headache
Laparoscopy:	Bleeding, backache/bodyache/headache
IUD:	Bleeding, sepsis
Oral Pills:	Bleeding, weakness
Condom:	Loss of sexual desire, backache/bodyache/ headache

The disadvantages reported by rural women were also similar except for condoms where 'fear of failure, was also reported. It may be noted that most of these reported fears were imaginary and not true and hence there is need to give people correct knowledge of anticipated problems on contraceptives.

**Table 6.11: Perceived disadvantages of the method**

<b>Disadvantages</b>	<b>Vasectomy</b>	<b>Tubectomy</b>	<b>Laparoscopy</b>	<b>CuT/IUD</b>	<b>Oral Pill</b>	<b>Condom</b>
<b>Urban</b>						
<b>A % believed that method has some disadvantage</b>	0.3	5.7	11.3	14.1	6.6	1.2
<b>Total number of women</b>	236200	240672	240672	224045	225917	213944
<b>B Nature of disadvantage *</b>						
Sepsis	-	9.0	14.1	26.4	2.2	-
Abdominal/gastric pain	-	43.4	25.3	10.1	15.2	-
Backache/body pain/headache	34.6	31.4	30.4	14.4	11.3	21.6
Weakness	-	14.4	8.0	4.3	25.7	19.3
Excessive or irregular bleeding	33.1	23.4	51.0	75.0	32.8	8.9
White discharge	-	-	14.5	5.2	3.9	-
Fear of failure	-	-	1.7	1.7	3.5	20.0
Problem in disposing	-	-	0.8	-	-	19.8
Infertility/secondary sterility	-	-	-	-	-	13.9
Loss of sexual desire	66.7	1.6	-	-	1.6	22.4
Weight gain	-	22.4	15.6	1.8	10.7	-
Others desire	-	-	1.8	1.4	21.9	-
Don't know/can't specify	-	-	-	-	1.5	-
<b>C % believed disadv. to be permanent in nature</b>	100.0	58.1	50.4	37.8	40.7	17.9
<b>D Basis of this belief *</b>						
Own experience	100.0	59.0	34.0	23.9	44.5	79.6
Friends experience	34.6	30.7	27.0	31.8	32.8	7.4
Heard from friend	-	15.7	13.8	13.5	6.1	13.0
Heard from others	-	7.7	36.0	29.5	18.8	-
TV, radio, posters	-	-	-	-	2.1	-
Health personnel	-	2.3	-	-	-	-
Others	-	-	-	2.0	1.8	-
<b>Rural</b>						
<b>A % believed that method has some disadvantage</b>	4.0	12.4	19.7	25.8	9.5	3.5
<b>Total number of women</b>	262183	317393	317393	267141	287469	256172
<b>B Nature of disadvantage *</b>						
Sepsis	11.3	16.8	11.7	33.6	6.3	7.6
Abdominal/gastric pain	23.9	37.3	34.9	11.9	26.5	20.1
Backache/body pain/headache	13.0	13.9	28.4	13.5	9.3	9.8
Weakness	60.5	18.8	19.3	10.0	32.3	14.7
Excessive or irregular bleeding	-	36.4	43.8	52.1	15.7	5.2
White discharge	-	4.9	6.1	5.4	2.3	2.4
Fear of failure	9.1	7.4	5.4	5.7	12.6	27.6
Problem in disposing	-	2.1	1.4	1.5	-	7.2
Infertility/secondary sterility	-	0.5	-	0.6	2.8	2.1
Loss of sexual desire	-	0.5	0.3	2.0	5.3	25.1
Weight gain	-	12.1	7.2	1.1	1.6	-
Others desire	6.3	3.0	7.4	3.1	20.2	12.8
Don't know/can't specify	-	-	0.4	-	-	2.5

<i>Disadvantages</i>	<i>Vasectomy</i>	<i>Tubectomy</i>	<i>Laparoscopy</i>	<i>CuT/IUD</i>	<i>Oral Pill</i>	<i>Condom</i>
<b>C % believed disadv. to be permanent in nature</b>	67.4	52.5	55.8	33.5	27.5	17.9
<b>D Basis of this belief (225) *</b>						
Own experience	2.4	40.7	33.2	14.4	33.8	35.5
Friends experience	23.3	35.9	27.0	37.9	34.6	47.9
Heard from friend	49.8	19.3	15.5	14.4	14.2	14.1
Heard from others	31.4	17.7	34.3	37.3	21.8	14.8
TV, radio, posters	-	-	-	0.3	1.0	-
Health personnel	-	-	0.3	-	1.0	-
Others	1.9	1.8	1.3	-	-	2.5
<b>Total</b>						
<b>A % believed that method has some disadvantage</b>	2.2	9.5	16.1	20.5	8.2	2.4
<b>Total number of women</b>	498383	558065	558065	491186	513386	470116
<b>B Nature of disadvantage *</b>						
Sepsis	10.5	14.8	12.5	31.3	4.8	5.9
Abdominal/gastric pain	22.4	38.8	32.0	11.3	22.5	15.7
Backache/body pain/headache	14.4	18.4	29.0	13.7	10.1	12.4
Weakness	56.7	17.7	15.9	7.5	30.6	15.7
Excessive or irregular bleeding	2.1	33.1	46.8	59.3	21.8	6.0
White discharge	-	3.6	5.6	5.3	2.9	1.8
Fear of failure	8.5	5.5	4.3	4.5	10.0	25.9
Problem in disposing	-	1.5	1.2	1.1	-	8.9
Infertility/secondary sterility	-	0.4	-	0.4	1.8	4.4
Loss of sexual desire	4.3	0.8	0.2	1.4	4.0	24.5
Weight gain	-	14.7	9.7	1.3	4.8	-
Others	5.9	2.3	1.5	2.6	20.8	10.0
Don't know/can't specify	-	-	0.3	-	0.5	1.9
<b>C % believed disadv. to be permanent in nature</b>	69.3	53.9	59.1	34.9	32.1	17.9
<b>D Basis of this belief *</b>						
Own experience	8.6	45.4	33.5	17.4	37.6	45.1
Friends experience	24.0	34.6	27.0	36.0	34.0	39.1
Heard from friend	46.6	18.3	15.0	14.1	11.4	13.8
Heard from others	29.4	15.1	34.6	34.9	20.8	11.6
TV, radio, posters	-	-	-	0.2	1.4	-
Health personnel	-	0.6	0.2	-	0.7	-
Others	1.8	1.3	0.9	0.6	0.6	2.0

\* Percentage may add to more than 100 because of multiple responses.

Denominator for A : Currently married women who are aware of the specific method.

Denominator for B,C&D : Currently married women who are aware of the specific method and said that the method has disadvantages.

## 6.4.2 Source of Supply of Contraception

In order to assess relative importance of various sources of contraceptive methods, the current and past users were asked the sources of supply/adoption of their first method. Their answers have been tabulated in Table 6.12. The currently married women who were aware of specific family planning methods were asked about their knowledge of the source(s) from where the methods could be obtained (Table 6.13).

The major findings related to source of supply are given below:

- i Most of the couples received vasectomy services from public sector programme though 37.6 percent acceptors of vasectomy in urban areas and almost the same percentage in rural areas had gone to the private sector. Similar is the situation for tubectomy acceptors expect fewer go to private sector for tubectomy in rural areas (Table 6.12).
- ii In the case of IUD and oral pills, the first supply was received by about 58 and 30 percent users respectively in urban areas from public sector and 41 and 53 percent from the private sector. In the case of rural areas, more couples received services from the public sector (76.8% for IUD and 44.4% for oral pills) than private sector though as high as 48.9 percent users of oral pill had taken services from private sector (Table 6.12).
- iii Situation in regard to condoms is very much mixed as both public sector and private sector were providing services (Table 6.12)
- iv About 29 to 45 percent respondents (currently married women) reported their private doctors could provide services of all family planning methods (Table 6.13).
- v More than 65 percent respondents reported that condoms and oral pills could be obtained from chemists and other shops. This shows the social marketing of these methods has a good potential (Table 6.13).
- vi The information about Traditional Birth Attendants, depot holders as possible sources of supply of oral pills and condoms was not known to women. There is need that the programme should utilise this source and make people aware of this channel of source (Table 6.13).

**Table 6.12: Source of supply of modern contraceptive methods ever used**

<i>Source of supply</i>	<i>Male sterilization</i>	<i>Female sterilization</i>	<i>Copper /IUD</i>	<i>Pill</i>	<i>Condom</i>
<b>Urban Public sector</b>					
Government Hospital/CHC	62.4	63.7	52.0	29.9	25.3
PHC/camps	-	5.6	7.3	10.0	29.6
Male/Female worker	-	-	-	1.1	-
<b>Private medical sector</b>					
Private doctor	29.3	25.8	37.1	20.1	14.2
Medical shop	-	-	3.7	33.1	88.0
<b>Other private sector</b>					
NGOs, Depot holders	-	-	-	1.2	-
Others	8.3	4.9	-	4.6	0.8
Total %	100.0	100.0	100.0	100.0	**
Total N	2847	49186	13162	21305	30680
<b>Rural Public sector</b>					
Government Hospital/CHC	37.3	52.9	31.1	9.9	11.3
PHC/camps	23.6	28.5	33.0	22.6	38.0
SC/Male/Female worker	-	1.2	12.7	11.9	8.7
<b>Private medical sector</b>					
Private doctor	-	13.3	23.2	27.6	17.0
Medical shop	-	-	-	21.3	82.5
<b>Other private sector</b>					
NGOs, Depot holders	-	-	-	-	-
Others	39.1	4.0	-	6.7	3.3
Total %	100.0	100.0	100.0	100.0	**
Total N	1811	76806	12362	18715	15804
<b>Total Public sector</b>					
Government Hospital/CHC	52.6	57.1	41.9	20.5	20.5
PHC/camps	9.2	19.6	19.7	15.9	32.5
SC/Male/Female worker	-	0.8	6.2	6.2	2.9
<b>Private medical sector</b>					
Private doctor	17.9	18.2	30.3	23.6	15.1
Medical shop	-	-	1.9	27.6	86.2
<b>Other private sector</b>					
NGOs, Depot holders	-	-	-	0.6	-
Others	20.3	4.4	-	5.6	1.7
Total %	100.0	100.0	100.0	100.0	**
Total N	4658	125992	25524	40020	46484

NA Not applicable

\*\* Multiple responses from current users of Condom/Nirodh total may add more than 100.

**Table 6.13: Knowledge of sources from where the method could be obtained**

<b>Methods</b>	<b>Percentage who mentioned</b>						<b>Number of women aware of the method</b>
	<b>PHC/District hospital</b>	<b>SC + workers</b>	<b>CBD</b>	<b>Private doctor</b>	<b>Shops</b>	<b>Others</b>	
Vasectomy	87.3	5.6	-	37.7	0.8	1.3	498383
Tubectomy	92.7	7.3	-	45.5	1.1	2.9	558065
IUD	84.9	21.6	-	44.8	2.7	1.3	491186
Pills	65.1	18.6	1.2	35.4	66.2	0.4	513386
Condom	66.1	16.7	0.2	34.7	67.6	0.7	470116
Foam tablets/Jelly	34.4	20.0	-	28.6	35.4	-	22920
Injectable	66.6	4.8	-	30.0	5.6	1.8	195746

Multiple responses - row totals may add more than one hundred.

### 6.4.3 Supply Position of Oral Pills and Condoms to the Current Users of the Method

Table 6.14 shows supply position and related issues of pills and condoms in the last three months as reported by current users of the method. As usership of pills was very low, it is shown in the table for only the 'Total Users' of pill. In case of condom however, the data are presented according to urban/rural residence of the condom users. Multiple sources were being used by oral pills and condoms users to get their supply of these methods.

About 19 percent users of oral pills reported that they did not sometime get their supply in the last three months. In the case of condoms, 44 percent users, more in urban areas, could not sometimes get their supply of the method in the last 3 months. Quite a large percentage of oral pill and condom users had reported receipt of their supply from shops and even private doctors.

**Table 6.14: Supply position of pills and condom as reported by the current users**

Source of supply	Pill Total users	Condom		
		Urban	Rural	Total
Source of supply *				
Government Hospital/CHC/PHC	50.7	54.9	49.3	53.0
SC and its male and female workers	2.4	-	8.7	2.9
VHG/CBD	1.3	-	-	-
Shops	69.4	88.0	82.5	86.2
Private doctors/clinic	26.8	14.2	17.0	15.1
Others	1.3	0.8	3.3	1.7
Total N	17727	30681	15804	46486
% reporting regular supply	94.6	96.3	88.7	93.6
Alternative in case of short supply				
Do not use the method	19.3	49.9	60.2	55.4
Get from some other source	54.7	-	39.8	21.2
Shift to other method	26.1	50.1	-	23.4
Supply position during last 3 months				
Always got the supply	26.1	-	58.1	31.0
Did not get some time	19.3	69.2	21.5	43.8
Never received	54.7	30.8	20.4	25.3
How many cycles R would like to receive at a time	1.3	8.7	3.5	6.9

\* Multiple responses - Percentage may add to more than 100.

**Table 6.15: Availability of pills and condom from other than public sources in rural areas**

Villages	Percentage of villages reporting availability of			
	Oral Pills	Condoms	Both	F.P. advice/services
Percent of villages having at least one				
Retailers/shop stocking contraceptive	15.5	17.2	12.7	-
Private doctors providing contraceptive	NA	NK	NK	27.6
Non-government organisation (NGO) distributing the method/providing family planning services	NK	NK	0.0	-
Depot holder/CBD stocking the method:				
(a) CBD Network	0.0	0.0	0.0	-
(b) Anganwadi acting as CBD	1.6	4.7	3.2	-
Number of villages covered in the sample	63	63	63	63

NK = Not Known      CBD = Community Based Distribution  
Source : Village Information Schedule- BSUP, 1993-94

Information on availability of pills and condom in rural areas from other than public sources namely, retailers, chemist shops, depot holders, Community Based Distribution (CBD) network, private doctors, NGOs etc. was collected in the village schedule and is presented in Table 6.15. Based on the information collected from 63 sample villages in Meerut district, only

15.5 percent of the villages were found having atleast one retailer's shop stocking pills and 17.2 percent villages stocking condoms.

Another important source stocking pills and condoms in rural areas was Anganwadi Workers who were acting as CBD in 2 to 3 percent of the sample villages. However, private doctors and NGOs were not found active in the supply of these contraceptives though in few villages they provided family planning services/advices.

#### 6.4.4 Attitude of Couples Toward Family Planning

In the district where acceptance of family planning is low, widespread disapproval of contraception may act as a major barrier to adoption of any method of contraception. In the BSUP, the currently married women were asked whether the use of family planning methods is approved or disapproved in the family. If they reported that it was disapproved, they were further probed whether any member(s) of the family was/were against its use. This analysis is reported in Table 6.16. Their responses were cross-classified with the background characteristics of the respondents in Table 6.17.

**Table 6.16: Attitude towards family planning**

<i>Attitude towards family planning</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Percent of women approving use of FP	85.9	73.1	78.2
	(209816)	(267824)	(477640)
Number of women	244208	366630	610838
Percent reporting disapproval of FP by family members	13.9	15.0	14.5
	(33988)	(54816)	(88804)
Number of women	244208	366630	610838
<b>Who oppose FP in family</b>			
Husband	88.9	71.1	77.9
Parents	8.1	14.2	11.9
Father-in-law	6.6	12.1	10.0
Mother-in-law	17.0	19.4	18.5
Other male member	1.5	7.4	5.1
Other female member	0.8	3.2	2.3
Other	0.6	6.0	3.9
Number of women *	33988	54816	88804

\* Women who reported member(s) of their family are against the use of contraceptive-multiple responses.

