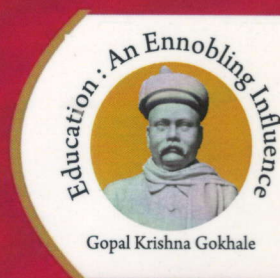


Utilization of RCH services during COVID-19 Pandemic: An assessment

Findings from IIPS-PRC multi-centric study MAHARASHTRA



POPULATION RESEARCH CENTRE
GOKHALE INSTITUTE OF POLITICS AND ECONOMICS,
PUNE, MAHARASHTRA



(स्थापना / Established in 1956)
बेहतर भविष्य के लिए क्षमता निर्माण
Capacity Building for a Better Future

INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES
DEEMED TO BE A UNIVERSITY, MUMBAI, INDIA

July, 2021

**Report submitted to the Ministry of Health and Family Welfare
(Stats. Division)**

Government of India, New Delhi

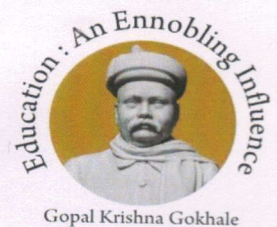
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Study design and research instrument

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Capacity Building for a Better Future

Sr. No.: 18-19 /

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FOREWORD

It has been over a year since the global pandemic of COVID-19 started impacting almost all spheres of our lives. While the pandemic is expected to last longer despite all our efforts to contain the virus, more attention is important to understand its consequences in the lives and livelihood of the people. The myriad of effects of the pandemic is difficult to measure and comprehend. The lockdown and subsequent closure of all activities brought several challenges. Wherever possible, institutions took it up these challenges and came up with alternatives ways of engagement. For example, work from home, use of virtual platforms to stay connected etc. became a new normal. This opportunity was also used to build skills and capacities of the staff for future growth and development. It was particularly challenging to operate essential services like health institutions by accomplishing the immense responsibilities of the COVID times but by ensuring safety of their employees.



The Statistics Division of the Ministry of Health and Family Welfare, Government of India, reached out to International Institute for Population Sciences, Mumbai by end of March 2020, to organize a comprehensive training workshop for the staff of the Population Research Centres located in various parts of the country. The key motive for the proposed activity was to use the lockdown period to build research capacity of the PRC staff. Subsequently, IIPS organized 4-week long virtual workshop covering all aspects of undertaking a research including research methodology, scientific writing and publishing research papers. The officials from the 18 Population Research Centres located in different States and Union Territories of India attended the training program.

The coordinators of the training program took one step forward and proposed a collaborative research study on a contemporary theme with the PRCs. The main idea was to take the class room learning during the training and implement them in the field to develop and use a standard research methods and study tools. Such attempt will also help in drawing meaningful conclusions for informed policies and programmes. Five PRCs, viz. Dharwad, Srinagar, Patna, Guwahati and Pune came forward to undertake the study on "Assessment of Utilization of RCH Services during COVID-19 Pandemic" and complete in a period of nine months (June 2020 to March 2021). The staff of the participating PRCs shared the responsibilities right from start of the study to its completion, including development of study design/methods, study tools, data entry software, data analysis and report writing. I was extremely delighted to listen to the preliminary results of the study when it was presented in a technical session organised as part of IIPS annual seminar during March 18-20, 2021.

I am confident that the findings of the study will provide a strong direction on ameliorating the likely impact of COVID-19 pandemic on essential health services including antenatal, natal and postnatal services; child health, immunization and ICDS services; and family planning services in the rural and urban areas of the five participating states. Certainly, such collaborative efforts will further strengthen the capacity of the PRC staffs in handling research projects more systematically.

I congratulate and appreciate the efforts of the team led by Prof. Usha Ram, IIPS for the successful completion of the study.

Prof. K. S. James

Director and Senior Professor

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The study "Utilization of RCH services during COVID-19 Pandemic: An assessment; Findings from IIPS-PRC multi-centric study" is a partnership between the International Institute for Population Sciences, Mumbai, and five Population Research Centres (PRCs), viz. Pune, Dharwad, Guwahati, Srinagar and Patna under the Ministry of Health & Family Welfare, Government of India. The successful completion of the study is the outcome of sincere efforts of the organization and individuals involved in the study.

The PRC, Pune is grateful to Shri D. K. Ojha, Dy. Director General, Ministry of Health and Family Welfare, Government of India and Ms. Anjali Rawat, Director, Ministry of Health and Family Welfare, Government of India, for suggesting the topic 'Impact of Pandemic on other Essential Health Services' to the PRCs and providing the necessary financial support.

The study team acknowledge the contribution of Prof. K. S. James, Director and Senior Professor, International Institute for Population Sciences, Mumbai for approving the PRCs and IIPS collaboration and assistance at various stages of the study. The IIPS brought several PRCs together to work on a specific theme using standardized methods and tool. We are also thankful to Prof. James for providing a special technical session in the IIPS annual seminar held during March 2021 to showcase the results of the study with the wider audience.

PRC Pune would also like to acknowledge with much appreciation the crucial role of Dr. Archana Patil, Director health Service; Dr. Bhagwan Pawar District Health Officer; Dr. Nandapurkar, Civil Surgeon; Dr. Sabane, Health Officer, and the Medical officers of respective Primary Health Centres; who gave us the permission to use the required machineries and the necessary material required for the study. A special thanks to Block Community Mobilisers and all the ASHAs who helped us in contacting the respondents during the prevailing COVID Pandemic.

PRC Pune would like to thank Prof. Rajas Parchure, Director, Gokhale Institute of Politics and Economics, Pune and Dr. P. N. Rath, Registrar, Gokhale Institute of Politics and Economics, Pune and Mrs. Ashwani Joglekar, Finance Officer, Gokhale Institute of Politics and Economics, Pune for all the guidance, cooperation and support in completing the project activities. We would like to thank all the administrative staff of PRC, Pune for providing the secretarial help while taking up this project.

PRC Pune would like to acknowledge support and cooperation from other collaborating PRCs- Dharwad, Srinagar, Patna and Guwahati for their involvement in this joint venture.

Special thanks to our respondents who cooperated and provided telephonic interviews even during pandemic situation despite of having their busy schedule.

Dr. Vini Sivanandan

Prof. Usha Ram

Dr. M. R. Pradhan

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Research Highlights

About the study

- ✦ The study is part of a multi-centric study undertaken in five states of Assam, Bihar, Jammu & Kashmir, Karnataka and Maharashtra.
- ✦ The study investigates into the utilization of the maternal and child health care services including the ICDS and Contraceptive services by the women and children during the COVID-19 pandemic.
- ✦ This report present findings from Pune district of Maharashtra.
- ✦ The study results are based on a survey population of 2112 persons and 500 eligible women in the age group of 15-49 years in the urban (291) and rural (299) areas.

Characteristics of the surveyed eligible women

- ✦ Rural-urban divide is significant and is prominently observed in terms of infrastructure such as the pucca type of house (53% rural, 92% urban); piped drinking water (64% rural, 99% urban); flushed sanitation facility (43% rural, 74% urban).
- ✦ The proportion of households with a designated area for handwashing is considerably higher in the urban areas (88.3%) than the rural areas (65.1%).
- ✦ Only 17% of the households had access to the internet and owned a computer. But more than 90% households have electricity and television.
- ✦ Median age of the eligible women was 26 years and the median years of schooling completed were 12 years.
- ✦ Only 58% of the women (63% urban, 49% rural) have a bank account and can operate it.