**Table 6.17: Approval to family planning**

Background characteristics	Percent approving FP use	Percentage reporting opposition from						Number of women	
		No one	Husband	Parent	Father-in-law	Mother-in-law	Others		
Age	13 - 19	71.3	90.8	7.8	1.2	-	1.4	0.6	34536
	20 - 29	79.8	85.3	10.4	1.6	2.6	3.9	1.7	255072
	30 - 39	78.8	84.3	13.1	2.3	0.9	2.2	1.9	201241
	40 - 49	75.8	86.2	11.4	1.3	0.4	1.3	1.4	119989
Residence	Urban	85.9	86.1	12.4	1.1	0.9	2.4	0.4	244208
	Rural	73.1	85.0	10.6	2.1	1.8	2.9	2.5	366631
<b>Education</b>									
	Illiterate	71.8	83.2	12.9	2.1	1.7	2.9	2.5	386987
	Upto class 4	77.5	82.7	12.7	3.6	1.7	6.1	-	28964
	Primary	89.1	87.3	10.2	0.6	2.1	2.5	-	44800
	Upto middle	90.3	90.9	7.3	0.9	0.9	1.8	-	51028
	Upto high	93.9	89.9	8.2	0.6	-	1.9	-	41092
	Above high school	90.8	92.3	6.8	0.8	0.8	1.3	0.4	57968
Religion	Hindu	82.8	91.0	6.5	0.5	0.6	2.0	0.6	467003
	Muslim	61.8	66.4	27.8	5.9	4.4	5.2	5.4	135844
	Other	88.8	87.8	9.7	2.6	-	-	-	7992
<b>Caste</b>									
	Scheduled caste	77.2	89.7	7.0	0.7	0.5	2.9	0.7	132471
	Scheduled tribe	59.4	90.2	5.4	-	-	4.4	-	4751
	Backward caste	81.9	89.6	7.9	0.5	0.4	1.2	1.3	104936
	Higher caste Hindu	87.0	92.4	5.7	0.4	0.8	1.8	0.1	224845
	Other religious groups	63.3	67.5	26.8	5.7	4.1	4.9	5.1	143836
	Total	78.2	85.5	11.3	1.7	1.5	2.7	1.6	610839

\* Multiple responses - row totals may add more than 100

It may be noted that even after more than forty years of the programme, 15 percent of women in rural areas and 14 percent women in urban areas reported disapproval of contraceptives in their family. Two most important members of the family who were opposed were husband and mother-in-law though father-in-law and even parents were also reported as 'opposers' of family planning in rural areas. Actual approvers of family planning methods were 85.9 percent women in the urban areas and 73.1 percent in rural areas.

Another expected fact, was that level of education was positively associated with approval and negatively associated with disapproval of family planning methods. Probably this fact was responsible for lesser approval of the methods among Muslims.

#### 6.4.5 Exposure to Family Planning Messages on Radio and Television

In order to explore the spread of family planning messages through different mass media, respondents were asked whether they had heard such messages on radio, television and/or in cinema in the last three months. If they had received the message, they were further asked about the type of message they received on family planning. Table 6.18 shows the differentials of ever married women exposed to family planning messages on radio and television according to their various background characteristics. Only 41.5 percent women reported exposure to family planning messages on radio/television. Only 19.0 percent had heard a family planning

message on both radio and television while 5.5 percent had heard only on radio and 17.0 percent only on television. This reveals that the radio /television has played a very limited role in disseminating family planning messages.

More urban women (58%) were exposed to family planning messages on radio/television than the rural women (30%). Television reach was relatively more in urban areas while radio was more in rural areas in disseminating family planning messages though both had poor reach.

More women in higher educational category had reported exposure to family planning messages both on radio and television than women of low educational category.

Among religious categories, more Hindus than Muslims had reported similar degrees of exposure to family planning message on radio/television. Similarly, higher caste Hindus had more family planning exposure on radio/television than scheduled caste and backward caste Hindus or other religious groups.

As expected, the percentage of women who had heard a family planning message on radio/television was almost twice (55%) among ever user of contraceptives than among those who never used any contraceptive (30%) (Table 6.18).

**Table 6.18: Heard family planning messages on radio and television**

<b>Background Characteristics</b>	<b>Heard of family planning messages on radio and television</b>				<b>Total %</b>	<b>Total N</b>
	<b>Neither</b>	<b>Radio only</b>	<b>Television</b>	<b>Both</b>		
<b>Age</b>						
13-19	60.9	7.0	14.7	17.3	100.0	34536
20-24	55.6	5.5	17.4	21.5	100.0	255870
25-29	59.2	6.4	17.3	17.1	100.0	206333
30-49	62.7	3.6	16.4	17.3	100.0	130528
<b>Residence</b>						
Urban	41.6	5.1	23.2	30.1	100.0	251857
Rural	69.9	5.8	12.8	11.5	100.0	375410
<b>Education</b>						
Illiterate	74.3	5.4	12.2	8.2	100.0	398640
Upto class 4	57.4	6.9	20.7	14.9	100.0	30382
Primary	43.5	4.9	28.7	23.0	100.0	45599
Upto middle	34.7	7.6	27.7	30.0	100.0	52317
Upto high	21.6	5.2	25.6	47.6	100.0	41353
Above high school	11.5	4.6	22.9	61.0	100.0	58975
<b>Religion</b>						
Hindu	54.0	5.7	18.8	21.5	100.0	478674
Muslim	76.4	4.9	10.5	8.3	100.0	140037
Other	20.1	3.7	22.7	53.4	100.0	8555
<b>Caste</b>						
Scheduled caste	68.1	6.6	16.1	9.2	100.0	137369
Scheduled tribe	74.9		15.3	9.8	100.0	4955
Backward caste	65.6	3.5	18.0	12.9	100.0	106192
Higher caste Hindu	39.8	6.3	20.9	33.0	100.0	230159
Other religious groups	73.1	4.8	11.2	10.9	100.0	148592
<b>Use of contraception *</b>						
Ever use	45.5	6.3	21.0	27.1	100.0	287205
Never use	69.5	4.8	13.6	12.1	100.0	323634
<b>Total</b>	<b>58.5</b>	<b>5.5</b>	<b>17.0</b>	<b>19.0</b>	<b>100.0</b>	<b>627266</b>

\* Responses from currently married women only.

The women who were exposed to family planning messages by the mass media namely radio, television or cinema were further asked about the type of message they had received in the last three months (Table 6.19)

### Messages on Radio

About 35 percent ever-married women in urban areas and 17 percent in rural areas received messages on family planning on radio in the last three months. Among the women who had received the message 59.2 percent in urban areas reported that the message was on small family size, 42.6 percent reported it on condoms and 49.9 percent on oral pills. A small percentage (13-21%) reported that the messages were on IUD and sterilization. In rural areas,

those who got exposed to the message of family planning, more had reported having received messages of small family size, condoms and oral pills and lesser percentage received messages of IUD and sterilization.

### Messages on Television

The exposure to family planning messages on television in the last three months was reported by 53.3 percent ever-married women in urban areas and only 24.3 percent in rural areas. A large percentage of them had received message of small family size, condoms and oral pills and a small percentage on IUD and sterilization.

### Messages through Cinema

Exposure to family planning messages through cinema was reported by a small percentage of ever-married women -- 12.9 percent in urban areas and 3.8 percent in rural areas. The messages received were similar to those received on radio and TV except that 26.9 percent respondents in urban areas and 20.7 percent in rural areas also reported the message on population problems in the cinema.

*Table 6.19: Family planning messages through different media*

<i>Types of messages received on family planning</i>	<i>Radio</i>			<i>Television</i>			<i>Cinema</i>		
	<i>Urban</i>	<i>Rural</i>	<i>Total</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
Percent received messages on FP	35.2	17.3	24.5	53.3	24.3	36.0	12.9	3.8	7.5
Number of women	251857	375410	627267	251857	375409	677266	251856	375410	627266
Small family size	59.2	59.7	59.4	62.1	58.6	60.7	52.1	55.4	53.1
Use of condom/Nirodh	42.6	44.5	43.4	48.5	37.9	44.2	41.4	35.7	39.7
Use of oral pills/Mala D	49.0	52.5	50.5	57.7	55.1	56.7	29.7	38.0	32.2
Use of loop/IUD/Cu-T	20.9	11.0	16.7	19.6	12.3	16.6	7.7	4.9	6.8
Sterilization	12.8	10.7	11.9	12.7	12.1	12.4	10.0	10.8	10.2
Population problems	14.3	23.3	18.1	16.1	20.0	17.6	26.9	20.7	25.0
Others	0.5	2.2	1.2	1.2	3.5	2.1	1.5	6.9	3.1
Number of women *	88590	64864	153454	134304	91206	225510	32552	14271	46823

\* Ever married women who are exposed to family planning message(s) by the specific media under consideration.

### 6.5 Reasons for Discontinuation of F.P. Method

All currently married women who were past users of a contraceptive method and were not currently pregnant were asked why they had discontinued the use of the method. Their responses to this question are tabulated in Table 6.20. The reasons were mostly related with the method. While in urban areas, major reasons given were 'did not like the methods', 'health problems', 'put on weight' and 'method failure'. In rural areas several more reasons were given. Major among those were, 'method failure', 'lack of sexual satisfaction', 'created menstrual problems', 'created health problems', and 'inconvenient to use' etc. With a little motivation and improvement in services, these women may be successfully brought in the programme.

Surprisingly, quite a high percentage of women reported accidental pregnancy as reason for discontinuation.

**Table 6.20: Reasons for discontinuation**

<i>Reasons for discontinuation</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
Method failed got pregnant	5.7	10.0	7.8
Lack of sexual satisfaction	-	3.7	1.8
Created menstrual problem	-	3.6	1.7
Created health problem	7.3	11.1	9.1
Inconvenient to use	1.3	1.3	1.2
Hard to get method	-	3.1	1.5
Put on weight	6.3	6.0	6.1
Did not like the method	44.9	28.8	37.2
Wanted to have a child	-	1.2	0.6
Lack of privacy for use	-	1.0	0.5
Others	21.8	12.3	17.3
Can't say/don't know	12.7	17.9	15.2
Total %	100.0	100.0	100.0
Number of women *	20163	18590	38752

\* Currently married and non-pregnant past users of contraceptive method.

## 6.6 Future Intentions of Contraceptive Use

Intentions to use contraception in the future provides a forecast of potential demand for services. It is an approximate indicator of what percentage of non-users will accept family planning methods in near future. The data show that almost 82 percent non-users in urban areas and 80 percent in rural areas intended to use contraceptives in near future (Table 6.21).

**Table 6.21: Future intention**

	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Within one year	55.7	41.3	46.4
1-2 years	19.0	29.0	25.4
2 or more years	7.1	10.0	9.0
Do not know/can't specify	18.2	19.7	19.2
Total %	100.0	100.0	100.0
Number of women *	19957	36045	56001

\* Currently married women-current non-users of contraception and not wanting children or who want to delay their next child.

**To sum up**, though current use of contraceptives in Meerut district was 45 percent, quite a large percentage of women felt need of using contraceptives but were not using them for reasons which went against family planning programmes. These reasons are given in this chapter; all efforts should be made to overcome those reasons. Similarly, efforts should be made to minimise the various problems which the users of contraceptives had reported. These problems had also been reported in this chapter. In other words, this chapter gives a good deal of information how the pace of acceptance of family planning methods could be accelerated. It is now a matter of taking concrete measures to translate findings of this survey into programme strategies.

## CHAPTER VII

### FERTILITY PREFERENCES

This chapter deals with three questions which were asked from currently married women about their desire for children in future: (i) whether the women wanted more children, (ii) if so, how long would she prefer to wait before the next child, and (iii) if she could start afresh, how many children in all would she want. In addition several other questions were also asked as sex preference for additional child, ideal family size and communication between husband and wife on the family size. Responses of women on whether (i) current pregnancy was an unwanted one, and (ii) what would be their intention if unwanted pregnancies occurred in future, have also been analyzed. Such information is useful as an indicator of general attitudes and the possible future course of fertility.

For currently pregnant women, the question on desire for more children was re-phrased to refer to desire for another child after the one that they were expecting. To take into account the way in which the preference variable was defined for pregnant women, the results were classified by number of living children, including the current pregnancy as equivalent to a living child.

Couples who had been sterilized were classified as wanting no more children. The validity of this assumption could be ascertained by referring to the marginal distribution of responses to the special question for sterilized women or men on regrets about being sterilized.

#### 7.1 Desire for More Children

The currently married women were asked whether they wished to have additional children. If answer was 'yes', then she was asked about the preferred timing and sex of the next child. This question has been analyzed by number of living children in Table 7.1. It is surprising to note that almost 40 per cent women, both in urban and rural (43.6%) areas, reported that they did not know whether and when they wanted to have the next child even when they had no living child - (a) Such responses by those who had two or more number of children could be reasonably justified but cannot be understood for those who had no living child. Perhaps they were implying that their husbands and other family members jointly took such decisions and thus they alone were not in a position to say anything on these aspects. Another important finding was that those who wanted to have additional children wanted to have them after 24 or more months which implies that they wanted to plan the next child.

**Table 7.1: Fertility preferences**

<i>Desire for children</i>	<i>Number of living children *</i>				<i>Total</i>
	<i>0</i>	<i>1</i>	<i>2</i>	<i>3 +</i>	
<b>Urban</b>					
<b>Desire for additional child</b>					
Within 11 months	21.2	4.2	6.0	7.8	9.7
12-23 months	31.1	7.7	18.3	23.6	19.8
24 or more months	7.6	59.8	40.4	21.9	33.1
Do not know	40.1	28.3	35.3	46.7	37.4
Total %	100.0	100.0	100.0	100.0	100.0
<b>Preferred sex of additional child</b>					
Only boy(s)	6.3	24.2	42.3	51.3	30.7
Only girl(s)	1.5	9.9	7.8	11.1	7.7
Both boy and girl	65.3	28.3	13.5	5.0	28.2
Either	12.6	21.2	17.4	1.3	13.2
Others	14.3	16.3	19.0	31.3	20.2
Total %	100.0	100.0	100.0	100.0	100.0
Number wanting more children	19199	22097	17244	20041	78580
<b>Rural</b>					
<b>Desire for additional child</b>					
Within 11 months	18.8	8.8	11.6	15.0	13.0
12-23 months	19.0	15.2	18.8	15.6	16.9
24 or more months	18.6	48.1	32.6	36.3	35.7
Do not know	43.6	27.8	36.9	33.1	34.4
Total %	100.0	100.0	100.0	100.0	100.0
<b>Preferred sex of additional child</b>					
Only boy(s)	4.1	26.7	55.9	73.1	40.8
Only girl(s)	-	7.6	11.1	7.8	7.0
Both boy and girl	77.2	38.8	17.1	3.6	32.4
Either	10.9	21.4	10.4	7.5	13.2
Others	7.8	5.5	5.4	8.0	6.6
Total %	100.0	100.0	100.0	100.0	100.0
Number wanting more children	26284	41964	30953	33904	133105
<b>Total</b>					
<b>Desire for additional child</b>					
Within 11 months	19.8	7.2	9.6	12.3	11.8
12-23 months	24.1	12.7	18.6	18.6	18.0
24 or more months	13.9	52.2	35.4	31.0	34.7
Do not know	42.1	28.0	36.3	38.1	35.5
Total %	100.0	100.0	100.0	100.0	100.0
<b>Preferred sex of additional child</b>					
Only boy(s)	5.0	25.8	51.1	65.0	37.1
Only girl(s)	0.6	8.4	9.9	9.0	7.2
Both boy and girl	72.2	35.2	15.8	4.1	30.8
Either	11.6	21.3	12.9	5.2	13.2
Others	10.5	9.3	10.3	16.7	11.7
Total %	100.0	100.0	100.0	100.0	100.0
Number wanting more children	45482	64060	48197	53945	211684

Note: In this table only those currently married women are considered who want more children.

\* Includes current pregnancy. For tabulating this table one is added in number of living children if the women is currently pregnant.

Almost 40 to 70 percent of women who had already two or more children and wished to have additional children wanted to have next child, a boy. Perhaps they did not have preferred number of male children in the family and therefore wanted additional children. Only a small percentage of women with large current family size (two or more children) wanted to have additional female children. Preference for more male children in the family was obvious from these responses. As expected, about 80 to 88 percent women with no living child had expressed that they wanted to have children both boys and girls. Considering the responses of women irrespective of their number of living children, it is encouraging to note from the programme point of view that about 12 percent of the women desired additional child without bothering about the sex of the child (Table 7.1).

Table 7.2 gives information to understand desired family size from those who had different number of living children. It may be noted that women in rural areas wanted to have a larger family size than women in urban areas. Also, those who had larger number of living children wanted no more child but the figures suggest as if they wanted to have larger family size than those who had currently fewer living children. Two indicators are shown below to support this finding. One of these indicators is the modal family size desired and the other is desired average size. Both these indicators have been shown by number of currently living children.

<i>No. of currently living children</i>	<i>Modal family size desired</i>	<i>Desired average size of family</i>
0	2	2.4
1	2	2.4
2	2	2.6
3	3	3.2
4	4	4.1
5+	5+	5.1+

**Table 7.2: Number of living children by number of additional desired children**

Number of living children *	Number of desired children					DK	Total %	Mean Number of women	
	0	1	2	3	4+				
<b>Urban</b>									
0	2.6	5.7	46.1	25.7	6.3	13.7	100.0	2.36	19713
1	20.9	38.5	28.2	2.7	0.9	8.9	100.0	1.18	27925
2	64.8	22.2	6.3	0.6	-	6.1	100.0	0.39	48942
3	81.3	13.2	0.9	-	-	4.6	100.0	0.16	51523
4	88.2	7.9	1.3	-	-	2.5	100.0	0.11	40615
5+	89.9	3.7	0.9	-	-	5.5	100.0	0.06	55491
Total	67.8	14.2	8.8	2.5	0.6	6.0	100.0	0.45	244208
<b>Rural</b>									
0	5.5	5.1	41.9	24.3	12.2	11.1	100.0	2.46	27802
1	16.9	33.2	27.0	14.8	3.6	4.4	100.0	1.55	50515
2	47.3	32.3	12.4	2.3	1.2	4.6	100.0	0.72	58692
3	75.3	16.9	4.5	0.6	0.9	1.9	100.0	0.33	71409
4	84.8	12.2	1.3	-	-	1.7	100.0	0.15	62852
5+	93.0	2.9	1.3	0.5	-	2.4	100.0	0.07	95360
Total	63.7	16.3	10.3	4.5	1.8	3.5	100.0	0.61	366631
<b>Total</b>									
0	4.3	5.3	43.6	24.8	9.8	12.2	100.0	2.42	47515
1	18.3	35.1	27.4	10.5	2.6	6.0	100.0	1.42	78440
2	55.2	27.7	9.6	1.5	0.6	5.3	100.0	0.57	107634
3	77.8	15.3	3.0	0.4	0.5	3.0	100.0	0.26	122932
4	86.1	10.5	1.3	-	-	2.0	100.0	0.13	103467
5+	91.9	3.2	1.1	0.3	-	3.5	100.0	0.07	150850
Total	65.3	15.5	9.7	3.7	1.3	4.5	100.0	0.55	610839

\* Includes current pregnancy.

The distribution of women who wanted more children by number of living children is given in Table 7.3. Desire for more children was higher in rural population than urban. No relationship with educational level was noticed as almost 30-35 percent women wanted to have additional children irrespective of the educational level. But for women with two children, a negative relationship was noticed with educational level. More Muslim women wanted additional children compared to Hindus. Similarly, more scheduled caste and backward caste wished to have additional children than high caste Hindus. There was also clear relationship with desire for additional children with number of sons they had. Once they had two sons, desire for additional children declined.

**Table 7.3: Desire to have more children by background characteristics**

<b>Background Characteristics</b>	<b>Number of living children *</b>					<b>All</b>	<b>Number of women</b>
	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>		
<b>Age</b>	13 - 19	98.4	93.5	87.7	100.0	-	95.2 34536
	20 - 29	96.5	89.7	55.8	36.9	24.2	57.0 255072
	30 - 39	90.1	20.7	17.8	11.7	11.6	14.4 201241
	40 - 49	73.8	30.2	4.3	1.2	1.9	3.8 119990
<b>Residence</b>	Rural	97.4	79.1	35.2	18.7	10.8	32.2 244208
	Urban	94.5	83.1	52.7	24.7	10.3	36.3 366631
<b>Education</b>	Illiterate	94.0	82.0	62.0	27.6	11.1	34.5 386987
	Upto class 4	100.0	96.3	45.3	19.3	27.6	46.5 28964
	Primary	100.0	72.2	35.1	19.1	4.6	29.2 44800
	Upto middle	94.1	90.8	34.4	17.4	1.7	35.8 51028
	Upto high	94.6	82.3	27.5	12.8	5.1	35.5 41092
	Above high school	100.0	68.4	16.2	9.0	3.4	32.7 57968
<b>Religion</b>	Hindu	96.7	79.6	38.9	18.2	6.8	31.4 467003
	Muslim	92.7	88.9	75.5	41.6	20.2	45.5 69244
	Other	100.0	100.0	-	15.3	20.5	39.5 7992
<b>Caste</b>	Scheduled caste	92.9	92.0	64.9	29.4	10.7	38.2 132471
	Scheduled tribe	-	-	100.0	-	8.2	9.8 4751
	Backward caste	100.0	92.3	47.0	28.7	7.0	36.5 104936
	Higher caste Hindu	97.0	70.1	26.7	9.3	3.3	25.5 224845
	Other religious groups	93.4	89.7	69.4	38.6	20.2	45.2 143837
<b>Number of living sons</b>							
None	95.7	85.3	73.9	69.1	50.8	84.2 131991	
1	-	77.0	42.3	30.8	19.4	40.9 170108	
2	-	-	26.2	7.5	8.4	11.7 330559	
3+	-	-	-	15.2	7.3	8.2 148289	
<b>Number of living daughters</b>							
None	95.7	82.9	35.6	18.5	25.1	64.2 170259	
1	-	79.3	41.1	9.2	5.5	27.1 183304	
2	-	-	76.1	32.6	7.4	23.4 138198	
3+	-	-	-	71.8	13.3	17.1 119075	
<b>Total</b>	95.7	81.7	44.8	22.2	10.5	34.7 610839	

\* Includes current pregnancy.

## 7.2 Ideal Number of Children

The analysis above has focused on the respondent's reproductive desire for the future, implicitly taking into account the number of children she already has. In determining the ideal number of children, the respondent is asked to state the number of children she would like to have if she could start her reproductive life once again. The ever married women were asked about the ideal family size and their responses were tabulated against the number of living children they had (Table 7.4).

**Table 7.4: Ideal and actual number of children**

Ideal number of children	Number of living children *							Total
	0	1	2	3	4	5	6+	
<b>Urban</b>								
None	-	-	-	0.6	-	-	0.8	0.2
1	2.4	2.7	0.5	0.4	-	-	-	0.7
2	45.7	54.6	60.1	17.7	26.8	6.4	6.4	31.2
3	29.3	21.8	22.5	63.1	36.7	39.5	24.9	36.0
4	5.1	3.6	3.1	6.9	22.2	22.8	23.9	12.1
5	-	.9	-	-	3.2	7.1	3.0	1.8
6+	1.2	1.8	0.5	-	-	2.0	6.4	1.4
Non-numeric responses	16.2	14.6	13.3	11.3	11.1	22.2	34.6	16.6
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	19173	28190	49374	53029	41874	27307	32371	251857
Mean ideal number **								
Ever-married women	2.52	2.46	2.35	2.85	3.02	3.47	3.71	2.86
Currently married women	2.52	2.46	2.34	2.85	3.04	3.47	3.72	2.85
<b>Rural</b>								
None	1.8	0.4	0.5	1.0	0.3	-	0.5	0.6
1	7.0	1.9	1.2	0.7	-	2.2	0.8	1.5
2	37.4	42.7	40.7	18.6	18.8	12.5	7.2	24.4
3	30.7	32.4	35.8	55.6	36.7	41.0	34.1	39.4
4	8.3	15.3	12.3	13.6	34.0	17.8	23.0	18.6
5	2.7	-	1.8	2.8	2.8	7.0	4.1	3.0
6+	3.0	2.1	2.2	3.0	2.7	7.3	18.9	5.5
Non-numeric responses	9.2	5.1	5.6	4.7	4.7	12.1	11.2	7.1
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	27802	50741	59550	72654	64146	46014	54503	75410
Mean ideal number **								
Ever-married women	2.66	2.74	2.79	3.10	3.31	3.45	4.07	3.18
Currently married women	2.66	2.74	2.79	3.11	3.31	3.46	4.14	3.18
<b>Total</b>								
None	1.0	0.3	0.3	0.8	0.2	-	0.6	0.4
1	5.1	2.2	0.9	0.6	-	1.4	0.5	1.2
2	40.9	47.0	49.5	18.2	21.9	10.3	6.9	27.1
3	30.1	28.6	29.8	58.8	36.7	40.5	30.7	38.0
4	7.0	11.1	8.1	10.8	29.4	19.6	23.4	16.0
5	1.6	0.3	1.0	1.6	2.9	7.0	3.7	2.5
6+	2.3	2.0	1.4	1.7	1.6	5.3	14.2	3.9
Non-numeric responses	12.1	8.5	9.1	7.4	7.2	15.8	19.9	10.9
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	47515	78931	108923	125683	106020	73321	86874	627266
Mean ideal number **								
Ever-married women	2.60	2.64	2.60	3.00	3.20	3.46	3.96	3.06
Currently married women	2.60	2.65	2.60	3.01	3.20	3.46	4.01	3.06

\* Includes current pregnancy

\*\* Means are calculated excluding the women giving non-numeric responses.

Ideal number of children were reported as 2.5 to 4.1. Generally, the higher the number of living children a woman had, higher was her reported ideal family size though the range was narrow between 2.5 to 4.1 children. Probably they were justifying their current large family size. For instance, ideal number of children for women with no living child were 2.6. This ideal number increased to 4.0 for those who had 6 or more number of living children.

Ideal number of children reported by women in urban areas was smaller than in rural areas. This number was 3.7 for urban women with 6 and more living children compared to 4.1 for rural women.

The modal number of ideal children for urban respondents were a little over two for those who had two or less number of living children. But then it shifted to three for all those who had more than two children. In the case of rural women, the ideal size was little over 2.5 for those who had upto three children, then this ideal size shifted between three to four.

A comparative statement of reported ideal number of children and currently living children is shown in Table 7.5. As expected, almost all women who had living children between 0-1 had their ideal number higher than their current size of living children. Most of those women who had two living children, had reported ideal number as two - more so in urban areas than rural. In the case of women with three living children, the ideal number mostly reported was three, both in rural and urban areas. Most of those with four or more living children, the ideal number was invariably lower than their current size of living children. In other words, women with 2 or 3 children tend to justify their family size by reporting their ideal size equal to the current size.

**Table 7.5: Match between ideal number of children and number of living children**

<i>Number of ideal children</i>	<i>Number of living children *</i>					<i>Total</i>
	<i>0-1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5+</i>	
<b>Urban</b>						
Less than ideal	98.1	30.1	7.8	3.6	1.9	27.8
Equal to ideal	1.9	69.3	71.1	25.0	7.1	36.3
More than ideal	-	0.6	21.1	71.4	91.1	35.9
Total %	100.0	100.0	100.0	100.0	100.0	100.0
Total N @	40580	42820	47057	37242	42426	210126
<b>Rural</b>						
Less than ideal	97.7	55.1	20.3	5.7	6.4	36.1
Equal to ideal	2.0	43.1	58.3	35.7	9.0	27.5
More than ideal	0.3	1.7	21.4	58.6	84.6	36.4
Total %	100.0	100.0	100.0	100.0	100.0	100.0
Total N @	73385	56221	69265	61102	88857	348831
<b>Total</b>						
Less than ideal	97.9	44.3	15.3	4.9	4.9	33.0
Equal to ideal	2.0	54.5	63.5	31.6	8.4	30.8
More than ideal	0.2	1.2	21.2	63.5	86.7	36.2
Total %	100.0	100.0	100.0	100.0	100.0	100.0
Total N @	113966	99041	116322	98344	131284	558957

\* Includes current pregnancy.

@ Excludes those ever married women who have given non-numeric answers regarding ideal number of children.

### **7.3 Husband-Wife Communication on Number of Children**

The currently married women were asked about the stage of their reproductive life when she had discussed with her husband about the number of children. Their responses are analyzed by background characteristics in Table 7.6.

**Table 7.6: Husband-wife communication on number of children they should have**

<b>Background Characteristics</b>	<b>Stage at which discussion took place</b>						<b>Total %</b>	<b>Number</b>
	<b>Immediately after marriage</b>	<b>After 1st child</b>	<b>After 2nd child</b>	<b>After 3rd child</b>	<b>Never</b>	<b>Don't know/remember</b>		
<b>Age</b>								
13-19	52.3	13.0	4.0	-	29.9	0.8	100.0	34536
20-29	37.5	19.3	13.6	4.2	25.2	0.2	100.0	127467
30-39	20.1	16.9	21.3	15.8	25.0	0.9	100.0	127605
40-49	11.7	8.7	16.5	22.5	37.7	2.9	100.0	321230
<b>Residence</b>								
Rural	24.5	15.2	18.4	17.4	22.7	1.9	100.0	244208
Urban	18.9	11.4	14.7	15.0	38.2	1.8	100.0	366631
<b>Education</b>								
Illiterate	14.4	11.8	13.4	17.9	40.0	2.5	100.0	386987
Upto class 4	25.6	8.8	19.7	20.2	24.1	1.7	100.0	28964
Primary	22.0	12.9	23.9	13.5	27.2	0.6	100.0	44800
Upto middle	31.2	16.5	16.8	14.1	20.5	1.0	100.0	51028
Upto high	34.3	16.4	24.1	11.5	13.2	0.6	100.0	41092
Above high school	45.0	16.5	20.9	8.0	9.7	-	100.0	57968
<b>Use of contraception</b>								
Ever use	19.9	12.7	22.4	19.9	23.4	1.8	100.0	287205
Never use	22.2	13.1	10.7	12.5	39.7	1.8	100.0	323634
<b>Total</b>	<b>21.1</b>	<b>12.9</b>	<b>16.2</b>	<b>16.0</b>	<b>32.0</b>	<b>1.8</b>	<b>100.0</b>	<b>610839</b>

The major findings related to husband-wife communication on number of children are summarised below:

- i Almost one third of the couples had no communication on the number of children in the family. Those who had communication could report the stage at which communication took place.
- ii Most of those who could recall when they had talked about the number of children reported that such conversation had occurred immediately after their marriage.
- iii It may also be noted that more younger couples reported such dialogue immediately after marriage than older couples. It means that younger couples had started feeling more concerned about their family size and thus the number of children made a topic of their concern immediately after marriage.
- iv More educated females tended to discuss on the number of children immediately after marriage.

## 7.4 Fertility Planning

A series of questions were asked from currently married women for each child born to them and any current pregnancy to determine whether the particular pregnancy was planned, unplanned but wanted at a later time, or unwanted. Information from these questions may result in underestimation of unwanted fertility due to rationalization because an unwanted conception may well become a cherished child. Nevertheless, these questions form a potential powerful indicator of the degree to which the couples successfully control childbearing.

The distribution of the number of unwanted pregnancies by the background characteristics of women has been analyzed in Table 7.7. About 11.1 percent currently married women reported one or more unwanted pregnancies and this percentage went upto 14.2 percent for women who had completed their reproductive life (aged 40-49).

Small differences were found in percentages of women reporting unwanted pregnancies among different religious groups. More Muslims reported unwanted pregnancies than Hindus. But no differences were observed in different caste groups. As expected there were differences in such percentages among women living in urban and rural areas. About eight percent women reported one or more unwanted pregnancies in urban areas compared to about 13 percent in rural areas.