Utilization of antenatal, natal and post-natal care during the pandemic

Antenatal care

- ✦ Of the women who had a live birth during the reference period, all the women from rural areas and 94% of women in urban areas have registered pregnancy in the first trimester.
- ✦ The coverage of four or more antenatal care visits was almost universal in rural areas (98%) whereas in urban areas it was 86%.
- ✦ Almost all the currently pregnant women surveyed have registered for ANC.
- ✦ ANC services such as monitoring of weight, blood pressure, sugar level, hemoglobin level, HIV, use of the ultrasound, protection against tetanus during the pregnancy was almost universal. However, only 27% women in rural areas and 57% of women in urban areas were tested for COVID-19
- ✦ Near about 57% of mothers received most ANC services from the public health facility.
- ✦ About 89% of registered pregnancy were at a public health facility; higher in the rural areas (94%) as compared to urban areas (86%).

- ✦ In majority of the live birth mothers did not face any difficulty in seeking antenatal care services during pandemic. Nonetheless, only a few mothers did complain for the same; mostly related to lack of transportation, family refused to go due to CoVID 19 or fear of COVID-19, too much time to travel due to COVID restrictions/checks.
- ✦ Nonetheless, 7% of women reported experiencing pregnancy complications and all the mothers did seek treatment.

Natal care

- ✦ Almost all of the live births during the reference period occurred in a health facility and near about three forth in a private health facility.
- ✦ Considerably proportions of the births were cesarean (45%).
- ✦ In 91% of the cases, mothers used a private vehicle to reach to the facility for delivery. ASHAs, who accompanied the pregnant women to the facility, was almost twice in rural areas (32%) as compared to urban areas (16%).
- ✦ About 19% live birth mother experienced complications at the time of delivery (prolonged labour lasting longer than 12 hours, Umbilical cord prolapse, other complications, breech presentation) and 95% sought treatment for the complication.

Postnatal care

- ✦ In 3% cases, mothers experienced postpartum complication mainly concentrated in rural areas (6.8%) and negligible in urban areas (0.9%) such as lower abdominal cramps, swelling of legs, body, face, foul smelling coucha, fever, rapid breathing, other complications and all sought treatment.
- ✦ Most of the women had a postnatal checkup within 24 hours of the live birth and most of which was done by a doctor (88%). However, 11% of women from rural areas did not have a PNC checkup.
- ✦ Twenty-one percent of the women reported that they received the JSY benefit by the time data was collected.

Contact with the health/ICDS workers and Supplementary nutrition from ICDS

- ✦ Most of the women who had a live birth during the reference period as well as currently pregnant women reported that the ASHAs and health worker visited them during pregnancy as well as after delivery and received help when needed.
- ✦ Many mothers reached out to ASHA for help during pregnancy, at delivery and after live birth for assistance and ASHA helped them.
- ✦ About 96% of the mother and pregnant women reached out to ASHA for help during the pandemic and also received help.
- ✦ Near about half the number of women who had live births and pregnant women received supplementary nutrition from the ICDS during the Pandemic.

Utilization of immunization, child health care and ICDS services during the pandemic

Immunization services

- ✦ Almost all the eligible children received doses of BCG, Polio-0, Hepatitis-B0, and Pentavalent first dose. Whereas near about 80% of the eligible children received Pentavalent (second and third doses) and 86% received measles and rubella.
- ✦ Only about 50-56% children received rotavirus first, second and third doses, DPT booster, Vitamin-A first dose.
- ✦ More than half the number of the children vaccinated with BCG and at a public health facility.
- ✦ Majority received vaccination from a place usual choice for vaccination.
- ✦ More girl children than boy children, from poor families, children of mothers with less education received vaccination from the public health facility.

Child health care

- ✦ About 43% children fell ill (mainly cough and cold and fever) during the pandemic and 97% were treated for the illness.
- ✦ Among the children who fell ill and sought treatment during the pandemic 65% of girl child and 82% of boy child were treated at a private facility and 99% were cured at the time of the survey.