**Table 7.7: Unwanted pregnancy**

<b>Background Characteristics</b>		<b>Number of unwanted pregnancies</b>				<b>Total %</b>	<b>Number of women</b>
		<b>0</b>	<b>1</b>	<b>2</b>	<b>3+</b>		
<b>Age</b>	13 - 19	98.6	1.4	-	-	100.0	34536
	20 - 29	92.8	5.3	1.4	0.5	100.0	255072
	30 - 39	84.2	8.4	4.9	2.4	100.0	201241
	40 - 49	85.8	4.7	6.2	3.3	100.0	119989
<b>Residence</b>	Rural	91.8	3.7	3.2	1.4	100.0	244208
	Urban	87.0	7.5	3.6	1.9	100.0	366631
<b>Education</b>							
	Illiterate	88.2	5.8	4.0	2.0	100.0	319217
	Upto class 4	88.9	4.3	5.4	1.5	100.0	28964
	Primary	81.0	11.2	4.7	3.1	100.0	44800
	Upto middle	89.0	7.7	2.4	0.9	100.0	51028
	Upto high	92.6	5.6	1.7	-	100.0	41092
	Above high school	92.4	5.3	1.8	0.4	100.0	57968
<b>Religion</b>	Hindu	87.5	7.1	3.7	1.6	100.0	467003
	Muslim	93.0	2.4	2.6	2.0	100.0	135844
	Other	100.0	-	-	-	100.0	7992
<b>Caste</b>							
	Scheduled caste	88.2	6.4	4.0	1.3	100.0	132471
	Scheduled tribe	89.5	5.4	-	5.2	100.0	4751
	Backward caste	87.3	6.6	3.8	2.4	100.0	104936
	Higher caste Hindu	87.2	7.9	3.6	1.3	100.0	224845
	Other religious groups	93.4	2.3	2.4	1.9	100.0	143836
<b>Total</b>		88.9	6.0	3.4	1.7	100.0	610839

The ever-married women were also asked about outcome of their unwanted pregnancies. Their responses for urban and rural women have been shown in Table 7.8. About eight percent (13.7% in urban areas and 5.7% in rural) of the unwanted pregnancies ended up in induced abortion and rest of them (92%) were left to take their own natural course. Almost 84 percent ended up in live births. It may therefore be inferred that if good and accessible services of Medical Termination of Pregnancy were made available, more and more women would take help of these services and avoid unwanted pregnancies.

**Table 7.8: Outcome of unwanted pregnancies \***

<b>Outcome of unwanted pregnancies</b>	<b>Urban</b>	<b>Rural</b>	<b>Total</b>
Live birth	79.6	85.9	83.9
Still birth	3.2	3.8	3.6
Spontaneous abortion	1.6	2.9	2.5
Induced abortion/MTP	13.7	5.7	8.2
Attempted to abort but failed	1.9	-	0.6
Others	-	1.7	1.2
No. of unwanted pregnancies	34475	74592	109067

The currently pregnant women were asked the intention with regard to their current pregnancy to determine whether they wanted to have it now, wanted to have later or never wanted it. Their responses are shown in Table 7.9. Almost 18 percent (19.3% in urban and 17.9% in rural areas) reported that they did not want the pregnancy at all. Another 9.1 percent wanted to have them later. Therefore, almost 27 percent women had been burdened with unwanted pregnancies, the situation was similar in urban and rural areas.

**Table 7.9: Fertility planning**

<b>Pregnancy intention</b>	<b>Urban</b>	<b>Rural</b>	<b>Total</b>
Wanted then	74.0	71.7	72.5
Wanted later	6.7	10.4	9.1
Wanted no more	19.3	17.9	18.4
Total %	100.0	100.0	100.0
Number of pregnancies	21729	42125	63854

The currently married women who did not want any more children and were not pregnant were asked their intention on the pregnancy if they got pregnant (even though they did not want to have any more pregnancy). Their responses are shown in Table 7.10. Almost 18 percent would accept them, another 11 percent were not sure what they would do with such unwanted pregnancies. Only 24 percent respondents reported that they would get them aborted. These types of replies led to two types of inferences: (i) either women did not know enough about MTP or were not sure of its simple operation and therefore did not think of aborting the unwanted pregnancy, and/or (ii) their motivation for having no more birth was not strong. Both these possibilities should be addressed by the programme so that more and more women should seek abortions for their unwanted pregnancies.

**Table 7.10: What the woman would do if gets unwanted pregnancy**

<b>Intention</b>	<b>Urban</b>	<b>Rural</b>	<b>Total</b>
Will accept the pregnancy	15.1	19.4	17.6
Will get it aborted	26.4	22.3	24.0
Others	13.8	13.3	13.5
Not sure/do not know	12.8	10.3	11.3
Not possible/sterilized	31.9	34.7	33.6
Total %	100.0	100.0	100.0
Number of women *	165628	233526	399154

\* Currently married women who do not want any more children.

**To sum up**, quite a large percentage of women ended up getting larger number of children than their ideal family size. Somehow not many of them were willing to get those unwanted pregnancies aborted. There is need therefore to work at two fronts: (i) their ideal family size should be made small, and (ii) if a woman gets unwanted pregnancy, she should not hesitate to go in for medical termination of that pregnancy.

## CHAPTER VIII

### MATERNAL AND CHILD HEALTH AND UTILIZATION OF HEALTH SERVICES

Care of mothers and children, the most vulnerable sections of our society, occupies a paramount place in our health services delivery system. The Ministry of Health and Family Welfare has taken concrete steps to strengthen maternal and child health services in the country. These services have been further reinforced by introducing the Child Survival and Safe Motherhood Programme (1992). The Universal Immunization Programme (UIP) was launched in 1985 as part of the overall national strategy to bring down infant and maternal mortality in the country by providing immunization to all infants against six vaccines- preventable diseases and pregnant women against tetanus. The goal is to achieve cent percent coverage of infants for each of these vaccines by 1995. This survey (BSUP) attempted to collect information on various aspects of MCH services. The present chapter starts with the antenatal care which mothers received during pregnancy in the last two years since October 1991. Then it moves to natal care and then immunisation coverage of children. It also covers aspects related to the contact of programme workers with the clients. The idea was that enough information should be collected so that utilisation of MCH services and usefulness of contacts between workers and clients could be enhanced.

#### 8.1 Antenatal Care

All currently married women were asked whether a health worker had visited them at home for an antenatal check-up and whether they had gone for an antenatal check-up outside the home during the pregnancy for the last or current pregnancy.

Table 8.1 shows experiences of currently married women to the extent antenatal care services were utilized in the last two years. Three antenatal care services were considered as antenatal check-up, receipt of iron and folic acid tablets and tetanus toxoid injections. It may be noted that only about 41 percent women received antenatal check-up, about 33 percent iron and folic acid tablets and 64 percent received tetanus toxoid vaccination. This level of coverage in a relatively better off district even after intensive MCH programme and very large programme for Child Survival and Safe Motherhood does not present an encouraging picture. Something needs to be done to improve the coverage though younger women were showing better response to these services than older ones. It may also be noticed that private doctors were playing very important role in providing antenatal check-up services (Table 8.1). Another fact which came out prominently was that urban women were having much higher coverage than rural women (except for tetanus toxoid) as their coverage level was almost one and a half times high.

Educational status of women had positive association with the coverage of antenatal services. The coverage is very good for women who had educational level of high school and above. Hindus were having better coverage in the antenatal care services than Muslims but the coverage among other religious groups was much better than even Hindus. This finding suggests that perhaps coverage was largely decided by the socio-economic status of the individuals rather than by religion. This finding got confirmed from the data in the next panel

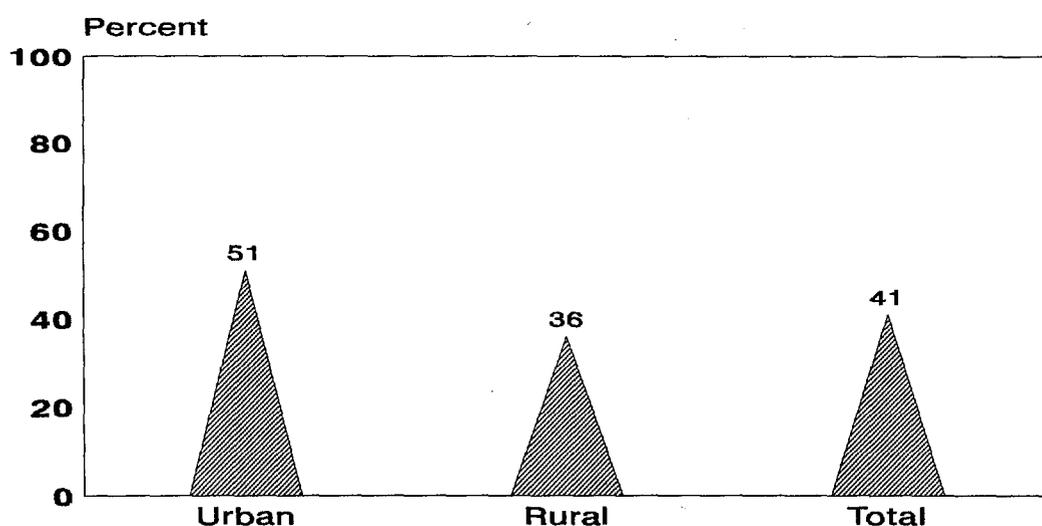
- higher caste Hindus had better coverage than scheduled castes or backward castes population.

**Table 8.1: Antenatal care**

Background characteristics	% of women who received				Source of Antenatal Care Services *						Number of women pregnant in last 2 yrs. *
	ANC checkup	Iron tablets	Tetanus Toxoid	Dist. Hosp/PHC	Sub- centre	Pvt. doctor	Camp	At home	Others	Total	
<b>Age</b>											
< 20	48.9	33.0	63.5	27.4	2.2	65.8	2.2	2.4	-	100.0	18705
20 - 34	42.5	34.9	66.1	29.7	4.3	58.7	0.3	2.4	4.6	100.0	232525
35 +	29.0	22.5	55.9	36.0	7.1	54.7	-	2.3	-	100.0	30815
<b>Residence</b>											
Urban	51.1	42.3	63.5	28.4	1.3	67.0	-	0.5	2.8	100.0	105006
Rural	35.7	28.2	65.6	31.5	7.0	52.1	0.7	4.1	4.7	100.0	177039
<b>Education</b>											
Illiterate	31.5	24.7	59.2	33.7	6.0	53.6	0.3	2.3	4.1	100.0	184389
Upto class 4	38.9	27.0	77.4	23.2	3.4	70.4	-	3.0	-	100.0	15954
Primary	59.4	42.8	76.7	37.5	-	43.6	2.1	7.3	9.5	100.0	19708
Upto middle	52.1	49.2	72.3	23.8	8.6	61.3	-	2.4	4.0	100.0	21828
Upto high	62.0	57.8	73.4	38.1	2.0	55.3	-	2.1	2.5	100.0	16838
Above high school	81.6	66.9	77.1	15.7	1.3	81.4	-	-	1.6	100.0	23329
<b>Religion</b>											
Hindu	44.6	38.6	67.8	30.4	4.5	57.5	0.5	2.6	4.5	100.0	200827
Muslim	32.6	19.7	57.1	29.0	4.3	63.0	-	1.9	1.8	100.0	79171
Other	68.8	56.9	68.8	22.7	-	77.3	-	-	-	100.0	2047
<b>Caste</b>											
Scheduled caste	33.8	29.3	62.7	32.7	8.7	50.3	-	1.7	6.5	100.0	67296
Scheduled tribe	32.1	32.1	55.8	30.6	-	69.4	-	-	-	100.0	2143
Backward caste	35.0	28.7	63.6	37.3	4.7	53.0	-	1.3	3.8	100.0	50906
Higher caste Hindu	60.1	52.9	75.1	26.9	2.4	62.3	0.9	3.6	3.9	100.0	80481
Other reli. groups	33.5	20.6	57.4	28.7	4.0	63.7	-	1.8	1.7	100.0	81218
<b>Total</b>	<b>41.4</b>	<b>33.4</b>	<b>64.8</b>	<b>30.0</b>	<b>4.4</b>	<b>58.9</b>	<b>0.4</b>	<b>2.4</b>	<b>3.9</b>	<b>100.0</b>	<b>282045</b>

\* Percent distribution of— pregnant women who get ANC checkup (column 2) by type source of antenatal services

**Figure 8.1: Percent Underwent ANC Check-up**



Meerut, UP, 1993-94

### 8.1(a) Levels of Death Rate and Infant Mortality Rate

The levels of crude death rate and infant mortality rate are given in Table 8.1(a). The overall level of crude death rate in 1991-93 was found to be 8.3 (7.4 for urban areas and 8.8 in rural). Such level for Uttar Pradesh in 1991 was 11.3. This level of CDR in Meerut district, therefore, seems to be an under estimate. The situation with regard to infant mortality rate (IMR) seems to be acceptable. These estimates may be viewed with caution as the sample size was small.

*Table 8.1(a): Death rate and infant mortality rate*

	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
Crude Death Rate	7.44	8.77	8.26
Infant Mortality Rate	97.34	84.53	89.38

Note: Rates from BSUP are based on deaths that occurred to usual residents of the households during the last two years preceding the survey (October 1991 to September 1993).

### 8.1(b) Place of Treatment and Type of Treatment

Further details on all deaths occurred in the last two years in the sampled households was collected on (i) source of treatment and (ii) system of medicine with which treatment was sought. The data are shown in Table 8.1(b). The major source of treatment was private doctor -- about 52 percent households sought treatment from them for the cases in their households. District hospital was the other source of treatment. It may be noted that 10-12 percent deceased cases both in urban and rural areas were being treated by home medicines.

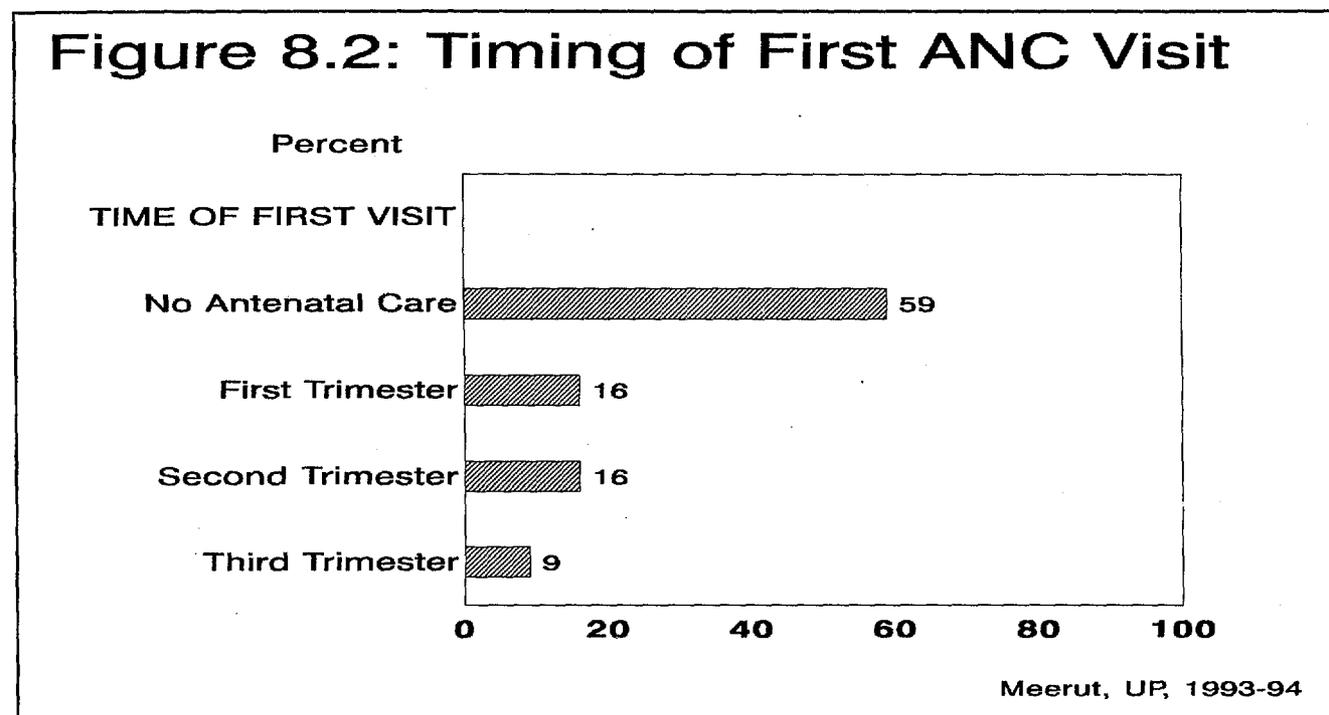
Allopathy was the major system of medicine used for the treatment. Only very small percentage of deceased people were treated by Ayurvedic or Homeopathy systems. Almost 18 percent had either received no treatment or were treated by home medicines.

**Table 8.1(b): Place and type of treatment**

	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
<b>Place of treatment</b>			
Dist.hospital	14.9	16.9	16.2
PHC	6.0	7.1	6.7
Sub centre	1.3	1.4	1.3
Pvt.doctor	56.0	50.7	52.5
Local vaidya	1.3	3.6	2.8
Home treatment	10.2	12.0	11.4
Others	10.3	8.2	8.9
<b>Type of treatment</b>			
No treatment	9.5	5.3	6.8
Home remedies	11.7	10.6	11.0
Magic/exorcism	1.3	1.1	1.2
Ayurvedic	5.4	8.4	7.3
Allopathy	66.0	60.8	62.6
Homeopathic	0.9	6.6	4.6
Others	1.8	2.4	2.2
Don't know	3.4	4.8	4.3
Total %	100.0	100.0	100.0
Total N	24680	46930	71610

Those respondents who had received antenatal (ANC) check up were further asked about the stage of pregnancy at the time of their first ANC visit. The data are shown in Table 8.2 and Figure 8.2. Women in urban areas came for antenatal check-up in the first and second trimester in almost equal proportion. In rural areas, slightly more women came for antenatal check-up in the second trimester. The median number of months of pregnancy for the first ANC contact was four months in urban and rural areas.

**Figure 8.2: Timing of First ANC Visit**



**Table 8.2: Stage of pregnancy**

<i>ANC visits</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
<b>Stage of pregnancy at the time of the first ANC visit</b>			
No antenatal care	48.9	64.5	58.7
First trimester	21.4	13.0	16.2
Second trimester	18.9	14.0	15.8
Third trimester	10.8	8.4	9.3
Total %	100.0	100.0	100.0
<b>Median months pregnant at first visit (for those with ANC)</b>	4.0	4.0	4.0
<b>Number of pregnancies in last two years</b>	105006	177039	282045

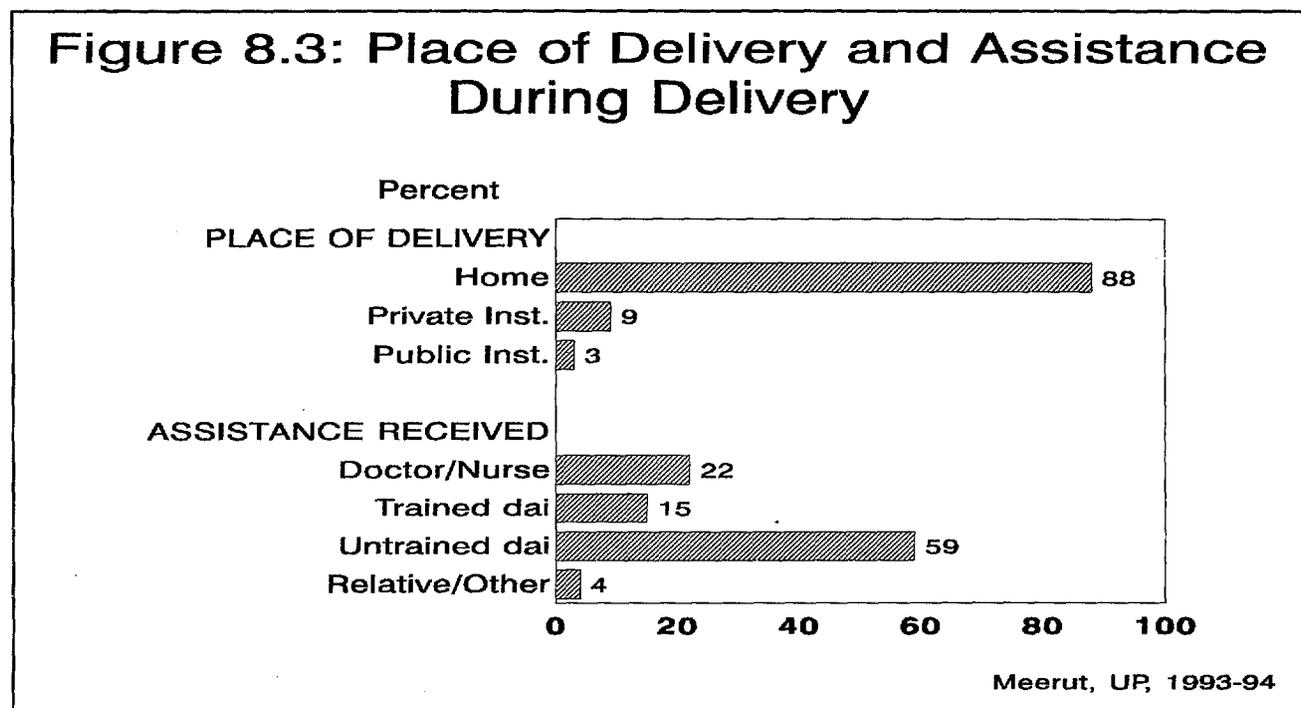
## 8.2 Place of Delivery and Assistance During Delivery

The distribution of live births in the last two years by place of delivery is shown in Table 8.3. Most of the deliveries (87.8%) in Meerut district still took place at homes. In urban areas, about 20 percent deliveries were in institutions and 80 percent at home. In rural areas, 93 percent were at homes and 7 percent in institutions - Figure 8.3. There were differentials by religious group; more Hindus were delivering in institution than Muslims but significantly larger percentage of deliveries of other religious groups took place in the institutions. As far as the educational level is concerned, higher the educational level of pregnant woman, more likely she would go to institutions for delivery.

**Table 8.3: Place of delivery**

<i>Background Characteristics</i>		<i>Place of delivery</i>				<i>Total %</i>	<i>Number of live births in last two years</i>
		<i>Govt. Hosp./ PHC</i>	<i>Sub-centre</i>	<i>Private</i>	<i>Home</i>		
<b>Mother's age at birth</b>							
	< 20	1.2	-	7.4	91.4	100.0	22269
	20 - 34	3.4	0.1	9.6	86.9	100.0	221431
	35 +	3.6	-	3.3	93.1	100.0	20320
<b>Residence</b>	<b>Urban</b>	5.4	0.3	14.6	79.8	100.0	102076
	<b>Rural</b>	1.8	-	5.3	92.9	100.0	161943
<b>Education</b>							
	Illiterate	0.9	-	2.8	96.3	100.0	170905
	Upto class 4	3.2	-	5.1	91.7	100.0	14966
	Primary	7.4	-	7.2	85.4	100.0	20634
	Upto middle	4.4	-	18.5	77.1	100.0	21502
	Upto high	12.0	-	17.7	70.2	100.0	14071
	Above high school	10.1	1.5	45.5	43.0	100.0	21942
<b>Religion</b>	<b>Hindu</b>	4.1	0.2	10.8	85.0	100.0	187809
	<b>Muslim</b>	0.7	-	3.6	95.7	100.0	74445
	<b>Other</b>	13.8	-	31.9	54.3	100.0	1765
<b>Caste</b>							
	Scheduled caste	2.0	-	2.1	95.9	100.0	62004
	Scheduled tribe	-	-	11.0	89.0	100.0	2103
	Backward caste	0.5	-	4.4	95.1	100.0	49234
	Higher caste Hindu	8.3	0.4	22.2	69.1	100.0	74467
	Other religious groups	1.0	-	4.2	94.8	100.0	76211
<b>Total</b>		3.2	0.1	8.9	87.8	100.0	264020

The respondents were asked the type of assistance they had received during their delivery in the last two years. Very large percentage of women (74.2%) had their deliveries attended by traditional birth attendants (TBAs), mostly being untrained dais (58.9%) as shown in Table 8.4 and Figure 8.3. These percentages in urban and rural areas were 66.7 and 78.9 respectively. In urban areas, private doctors accounted for 24.3 percent of the deliveries; this percentage in rural areas was only about nine.



*Table 8.4: Assistance during delivery*

<i>Background characteristics</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
Doctor or trained nurse	7.2	6.3	6.7
Trained dai	20.5	12.0	15.3
Untrained dai	46.2	66.9	58.9
Family member	0.8	3.8	2.6
Private doctor/nurse	24.3	8.8	14.8
Others/self	1.1	2.1	1.7
Total %	100.0	100.0	100.0
Number of live births	102076	161943	264020

### 8.3 Immunisation of Children

The expanded immunisation programme in the country was initiated in the year 1978 which was renamed as Universal Immunisation Programme (UIP) later. The programme has the objective of immunising children against six preventable killer diseases like TB, Polio, Diphtheria, Whooping Cough, Tetanus and Measles. One dose each of BCG and Measles vaccine and three doses each of DPT injections and oral polio drops have been recommended to each child under 12 months of age. The UIP programme is introduced in each district of the country. The coverage situation in Meerut district was assessed in the BSUP and results are given in Table

8.5. Table 8.5(a) gives the coverage for children aged 6-23 months and Table 8.5(b) for children aged 12-23 months. In case of children aged 6-23 months, the immunisation picture was as follows:

- i About 33 percent children in urban areas and 27 per cent children in rural areas did not receive any immunisation.
- ii About 27 percent children in urban areas and 22 percent in rural areas received all the six immunisations.
- iii The coverage of different immunisations in urban and rural areas is shown below:

	<i>Urban</i>	<i>Rural</i>
BCG	67.3	66.7
DPT (Three doses)	37.0	32.7
Polio (Three doses)	38.5	38.3
Measles	39.7	41.3

It may be noted that coverage in rural areas was almost similar to that of the urban areas.

- iv The dropout rates for DPT and Polio from the first dose to the third dose was found to be very high - only 58-66 percent of infants who started on vaccine completed the full schedule. The continuation was slightly better in urban than rural areas.
- v The coverage was better among higher educated categories, and Hindus. The lower coverage among Muslims is probably due to their low socio-economic status. This finding got confirmed from the last panel where coverage by caste is shown.

Overall, the situation of vaccine coverage is quite poor in the district. A lot of efforts are needed to improve the situation.

**Table 8.5a: Vaccination of 6-23 months children by background characteristics (Urban and Rural)**

Background Characteristics	Percentage of children 6-23 months vaccinated against										Number of children	
	BCG	DPT			Polio			Measles	All	None		
		1	2	3+	1	2	3+					
<b>Urban</b>												
<b>Sex</b>	Male	70.3	55.6	43.8	32.9	57.8	49.1	33.9	36.9	22.6	29.7	23563
	Female	64.9	55.7	49.7	40.5	57.8	50.7	42.4	42.1	30.2	35.1	27731
<b>Mother's education</b>												
	Illiterate	55.8	38.7	30.7	25.8	40.4	34.1	27.5	32.0	20.2	44.2	30017
	Upto class 4	43.6	43.6	31.3	19.0	43.6	36.9	19.0	24.7	12.3	56.4	3906
	Primary	74.3	61.7	49.8	49.8	74.3	62.4	62.4	35.3	23.5	25.7	2103
	Upto middle	88.5	82.4	65.6	59.9	82.4	65.6	59.9	58.5	47.2	11.5	4358
	Upto high	94.3	86.9	73.8	32.2	94.3	73.8	32.2	39.7	15.9	5.7	4365
	Above high school	100.0	100.0	100.0	82.8	100.0	100.0	82.8	73.1	59.7	0.0	6546
<b>Religion</b>	Hindu	81.6	70.5	59.9	46.8	72.5	61.5	48.5	50.5	34.8	18.4	29649
	Muslim	46.5	33.6	27.5	23.1	36.0	32.3	24.3	24.1	16.0	53.5	21082
	Others *	100.0	100.0	100.0	43.3	100.0	100.0	43.3	56.7	0.0	0.0	563
<b>Caste</b>												
	Scheduled caste	69.3	53.8	44.5	44.5	56.8	47.5	50.4	43.1	33.8	30.7	8793
	Scheduled tribe*	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	236
	Backward caste	79.6	57.5	40.4	27.1	57.5	40.4	27.1	52.5	22.0	20.4	6130
	Higher caste Hindu	89.5	87.3	78.5	57.2	89.5	80.0	57.2	55.0	41.4	10.5	14490
	Other religious groups	47.9	35.3	29.4	23.6	37.7	34.1	24.8	24.9	15.6	52.1	21645
<b>Total</b>		67.3	55.7	47.0	37.0	57.8	50.0	38.5	39.7	26.7	32.7	51294
<b>Rural</b>												
<b>Sex</b>	Male	68.9	60.6	48.8	34.9	71.1	58.3	40.1	43.9	23.2	22.9	46162
	Female	64.1	51.9	40.1	30.3	60.5	46.6	36.1	38.3	21.3	30.5	40701
<b>Mother's education</b>												
	Illiterate	61.2	52.7	41.8	30.8	63.2	49.4	34.6	37.0	18.8	30.0	59796
	Upto class 4	53.5	53.5	30.8	19.7	53.5	30.8	24.2	35.9	10.1	46.5	4610
	Primary	74.1	66.4	53.4	44.6	74.8	66.9	52.9	55.5	41.4	22.7	7946
	Upto middle	85.5	67.4	53.0	38.7	74.6	64.1	53.5	53.6	31.5	10.8	6387
	Upto high	94.3	82.2	62.2	44.4	80.8	63.1	52.0	58.1	32.6	0.0	3818
	Above high school	90.0	55.8	55.8	31.7	78.0	72.5	42.6	47.2	26.4	10.0	4307
<b>Religion</b>	Hindu	69.1	59.1	48.3	34.0	70.2	57.2	40.2	44.7	24.6	23.8	66055
	Muslim	59.1	48.3	33.2	28.8	53.1	39.0	32.0	30.6	14.9	35.0	20807
<b>Caste</b>												
	Scheduled caste	53.7	47.3	37.3	26.1	63.6	45.1	30.3	35.9	14.5	35.3	20330
	Scheduled tribe *	0.0	54.7	54.7	0.0	54.7	54.7	0.0	0.0	0.0	45.3	449
	Backward caste	61.4	46.6	39.3	24.8	64.0	52.7	30.0	42.9	17.6	30.9	18037
	Higher caste Hindu	86.7	76.2	62.5	46.4	79.5	69.2	55.1	53.1	37.3	10.1	27239
	Other religious groups	59.1	48.3	33.2	28.8	53.1	39.0	32.0	30.6	14.9	35.0	20807
<b>Total</b>		66.7	56.5	44.7	32.7	66.1	52.8	38.3	41.3	22.3	26.5	86863

Background Characteristics	Percentage of children 6-23 months vaccinated against										Number of children	
	BCG	DPT			Polio			Measles	All**	None		
		1	2	3+	1	2	3+					
<b>Total</b>												
<b>Sex</b>												
Male	69.4	58.9	47.1	34.2	66.6	55.2	38.0	41.6	23.0	25.2	69725	
Female	64.4	53.4	44.0	34.4	59.4	48.3	38.7	39.9	24.9	32.4	68432	
<b>Mother's education</b>												
Illiterate	59.4	48.0	38.1	29.2	55.6	44.3	32.2	35.3	19.2	34.7	89813	
Upto class 4	49.0	49.0	31.0	19.4	49.0	33.6	21.8	30.7	11.1	51.0	8516	
Primary	74.2	65.4	52.6	45.7	74.7	66.0	54.9	51.3	37.6	23.3	10049	
Upto middle	86.7	73.4	58.1	47.3	77.7	64.7	56.1	55.6	37.9	11.0	10744	
Upto high	94.3	84.7	68.4	37.9	88.0	68.8	41.4	48.3	23.7	3.0	8182	
Above high school	96.0	82.5	82.5	62.5	91.3	89.1	66.9	62.9	46.5	4.0	10852	
<b>Religion</b>												
Hindu	72.9	62.6	51.9	37.9	70.9	58.5	42.8	46.5	27.8	22.1	95704	
Muslim	52.7	40.9	30.4	25.9	44.5	35.6	28.1	27.3	15.4	44.3	41889	
Others *	100.0	100.0	100.0	43.3	100.0	100.0	43.3	56.7	0.0	0.0	563	
<b>Caste</b>												
Scheduled caste	58.5	49.3	39.4	31.7	61.6	45.8	36.3	38.1	20.3	33.9	29123	
Scheduled tribe *	34.5	35.8	35.8	0.0	35.8	35.8	0.0	0.0	0.0	29.7	685	
Backward caste	66.0	49.4	39.6	25.4	62.3	49.6	29.3	45.4	18.7	28.2	24167	
Higher caste Hindu	87.7	80.0	68.1	50.2	83.0	73.0	55.8	53.7	38.7	10.2	41729	
Other religious groups	53.4	41.7	31.3	26.1	45.2	36.5	28.3	27.7	15.2	43.8	42453	
<b>Total</b>	66.9	56.2	45.6	34.3	63.0	51.8	38.3	40.7	23.9	28.8	138157	

\* Number of children in this category is small and therefore results may be interpreted cautiously.

\*\* Children who are fully vaccinated, i.e., those who have received BCG, Measles, and three doses of DPT and Polio vaccine.

In case of children aged 12-23 months, the immunisation picture was as follows:

- i About 33 percent children in urban areas and 25 percent children in rural areas did not receive any immunisation.
- ii About 34 percent children in urban areas and 28 percent in rural areas received all the six immunisations.
- iii The coverage of different immunisations in urban and rural areas is shown below:

	Urban	Rural
BCG	66.8	67.7
DPT (Three doses)	39.2	36.7
Polio (Three doses)	41.3	42.4
Measles	48.9	50.4

It may be noted that coverage in rural and urban areas was similar, It is very dissatisfactory.

- iv The dropout rates of DPT and Polio from first dose to the third was very high - only about 62 to 70 percent infants who started on vaccine completed the full schedule.
- v As expected, coverage was higher among higher educated categories and Hindus. The lower coverage among Muslims was due to their lower socio-economic status. This finding also got confirmed from the last panel where higher socio-economic status showed better coverage.

Overall the situation in regard to immunisation was not good.

**Table 8.5b: Vaccination of 12-23 months children by background characteristics (Urban and Rural)**

Background Characteristics		Percentage of children 12-23 months vaccinated against										Number of children										
		BCG			DPT			Polio			Measles		All**	None								
		1	2	3+	1	2	3+	1	2	3+												
<b>Urban</b>																						
<b>Sex</b>	Male	67.3	55.6	42.3	33.3	58.5	49.4	34.7	44.4	25.1	32.7	17380										
	Female	66.2	58.2	53.6	44.8	59.7	55.1	47.6	53.1	42.0	33.8	18098										
<b>Mother's education</b>																						
Illiterate		58.3	43.1	35.7	29.9	45.5	40.5	32.3	37.4	24.6	41.7	21264										
Upto class 4		38.3	38.3	20.0	20.0	38.3	28.4	20.0	18.5	10.1	61.7	2644										
Primary		65.1	48.0	31.9	31.9	65.1	49.0	49.0	48.0	31.9	34.9	1548										
Upto middle		86.1	86.1	72.0	65.1	86.1	72.0	65.1	71.0	57.3	13.9	3589										
Upto high		88.2	88.2	72.7	33.8	88.2	72.7	33.8	60.5	21.6	11.8	2091										
Above high school		100.0	100.0	100.0	79.7	100.0	100.0	79.7	100.0	79.7	0.0	4343										
<b>Religion</b>	Hindu	78.1	68.5	59.9	48.8	69.8	62.2	51.2	58.7	41.9	21.9	21540										
	Muslim	48.1	37.5	28.1	24.8	41.3	35.6	26.6	32.1	21.6	51.9	13618										
	Others *	100.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	0.0	320										
<b>Caste</b>																						
Scheduled caste		69.7	52.7	48.7	48.7	56.8	52.8	56.8	41.7	37.8	30.3	6442										
Backward caste		77.0	59.3	39.9	24.9	59.3	39.9	24.9	59.3	24.9	23.0	5422										
Higher caste Hindu		84.3	84.3	78.6	62.2	84.3	80.9	62.2	69.6	54.1	15.7	9677										
Other religious groups		49.2	39.0	29.8	24.3	42.7	37.1	26.0	33.7	21.1	50.8	13938										
<b>Total</b>		66.8	56.9	48.1	39.2	59.1	52.3	41.3	48.9	33.7	33.2	35478										
<b>Rural</b>																						
<b>Sex</b>	Male	69.6	62.5	51.2	37.6	73.3	62.5	43.1	52.1	27.9	21.2	32917										
	Female	65.6	55.5	44.1	35.6	63.4	50.8	41.6	48.4	27.7	29.9	29208										
<b>Mother's education</b>																						
Illiterate		60.7	54.4	44.5	35.3	64.9	52.7	39.0	46.2	24.6	29.8	43102										
Upto class 4		62.5	62.5	37.5	26.9	62.5	37.5	26.9	46.3	17.8	37.5	2618										
Primary		76.3	73.0	59.1	47.5	77.1	70.0	55.0	58.4	43.4	19.6	6075										
Upto middle		90.6	71.7	57.4	44.1	80.8	71.4	58.1	62.9	39.6	9.4	5076										
Upto high		100.0	82.9	62.8	37.9	81.0	64.2	48.6	65.7	30.0	0.0	2722										
Above high school		91.5	53.6	53.6	29.1	82.0	82.0	47.6	64.5	29.1	8.5	2532										
<b>Religion</b>	Hindu	71.6	62.1	51.8	38.0	73.1	62.0	44.6	55.5	31.4	21.7	46541										
	Muslim	56.1	50.7	36.0	32.6	55.4	42.0	35.7	34.9	17.0	36.0	15583										
<b>Caste</b>																						
Scheduled caste		53.0	47.5	40.7	27.0	64.1	45.6	30.1	45.9	18.9	34.2	13493										
Scheduled tribe *		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	203										
Backward caste		66.3	54.6	46.0	31.2	71.6	61.2	36.7	55.7	24.2	24.7	13105										
Higher caste Hindu		88.5	77.6	63.8	50.5	81.1	74.3	60.2	62.6	45.0	10.4	19740										
Other religious groups		56.1	50.7	36.0	32.6	55.4	42.0	35.7	34.9	17.0	36.0	15583										
<b>Total</b>		67.7	59.2	47.8	36.7	68.7	57.0	42.4	50.4	27.8	25.3	62124										

Background Characteristics	Percentage of children 12-23 months vaccinated against											Number of children
	BCG	DPT			Polio			Measles	All**	None		
		1	2	3+	1	2	3+					
<b>Total</b>												
<b>Sex</b>	Male	68.8	60.1	48.1	36.1	68.2	58.0	40.2	49.4	26.9	25.2	50297
	Female	65.9	56.5	47.7	39.1	62.0	52.5	43.9	50.2	33.1	31.4	47306
<b>Mother's education</b>												
	Illiterate	59.9	50.7	41.6	33.5	58.5	48.7	36.8	43.3	24.6	33.8	64366
	Upto class 4	50.3	50.3	28.7	23.4	50.3	32.9	23.4	32.4	13.9	49.7	5262
	Primary	74.0	67.9	53.6	44.4	74.7	65.7	53.8	56.3	41.0	22.7	7623
	Upto middle	88.7	77.7	63.4	52.8	83.0	71.6	61.0	66.2	46.9	11.3	8664
	Upto high	94.9	85.2	67.1	36.1	84.1	67.9	42.2	63.4	26.3	5.1	4813
	Above high school	96.9	82.9	82.9	61.1	93.4	93.4	67.9	86.9	61.1	3.1	6875
<b>Religion</b>												
	Hindu	73.7	64.1	54.4	41.4	72.1	62.1	46.7	56.5	34.7	21.8	68082
	Muslim	52.4	44.5	32.3	29.0	48.8	39.0	31.4	33.6	90.1	43.4	29201
	Others *	100.0	100.0	100.0	-	100.0	100.0	0.0	100.0	0.0	0.0	320
<b>Caste</b>												
	Scheduled caste	58.4	49.2	43.3	34.0	61.7	48.0	38.7	44.5	25.0	32.9	19935
	Scheduled tribe *	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	203
	Backward caste	69.4	56.0	44.2	29.3	68.0	55.0	33.3	56.8	24.4	24.2	18527
	Higher caste Hindu	87.1	79.8	68.7	54.3	82.1	76.5	60.8	64.9	48.0	12.2	29416
	Other religious group	52.9	45.1	33.0	28.7	49.4	39.7	31.1	34.3	18.9	43.0	29521
<b>Total</b>		67.4	58.4	47.9	37.6	65.2	55.3	42.0	49.8	29.9	28.2	97603

\* Number of children in this category is small and therefore results may be interpreted cautiously.

\*\* Children who are fully vaccinated, i.e., those who have received BCG, measles and three doses of DPT and polio vaccine.

#### 8.4 Utilization of Public Health Services

The ever-married women in the survey were asked about their preferred source of medical treatment during sickness; 62.4 percent in urban areas and 55.5 percent in rural areas reported that they always preferred private sources (Table 8.6). In contrast, only about 13 percent in urban areas and about 6 percent in rural areas always preferred public source for the service. Remaining were using both sources. When women were further asked the reasons for preferring private source, about 70 percent (69% in urban and 71% in rural areas) gave better treatment as the reason. About 39 percent (40.7% in urban and 37.8% in rural areas) reported "near the house" as the reason for preferring the private source of services. The third important reason (reported by about 19 percent of respondents) stated was "cheaper treatment". In addition, the other two important reasons reported were "no medicines available" (15.6%) and "bad behaviour of PHC staff" (6.9%). One may therefore see that quality of service at public sources and accessibility of services (close to home) are the major reasons for non-use of public sources and use of private sources. Most of the respondents also reported of uncertainty of receiving services at PHC even if they went there.

**Table 8.6: Preferred sources of medical assistance during sickness**

	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
<b>Preferred sources</b>			
Always public sources (PHC/CHC, District Hospital, SC)	13.3	5.7	8.8
Sometime public source and sometime private	23.5	34.8	30.3
Always private source/doctor	62.4	55.5	58.3
Others	0.8	3.9	2.7
Total %	100.0	100.0	100.0
Number of women	251857	375410	627266
<b>Reasons for always preferring private source *</b>			
Cheaper treatment	26.3	13.2	18.8
Near to my house	40.7	37.8	39.1
Better treatment	69.0	71.1	70.2
PHC/SC are far off	1.8	4.8	3.5
Bad behaviour of PHC staff	6.8	7.0	6.9
No alternative	3.5	13.1	9.0
No medicines available	19.7	12.5	15.6
No staff/doctor available	5.3	2.3	3.6
Takes more time at government hospital	11.6	2.1	6.2
Others	1.5	1.3	1.4
Can't say/Don't know	0.8	0.3	0.5
Number of women prefer always private source	157237	208286	365523
<b>Certainty about availability of doctor at PHC</b>			
Quite certain	52.0	35.6	41.8
Not certain	24.1	21.3	22.4
Do not know	23.9	43.0	35.8
Total %	100.0	100.0	100.0
No. of women prefer always public source or sometimes public/Pvt.	92631	152303	244934

\* Multiple responses-total may add more than 100

It may be noted that about 19 percent of respondents reported that private treatment was cheaper. It may be because of (i) quick relief from illness when treated by a private doctor, either/or (ii) respondents might have paid for the services at public sources. For this reason, the respondents were asked whether they paid for the services at the public sources (Table 8.7). To this, almost 64 percent respondents in rural areas said 'yes'. In urban areas, about 51 percent reported that they made payment at the public service centres. It may also be pointed out that most of the respondents, both in rural (73.2%) and urban areas (50.3%), were willing to make payment for the services if they got good quality health services (Table 8.7). This finding of willingness to pay has a good deal of use in modifying service strategies in public sector service centres.

**Table 8.7: Payment for the services at public clinics**

	<i>Rural</i>	<i>Urban</i>	<i>Total</i>
Percent of women reporting payment at health centres	50.7	64.3	59.2
Number of women *	92631	152303	244934
Percent ready to pay for services if it improves	50.3	73.	63.5
Number of women **	204848	277498	482346

\* Number of ever married women who generally go for treatment when they or their family members fall sick always to PHC/SC or other Government hospital(public) or sometimes to public and sometimes to private doctors.

\*\* Number of ever married women who did not report payment for the government health care services.

## **8.5 Client-Provider Interaction**

Regular client-provider interaction is key to the promotion and success of the programme activities and services. Therefore, the clients (women) were asked information on various aspects of such communication. This section will discuss the results of those answers. The respondents were asked various questions on the contact between her/her family and the programme workers. The extent of such contacts has been reported in Table 8.8. Only 37 per cent women in urban areas and 17 percent in rural areas reported any contact with the public health service providers in the last three months. This contact could be either made by the worker or by the family member. When asked about the family making efforts of contacting the PHC/Sub-centre workers in the last three months, 25 percent respondents in urban areas and 8 percent in rural areas said that they contacted the workers in the last three months. The average number of such contacts by them were a little over one.

When the respondents were asked about the contacts made by the workers (in last three months), only 12 percent respondents in urban areas and 10 percent in rural areas reported such contacts. The contact was made only once and that too mostly by the ANM or LHV. Very small proportion of respondents reported contact by male workers.

**Table 8.8: Client-providers' contact**

	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
% of women or her HH member contacted PHC/SC workers during last 3 months	25.0	8.2	15.0
<b>Average number of contacts with PHC/SC workers</b>			
Mean	0.9	1.22	1.05
SD	0.6	0.75	0.66
% of households visited by workers in the last 3 months	11.8	8.9	10.1
<b>% of households reported visit of</b>			
1 person	77.7	85.3	81.7
2 person	18.6	13.1	15.7
3 or more person	3.7	1.6	2.6
Total %	100.0	100.0	100.0
<b>Frequency of visit during last 3 months</b>			
1st person			
1	84.1	93.4	89.0
2	13.1	4.0	8.2
3 or more times	2.9	2.7	2.8
2nd person			
1	38.2	85.4	58.3
2	51.7	9.7	33.8
3 or more times	10.1	4.9	7.9
<b>Who visited last</b>			
ANM/LHV	60.7	92.2	77.4
Male workers	31.4	4.9	17.3
Doctor	5.9	1.4	3.5
Others	2.0	1.5	1.7
Percent of families reporting at least one contact with public health service providers	32.4	15.5	22.2

The respondents who reported visit by the workers in the last three months were asked some more questions about the quality of the visit. This has been reported in Table 8.9.

**Table 8.9: Quality of client-provider interface**

	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
% women reporting visit of health worker from PHC/SC during last 3 months	11.8 (29674)	8.9 (33538)	10.1 (63212)
Number of women	251857	375409	627266
% women who were visited by worker reported:			
Provided enough time by worker	97.7	94.0	95.7
Satisfied with the assistance provided	94.8	74.2	83.8
Would like worker to visit again	92.6	73.7	82.6
Villagers hold good opinion about worker	46.1	26.3	35.5
Number of women visited by worker	49674	33538	63212

Various aspects of reports on the quality of visit were as follows:

- i Almost 98 percent respondents in urban areas and 94 per cent in rural areas reported that the worker had given enough time during the contact.
- ii Most of the respondents were satisfied with the medical assistance provided by the worker. Almost 95 percent respondents in urban areas and 74 percent in rural areas reported satisfaction.
- iii Most of the respondents wanted that the worker should visit again. This indicated that the clients were satisfied with the visit of the worker.
- iv Only about 46 percent respondents in urban areas and 26 percent in rural areas had good opinion about the workers.

It may thus be noted that the workers should increase frequency of his/her contact with the clients, spend more time and give the members feeling of usefulness so that respondents hold good opinion about them.

In another question, the currently married women were asked whether any programme worker had talked to them about family planning methods. If response was 'yes', then they were asked (i) what family planning methods were talked about, (ii) whether she was informed about their advantages/disadvantages or both, (iii) whether she was informed as to how to use the method, and (iv) whether she was informed about the sources of service/supply. These aspects have been analyzed in Table 8.10.

**Table 8.10: Level of information (detailed) provided about various methods by workers**

<b>Methods</b>	<b>Percentage reporting visit of workers</b>	<b>Percentage reported that</b>				
		<b>Method was mentioned</b>	<b>Informed advantages and disadvantages</b>		<b>Informed how to use</b>	<b>Informed about source</b>
			<b>Both</b>	<b>None</b>		
Informed about family planning methods (73094)	20.4	-	-	-	-	-
Vasectomy	-	20.6	21.7	6.8	90.1	97.8
Tubectomy	-	59.8	40.3	5.6	93.8	98.2
IUD/CuT	-	45.2	31.1	5.3	91.8	96.5
Pills	-	50.9	27.2	9.8	94.2	95.8
Condom	-	39.2	26.7	10.7	91.5	95.6
Withdrawal	-	8.6	11.7	5.1	-	-
Safe period	-	14.1	15.7	3.2	-	-
Number of women	610839	73094	73094	73094	73094	73094

The following are the highlights of the responses on all these aspects:

- i Only 20 percent respondents reported contact of worker related to family planning.
- ii During contact, the workers had informed the clients about tubectomy/laparoscopy (59.8%), oral pills (50.9%), IUDs (45.2%) and condoms (39.2%) and vasectomy (20.6%). About 14 percent reported that workers had mentioned to them about safe period method and 9 percent about withdrawal.
- iii About 20 to 40 percent of the respondents (who had reported contact for family planning) reported that the workers told them both advantages and disadvantages of the method.
- iv Most of the clients reported being informed on how to use family planning methods and where to get services/supplies. That is, though the contacts related to family planning were very few but they were informative in most respects except enough was not being told about their advantages and disadvantages.

The ever-married women were asked their perception about ANM for attending delivery cases. This was an indicator of the quality of natal services. About 67 percent respondents agreed that a young ANM is better than a traditional dai for assisting delivery. In the remaining questions, the respondents negated the usual myths on working of ANMs for delivery. These myths and percentage of women who negated them are shown below:

**Table 8.11: Perception of women about ANM**

	<i>Urban</i>	<i>Rural</i>	<i>Total</i>
% agreeing that a young ANM is better than a traditional dai for assisting delivery	71.9	64.4	67.4
% agreeing that a high caste ANM does not want to attend delivery of SC women	12.3	18.9	16.2
% agreeing that ANM/Nurse belonging to SC are not acceptable among high caste			
% agreeing that ANM often do not want to visit or attend delivery in poor families	14.1	19.9	17.6
Number of ever married women	14.0	17.9	16.3
	251857	375694	627551

<i>Myths</i>	<i>% who negated</i>
High caste ANM does not attend delivery of scheduled castes	84
Scheduled caste ANM is not acceptable in high caste families	82
ANMs do not attend delivery in poor families	84

This section of the questionnaire therefore, justified importance of the ANM as useful programme worker.

**To sum up**, the antenatal coverage of mothers in Meerut district was found to be low and so was the immunisation coverage of children. Most of the deliveries were being conducted at home and that too by untrained dais. Only 20 percent currently married women reported contact with the workers about family planning methods in the last three months. These contacts were quite informative except that enough information was not being given on the advantages and disadvantages of family planning methods. This chapter also provided enough information to negate several myths on the working of ANMs.

## CHAPTER IX

### COMMUNITY LEVEL VARIABLES

#### 9.1 Village Information

According to 1991 census, out of the total 900 inhabited villages in Meerut district, a sample of 63 villages was drawn for household survey. The information was collected on Village Information Schedule for each of the sample villages regarding the village population, distance of nearest health centre from main road, educational and medical facilities, family planning contraceptive outlets, and non-government organizations involved in family planning work. The results are presented in Table 9.1 which could be useful for interpretation of the survey findings.

Table 9.1 shows that half of the villages have a population more than 4000. There is no village with a population below 500. So, on an average, a sample village consists of a population of 4625.

The average distance of nearest Sub-Centre, PHC, CHC, District-Headquarters from the main road of the sample village is 2.6, 8.3, 14.2 and 41.0 kms respectively.

Most of the villages (95%) have Primary Schools and 62 percent have Secondary Schools.

Most of the villages have private medical practitioners of one or more systems of medicine. On an average, there are 5.8 Private Medical Practitioners in a village. For each system shown in the table, average number of Private Medical Practitioners varies from 0.3 to 2.3. Ayurvedic system of medicines seems to be more popular than any other in the sample villages. Only in 1/4th of the sample villages, Private Medical Practitioners are providing family planning services.

In more than half of the villages (57%) there is no provision for a Medical Store. Though there are some large villages which have 3-5 Medical Shops, the retail outlets for stocking condoms and oral pills were found in 16 - 17 percent of the villages. There is no Community Based Distribution (CBD) Network for condom in any village. However, in 15 percent villages, CBD Network for Oral Pills is there.

The Anganwadi Centres being the focal point for delivery of all child development services are found to be existing in 13 percent of the villages and most of them are not found to be working for distribution of family planning methods like condoms and oral pills. Very few villages have a Non-Government Organization (NGOs).

Only in 53 percent villages there are 1 to 4 Traditional Birth Attendants (TBAs), and 43 percent villages have panchayat members who belong to the same villages and are actively involved in the promotion of family planning activities.

*Table 9.1: Health facilities available at village level*

<i>Facility</i>	<i>Distribution of villages</i>	
	<i>Number</i>	<i>Percent</i>
Number of villages in the sample	58	100.0
1. Population Size (Census 1991)		
- 999	3	5.2
1000-1999	9	15.5
2000-2999	12	20.7
3000-3999	5	8.6
4000-4999	14	24.1
5000+	15	25.9
Mean	4625	
2. Distance of Nearest Medical Facility from Main Road (Km)		
(a) Sub-Centre		
< 2	33	56.9
2-4	13	22.4
5-7	8	13.8
8 +	4	6.9
Mean	2.57	
(b) PHC		
< 5	21	36.2
5-9	18	31.0
10-14	9	15.5
15-19	7	12.1
20+	3	5.2
Mean	8.34	
(c) CHC		
< 5	17	29.3
5-9	6	10.3
10-14	8	13.8
15-19	7	12.1
20+	20	34.5
Mean	14.19	
(d) District Headquarter		
< 10	1	1.7
10-19	11	19.0
20-29	7	12.1
30-39	15	25.9
40-49	9	15.5
50+	21	36.2
Mean	41.05	

<i>Facility</i>	<i>Distribution of villages</i>	
	<i>Number</i>	<i>Percent</i>
3. Schools:		
(a) Primary School	55	94.8
(b) Secondary School	36	62.1
4. Number of Pvt. Medical Practitioners (PMP):		
(a) Any system : None	4	6.9
1-2	14	24.1
3-4	1	19.0
5+	29	50.0
Mean	5.8	
(b) Allopathy: None	38	65.5
1-2	14	24.1
3-4	3	5.2
5+	3	5.2
Mean	0.88	
(c) Homeopathy: None	41	70.7
1-2	16	27.6
3-4	1	1.7
5+	-	-
Mean	0.38	
(d) Ayurvedic: None	28	48.3
1-2	14	24.1
3-4	7	12.1
5+	9	15.5
Mean	1.97	
(e) Unani: None	52	89.7
1-2	4	6.9
3-4	-	-
5+	2	3.4
Mean	0.34	
(f) Others *: None	33	56.9
1-2	6	10.3
3-4	7	12.1
5+	12	20.7
Mean	2.31	
* Includes Quacks		

<i>Facility</i>	<i>Distribution of villages</i>	
	<i>Number</i>	<i>Percent</i>
5. Pvt. Medical Practitioners providing F.P. services	16	27.6
6. Number of medical shops in the Village :		
None	33	56.9
1	10	17.2
2	7	12.1
3-5	8	13.8
Mean	0.98	
7. Retail outlets stocking :		
(a) Condoms	10	17.2
(b) Oral Pills	9	15.5
8. Number of Retail Outlets Stocking:		
(a) Condoms: None	48	82.8
1-2	6	10.3
3-7	4	6.9
Mean	0.52	
(b) Oral Pills: None	49	84.5
1-2	7	12.1
3-7	2	3.4
Mean	0.31	
9. Community Based Distribution (CBD) Network for :		
(a) Condom	0	0
(b) Oral Pills	9	15.5
10. Existence of Anganwadi For Distribution of:		
(a) Condoms:		
Exists as CBD	2	3.5
Exists only	6	10.3
No Anganwadi	50	86.2
(b) Oral Pills:		
Exists as CBD	1	1.7
Exists only	6	10.4
No Anganwadi	51	87.9

<i>Facility</i>	<i>Distribution of villages</i>	
	<i>Number</i>	<i>Percent</i>
11.Existence of Non-Government Organisation (NGO)	4	6.9
12.Existence of Traditional Birth Attendant (TBA)	48	82.8
13.Number of Traditional Birth Attendant (TBA):		
(a) Trained: None	27	46.5
1	24	41.4
2-4	7	12.1
Mean	0.74	
(b) Untrained: None	14	24.1
1	27	46.6
2-4	17	29.3
Mean	1.29	
N.B. A village may have both trained and untrained TBA		
14.Number of Panchayat Members belonging to the village"		
None	7	12.1
1-4	-	-
5-9	5	8.6
10-14	19	32.8
15+	27	46.5
Mean	13.03	
15.Number of Panchayat Members who belong to the village and are actively involved in F.P. promotion:		
None	25	43.1
1-4	21	36.2
5-9	6	10.4
10+	6	10.3
Mean	2.72	

## 9.2 CHC/PHC/SC INFORMATION

As per the norms stipulated by the Government of India, there is one sub-centre (SC) per 5000 population in plain areas and one per 3000 in hilly and tribal regions to provide primary health care and family planning services. The Primary Health Centre (PHC) covers a population of 30,000 and each PHC supervises the working of six sub-centres. The Community Health Centre (CHC) serves a population of 1.0 to 1.25 lakhs and also acts as first line referral centre. The information from 7 CHC/PHC and 26 SCs falling under sample villages is collected on

various facilities available such as infrastructure, manpower, cold chain equipment, supply of contraceptives and availability of different types of IEC material. The results are presented in Table 9.2.

More than half of CHC/PHC buildings (57%) are government owned. Electricity is available in all the CHC/PHCs. All SC buildings are rented and facility of electricity is found to be in 80 percent of SCs. In 43 percent of CHC/PHC neither operation theatre nor vehicle is available. Medical officer, Block Extension Educator and Multi-Purpose Health Supervisors, LHV and ANM are present in 75%, 60%, 78%, 72% and 94% CHC/PHCs respectively. Half of the CHC/PHC have driver of vehicles in position. Three-fourth SCs have auxiliary nurse mid-wife (ANMs).

**Table 9.2: Health facilities available at CHC/PHC/SC**

<i>Facility</i>	<i>CHC/PHC</i>	<i>SC</i>
Number of Centres in the sample	7	26
1. Infrastructure :		
(a) Building	57.1	-
Government	42.9	100.0
Rented	100.0	80.8
Donated		
(b) Electricity	42.9	
(c) Vehicle	14.2	
(d) Operation Theater	42.9	
2. Manpower: In-position		
(a) Medical Officer	75.0	
(b) Block Extension Educator (BEE/HEO)	60.0	
(c) Multi Purpose Health Supervisor [MPHS (Male)HA/SS]	78.3	
(d) Lady Health Visitor (LHV)	73.1	
(e) Auxiliary Nurse Midwife (ANM)	94.6	78.1
(f) Multi-Purpose Worker (MPW-M)	NK	
(g) Driver	50.0	
3. Cold Chain Equipment		
(a) ILR	85.7	
(b) Refrigerator	28.6	
(c) Vaccine Carriers	100.0	92.3
(d) Thermos	85.7	42.3

<i>Facility</i>	<i>CHC/PHC</i>	<i>SC</i>
4. Supply of Vaccine (last six months)		
(a) Polio		
Regular and adequate	85.7	61.6
Regular but not adequate	14.3	19.2
Neither regular nor adequate	-	-
(b) BCG		
Regular and adequate	57.1	26.9
Regular but not adequate	28.6	34.6
Irregular but adequate	14.3	30.8
Neither regular nor adequate	-	7.7
(c) DPT		
Regular and adequate	71.4	46.2
Regular but not adequate	14.3	15.4
Irregular but adequate	14.3	23.0
Neither regular nor adequate	-	15.4
(d) Measles		
Regular and adequate	42.9	26.9
Regular but not adequate	42.9	30.8
Irregular but adequate	14.3	26.9
5. Services available (on day of visit)		
(a) Vasectomy Equipment (in working condition)	85.7	
Trained Personnel	85.7	
(b) Tubectomy Equipment (in working condition)	57.1	
Trained Personnel	57.1	
(c) Laparoscopy Equipment (in working condition)	57.1	
Trained Personnel	57.1	
(d) IUD Insertion Kit (in working condition)	85.7	50.0
Trained Personnel	58.7	23.1
(e) MTP Equipment (in working condition)	71.4	
Trained Personnel	57.1	

6 Supply of Contraceptives (last six months)		
(a) IUD:		
Regular and adequate	71.4	26.9
Regular but not adequate	28.6	13.8
Irregular but adequate	-	7.7
Neither regular nor adequate	-	34.6
(b) Pills:		
Regular and adequate	85.7	61.5
Regular but not adequate	14.3	7.7
Irregular but adequate	-	15.4
Neither regular nor adequate	-	15.4
(c) Condoms/Nirodh:		
Regular and adequate	85.7	84.7
Regular but not adequate	-	3.8
Irregular but adequate	14.3	7.7
Neither regular nor adequate	-	3.8
(d) IEC material for family planning		
Regular and adequate	28.6	7.7
Regular but not adequate	42.8	15.4
Irregular but adequate	14.3	15.4
Neither regular nor adequate	14.3	61.5
7. Demand Creation Activities (day of visit)		
(a) Slide Projector		
Available and working	-	
Available and not working	28.6	
(b) Film Projector		
	-	

NK = Not Known

At CHC/PHC, ICE Lined Refrigerator (ILR) are functioning in more than 80 percent and refrigerator in one-fourth of the CHC/PHCs. Vaccine Carriers and thermos are found in working order in most of the CHC/PHC. In case of SCs vaccine carriers and thermos are seen to be functioning in 92 percent and 42 percent respectively.

The supply of Polio and DPT is regular and adequate in CHC/PHCs. However, supply was not very satisfactory for BCG and measles in both CHC/PHCs and SCs.

The equipments for vasectomy, tubectomy, laparoscopy, IUD and MTP are found in working condition in 57-86 percent of the CHC/PHC, while different categories of trained personnel are in position in 57-85 percent of the centres. Half of the SCs have IUD kit and trained staff is available in about one-fourth (23%) of the SCs.

The supply of contraceptives is seen to be regular and adequate in all the centres. However, IEC material for family planning is not adequate in both CHC/PHCs and SCs.

The slide projectors and film projectors are available in working condition in only 12 to 25 percent CHC/PHC.

## CHAPTER X

### SUMMARY AND CONCLUSIONS

A demographic survey was conducted covering 2807 ever-married women aged 13-49 years in December 1993, in the district of Meerut of the State of Uttar Pradesh with the objectives:

- (a) To determine baseline levels of demographic and family welfare programme parameters, against which impact of the programme innovative family planning services (IFPS) will be assessed.
- (b) To identify strategy measures which can help in strengthening the programme and ultimately increase its impact on fertility reduction. Besides, canvassing a questionnaire to the selected households and ever-married women therein, information was collected from the selected villages and various Community Health Centres, Primary Health Centres and Sub-Centres which serve those villages.

The paras below give important findings of the survey and highlight their programme implications:

- 1 More than two percent (2.3%) population of Meerut district was composed of visitors. This population has proportionately more children and women and therefore sex ratio is very much favourable to females.
- 2 About 22 percent of the households were Muslims and 77 percent Hindus. This percentage in urban areas was somewhat different -- about 27 percent were Muslims and 70 percent were Hindus. Among Hindu households, the percent distribution of scheduled castes, scheduled tribes, backward castes and higher castes were 29.9, 1.2, 22.8 and 46.1 respectively.
- 3 The average size of the household was 6.3 members. The modal size of households was 5 in urban and 6 in rural areas. About 41 percent of the population (aged 6 and over) were illiterate and 58 percent were below primary completed (includes illiterates). These percentages for females were about 56 and 71 respectively.
- 4 Four indicators in rural areas namely, (a) forty-three percent households were landless and 32 percent had 1-3 acres of land, (b) only 22 percent houses were pucca, (c) only 36 percent households possessed radios and 28 percent TVs, and (d) about 58 percent households had electricity suggest that the district Meerut is one of the socio-economically backward districts in the state.
- 5 Fifty three percent women (aged 13-49) reported no exposure to any of four media -- newspapers, radio, TV and cinema. This percentage reduces to 38 in

urban areas compared to 64 in rural areas.

- 6 Marriage is universal in the district. The singulate mean age at marriage for female was found to be 20.3 years. Only one-third of the women in rural areas knew the correct legal age at marriage for females. There is, therefore, need that the legislation of minimum legal age at marriage should be widely publicized and people should know that it is a cognisable offence.
- 7 The level of crude birth rate was found to be 30.3 in 1991-93. This is lower than Sample Registration System estimate (35.7) for the State of Uttar Pradesh. Total fertility rate was found to be 4.6 -- 4.2 in urban areas and 4.9 in rural areas. More intensive efforts are needed in the rural areas to bring down fertility.
- 8 In rural areas, fertility in the age group 15-19 was exceptionally high. This has implications on maternal and infant mortality because of high risk births in this young age group. Appropriate IEC strategy needs to be developed to inform this group (aged 15-19) about high risk they run with pregnancy. Besides fertility in all age groups in rural areas was higher than urban areas -- the difference was about 1 ½ times in ages 15-25 years and became small thereafter.
- 9 Muslim fertility was higher (TFR = 5.8) than Hindus (TFR = 4.3) but both these religious groups had fertility much higher than other religious groups. It may be stated that the fertility did not seem to be related to the religion as such, it is more a function of socio-economic status of the family.
- 10 The reproduction was very high in ages 20-24, 25-29 and 30-34. These are probably the ages where idea of three years spacing should be stressed. Those who have completed their family should be motivated to accept terminal method of family planning.
- 11 Women in rural areas knew about tubectomy but not so much about other methods. There is need to build campaigns in rural areas to inform them about all methods, particularly about spacing methods. Availability of choice in the family planning methods is likely to make women accept method of their choice.
- 12 More information needs to be given about family planning methods so that women know how to use different methods. Promotional activities should focus on this dimension of family planning methods. Women did not know where to get supplies/services of different family planning methods. This aspect should also receive attention.
- 13 About 34 percent women had reported currently using some modern methods of family planning. In addition, five percent reported use of traditional methods, particularly periodic abstinence. The method-mix in urban and rural areas is shown below:

<i>FP Method</i>	<i>Method-Mix</i>	
	<i>Urban</i>	<i>Rural</i>
Sterilization	46.8	61.5
IUD/CuT	5.5	5.1
Oral Pill	7.9	7.1
Condom/Nirodh	27.9	12.4
Other modern meth	-	0.5
Traditional methods	11.9	13.4

Use of condoms is much higher in urban areas and that of traditional methods in rural areas.

- 14 Women did not feel that their family was complete unless they had two surviving sons. The practice of spacing methods might start but very few women/couples accepted sterilization unless they had two surviving sons.
- 15 Twenty percent currently married women felt that their need for spacing methods was unmet and 27 percent felt that their need for limiting family was unmet. Though, these percentages felt need for using family planning methods but they were not practising them for reasons which went against contraception and family planning programme.
- 16 Quite a large percentage of family planning users had received services/supplies from the private sector. It therefore suggests need for involving doctors in private sector in this programme. In the case of condoms and oral pills, two third of users reported that they could be obtained from chemist and other shops. This shows the social marketing of these methods has a good potential.
- 17 Some percentage (14% in urban areas and 15% in rural areas) reported disapproval of family planning methods in their families, particularly by husband and mother-in-law. It, therefore, suggests that programme should reach these two influential members of the family.
- 18 Only 42 percent of the women who had exposure of radio/TV had reported exposure to family planning messages. Though a substantial percentage had exposure to these media, still radio/TV being powerful/electronic media had to play a very significant role in disseminating family planning messages. Mostly, the message was on small family size, condoms or oral pills. Only very small percentages reported about messages on IUD or sterilization.
- 19 More than half of women who already had two or more children and wished to have additional children wanted to have next child a boy. Perhaps they did not have preferred number of male children in family. Preference for male children is quite obvious in such responses.

- 20 The modal number of ideal children for urban and rural respondents were two for those who had two or less number of living children. But then it shifted to three for all those who had more than two children.
- 21 Almost all couples reported communication on the number of children in the family. More younger couples reported such dialogue immediately after marriage than older couples. Thus younger couples have started feeling concerned about family size; it is right time to sell them the idea of planned family.
- 22 Only eight percent of the unwanted pregnancies were reported to have ended in induced abortions. Rest of them were allowed to continue. If good and accessible services of MTP were made available, more and more women will take help of these services and avoid unwanted pregnancies. Almost 28 percent currently pregnant women reported that their current pregnancy was unwanted. It may therefore suggest that about 28 percent of the total pregnancies at a point in time require MPT services.
- 23 Only 41 percent women received antenatal check-up, 33 percent iron and folic acid tablets and 65 percent received tetanus toxoid during their recent pregnancy in last two years. The coverage was better in urban areas than rural. Private doctors were playing an important role in the provision of these services. Both in urban and rural areas women came for antenatal check-up in first and second trimester in equal proportion. On an average, the women had fourth month of pregnancy at the time of their first visit for ANC.
- 24 The level of crude death rate was found to be 8.3 and that of infant mortality rate 89.4. These estimates may be viewed with caution as sample size was small.
- 25 Most of the deliveries still took place at home -- both in urban and rural areas. Very large percentages of women (74%) had their deliveries attended by traditional birth attendants (TBAs), mostly untrained.
- 26 About 34 percent children (12-23 months) in urban areas and 28 percent in rural areas received all the six immunizations. The coverage of different immunisations is shown below:

	<i>Urban</i>	<i>Rural</i>
BCG	66.8	67.7
DPT (Three doses)	39.2	36.7
Polio (Three doses)	41.3	42.4
Measles	48.9	50.4

The coverage in rural areas was almost the same as in urban areas.

- 27 The dropout rates for DPT and Polio were almost one third.

- 28 About 62 percent in urban areas and 55 percent in rural areas reported that they always preferred services of private sources. In contrast, only 13 percent in urban areas and about 6 percent in rural areas always preferred public source for services. When women were further asked the reason for preferring private sources, the major reasons given were: better treatment, near the house, cheaper treatment in comparison to government hospitals where it takes more time and medicines are not available. These responses suggest need for improving accessibility and quality of services.
- 29 Only 32 percent women in urban areas and 15 percent in rural areas reported atleast one contact with programme workers in the last three months. There is need to increase frequency of such contacts as most of the respondents had reported satisfaction with the contact.
- 30 The contacts of workers with clients related to family planning were very few but they were informative in most respects except enough was not being told about their advantages and disadvantages. It may be seen that most of these findings have great relevance for the programme. There is need to translate these findings to strengthen the programme. Such efforts will lead to greater acceptance of the programme and thus better health, low mortality and reduced fertility.

## Appendix

### URBAN & RURAL SAMPLING UNITS, DISTRICT MEERUT, BSUP 1993-94

#### LIST OF SAMPLE URBAN BLOCKS DISTRICT MEERUT

PUS No.	TOWN/CHARGE	WARD NO.	NAME OF WARD	NUMBER	POPULATION
Meerut M.C. Mahapalika No.					
01	1	1	Modipuram	10	869
02	1	3	Anoop Nagar	133	669
03	2	4	Sabun Godan	62	416
04	2	5	Malyana T.P. Nagar	91	526
05	2	6	Rithani	113	377
06	4	11	Baghpat Gate	51	441
07	4	12	Braham Puri	122	638
08	5	13	Bhagwat Pura	9	277
09	5	14	Saddik Nagar	50	651
10	5	14	Saddik Nagar	91	439
11	5	14	Tara Puri	102	869
12	5	14	Tara Puri	121	435
13	5	15	Prahalad Nagar	153	397
14	6	16	Dakshini Islamabad	29	339
15	6	17	Sarai Behleen	112	577
16	7	19	Gudri Bazar	5	852
17	7	21	Budhana Gate	66	642
18	7	21	Budhana Gate	86	591
19	8	24	Zakir Hussan Col.	78	609
20	9	25	Shastri Nagar	99	364
21	9	25	Shastri Nagar	110	409
22	9	26	Nangla Battoo	161	453
23	9	27	Saket	179	697
Meerut Cantt. Special Charge					
24		1	R.A. Bazar	9	962
25		6	Tanki Mohalla Sadar	30	318
Mawana M.B.					
26		4	Munna Lal	27	673
27		8	Khairat Ali	52	562
Sardhana M.B.					
28		3	Mandi Chamaran	16	666
29		9	Bhatwata	50	455
Karnawal T.A.					
30		4	Bazar Wala	10	525
31		8	Rathaka	19	375
Parkshit Garh T.A.					
32		9	Matawala	24	503
33		10	Bajri	27	445
Khekra T.A.					
34		6	Seema Puri	26	553
35		9	Vijay Nagar	39	573
Aggarwal Mandi T.A.					
36		4	Arya Samaj	6	336
37		8	Shiv Mandir	18	599

**LIST OF SAMPLE VILLAGES/PSU's, DISTRICT MEERUT**

<b>PSU NO.</b>	<b>TEHSIL CODE</b>	<b>TEHSIL NAME</b>	<b>BLOCK CODE</b>	<b>VILLAGE NAME</b>	<b>VILLAGE CODE</b>	<b>VILLAGE NAME</b>	<b>POPULATION</b>
38	1	BHAGPAT	1	CHHAPRAULI	6	LOOMB	9050
39	1	BAGHPAT	1	CHHAPRAULI	11	RAMALA	6945
40	1	BAGHPAT	1	CHHAPRAULI	25	MUKANDPUR	3086
41	1	BAGHPAT	1	CHHAPRAULI	26	SOTHI	1106
42	1	BAGHPAT	2	BARAUT	33	GOPALPUR KHADANA	878
43	1	BAGHPAT	2	BARAUT	39	KASAMPUR KHERI	4314
44	1	BAGHPAT	2	BARAUT	43	MUKARRABPUR KANDERA	5562
45	1	BAGHPAT	2	BARAUT	66	LUHARI	9631
46	1	BAGHPAT	2	BARAUT	69	BIJROL	11013
47	1	BAGHPAT	2	BARAUT	71	LOHADDA	3011
48	1	BAGHPAT	2	BARAUT	72	VAZIDPUR	6749
49	1	BAGHPAT	2	BARAUT	83	IDRISPUR	2419
50	1	BAGHPAT	3	BAGHPAT	85	OSIKA	2857
51	1	BAGHPAT	3	BAGHPAT	97	SAROORPUR KALAN	10822
52	1	BAGHPAT	3	BAGHPAT	125	NIWARA	2526
53	1	BAGHPAT	4	PILANA	140	AHERA	2751
54	1	BAGHPAT	4	PILANA	143	BILOCHPURA	5799
55	1	BAGHPAT	4	PILANA	150	LUHARA	3818
56	1	BAGHPAT	4	PILANA	161	SAIDBHAR	4030
57	1	BAGHPAT	4	PILANA	174	PILANA	4986
58	1	BAGHPAT	4	PILANA	181	KHATTA PRAHLADPUR	6688
59	1	BAGHPAT	4	PILANA	184	SALAWATPUR KHERI	1900
60	1	BAGHPAT	5	KHEKRA	208	SANKROD	4760
61	1	BAGHPAT	5	KHEKRA	221	RAWAN URF BARAGAON	4777
62	1	BAGHPAT	5	KHEKRA	229	AHMADANAGAR	1610
63	1	BAGHPAT	5	KHEKRA	238	DAGARPUR	2945
64	1	BAGHPAT	5	KHEKRA	247	PHALERA	1454
65	2	SARDHANA	6	BINAULI	5	MOZIZABAD NAGAL	4883
66	2	SARDHANA	6	BINAULI	32	SIRSALI	5748
67	2	SARDHANA	6	BINAULI	51	FAZALPUR	3820
68	2	SARDHANA	7	SARURPUR KHURD	68	CHHUR	7744
69	2	SARDHANA	7	SARURPUR KHURD	77	JASAR SULTANNAGAR	4809
70	2	SARDHANA	7	SARURPUR KHURD	81	SURURPUR KHURD	4992
71	2	SARDHANA	8	SARURPUR KHURD	102	AURANG NAGAR BARDHANA	6667
72	2	SARDHANA	8	SARDHANA	125	KAILI	4576
73	2	SARDHANA	8	SARDHANA	143	JASRATHPUR	810
74	2	SARDHANA	9	DAURALA	150	WALIDPUR	2096
75	2	SARDHANA	9	DAURALA	152	AKHTYARPUR	1202
76	2	SARDHANA	9	DAURALA	168	PHUHALLI	4372
77	2	SARDHANA	9	DAURALA	172	BAHRALA	2609
78	2	SARDHANA	9	DAURALA	182	JAINPUR	606
79	2	SARDHANA	9	DAURALA	190	MAHALKA	6096
80	2	SARDHANA	9	DAURALA	196	MAIL	3573
81	2	SARDHANA	9	DAURALA	199	KHANUTA	2214
82	2	SARDHANA	9	DAURALA	202	MUKHTYARPUR NAGLA	1092
83	3	MAWANA	10	MAWANA KALAN	61	JANDHERI	2353
84	3	MAWANA	11	HASTINAPUR	62	BATAWLI	1914
85	3	MAWANA	11	HASTINAPUR	124	MEWA	4687
86	3	MAWANA	12	PARIKSHITGARH	191	DHANPURA	1142
87	3	MAWANA	13	MACHRA	266	ATMADPUR	2101
88	3	MAWANA	13	MACHRA	285	MOHD. MURADPUR URF SHOLDA	2900
89	3	MAWANA	13	MACHRA	294	BHAGWANPUR BANGAR	1215
90	4	MEERUT	14	ROHTA	33	BOHLA	3743
91	4	MEERUT	14	ROHTA	37	BHADAURA	3136
92	4	MEERUT	14	ROHTA	43	RASULPUR ZAHID	2127
93	4	MEERUT	15	JANIKHURD	72	PANCHLI KHURD	5374
94	4	MEERUT	15	JANIKHURD	91	KISHORI	2165
95	4	MEERUT	17	RAJPURA	140	MAMIPUR	1899
96	4	MEERUT	17	RAJPURA	143	MASOORI	4373
97	4	MEERUT	17	RAJPURA	169	KINAN NAGAR	5776
98	4	MEERUT	17	RAJPURA	171	PACHGAON PATTI SANWAL	1339
99	4	MEERUT	17	RAJPURA	172	SISOLI	4243
100	4	MEERUT	18	KHARKHODA	221	KAILI	4640