ICDS Services

- ✦ Over 69% of the children aged below 6 years of age ever attended or registered at the anganwadi centre (AWC) pre-pandemic and 61% registered during the pandemic.
- ✦ About 86% children ever received food and consumed the food; a higher (more than 90%) number of the children received and consumed the food during the pandemic period.
- ✦ About 8% of the children received food for some days only. Considerable proportions of mothers cited the child too small (54%); other reasons (12%) and too many children at AWC (10%) as the main reason for the child not attending AWC during the pandemic.
- ✦ Majority mothers (84%) felt that the quantity and quality of food and quantum of other services from the AWC remained same in the pandemic.

Contact with the health / ICDS workers for child health needs and difficulties faced during the pandemic

- ✦ About 90% of the mothers reported that the health/ ICDS worker has visited them during the pandemic for child vaccination or health care needs.
- ✦ As reported by mother, significant rural, urban differential was observed in terms of anganwadi workers (AWW) visit for child vaccination (rural 6%, urban 53%) and health care (rural 5 %, urban 44%) during the pandemic.
- ✦ Near about 90% of the mothers informed that ASHA visited them for child vaccination and health care services during the pandemic.

- ✦ About 83% and 92% of the mothers, respectively, contacted ASHA for services related to the child vaccination and health care during the pandemic and almost all received the help from ASHA.
- ✦ Majority of the mothers reported that they did not experienced difficulty in seeking vaccination and child health care during the pandemic.

Utilization of contraceptive services during the pandemic

- ✦ Of the non-pregnant women, 33% in urban areas and 25% in rural areas reported using a method to delay/avoid pregnancy at the time of the survey.
- ✦ Female sterilization (28%) and condom (50%) are the most popular method in both rural and urban areas respectively.
- ✦ About 53% of the couples who got sterilized during the pandemic got it from a private health facility.
- ✦ Of the modern spacing method users, 94% from urban areas and 66% got their most recent supply from a public health source.
- ✦ Only 3% experienced menstrual problems during the pandemic, and only 66% reported they sought treatment for the menstrual problems.

Chapter 1

Introduction

Chapter 1: Introduction

1.1 Background of the Survey

The Ministry of Health and Family Welfare, Government of India requested IIPS to organize a series of training program for the PRC officials in May 2020 immediately after the lockdown to build capacity of the staff on various aspects of research. In response, the IIPS organized the training program for the PRC officials during June-July 2020 via virtual platform spanning over four-weeks. The series covered a total of several themes: Improving Writing Skills: Research Articles & Policy Briefs; Ethical Issues in Population & Health Research; Statistical Packages: SPSS & STATA; Sampling for Survey Research, Sample Size and Sampling Weights; Monitoring and Evaluation; Population Projections; Designing Survey Tools for Quantitative and Qualitative Studies; Development of Research Proposal for OR/Intervention Studies in RH; Qualitative Data Analysis using Nvivo and ATLAS.ti; and Choosing Appropriate Statistical Techniques for Research Data. In one of the course entitled “**Designing the Survey Instruments**”, the course coordinators discussed with the participants about considering a joint study post training programs on a theme of common interest to all PRCs. The idea was to translate the learnings during the training programs in to effective outcomes. The PRCs appreciated the idea and decided to move forward making this effort a reality after the conclusion of the training series.

The Collaboration: A total of seven Population Research Centers, viz. Bengaluru (KN), Dharwad (KN), Guwahati (AS), Thiruvananthapuram (KL), Srinagar (JK), Patna (BR) and Pune (MH) came forward and joined the collaboration. The collaboration formally launched in August 2020 with an approval from the Director IIPS. The PRC Bengaluru withdrew after a month due to resource constraints and Kerala PRC could not undertake the fieldwork in the state as they did not get state approval for undertaking the study. Finally, five PRCs continued the collaboration. The study collaboration period was for a total of nine months ending in March 2020-21.

Rationale: The Ministry of Health and Family Welfare (MoHFW), Government of India entrusts the PRCs with a list of research topics to be undertaken by them during a given financial year. Generally, each PRC uses its own methodology and research tools to complete

these studies which makes across state comparison of the study results/findings difficult. It was thus thought that using standardized methods and tools across PRCs for a study would not only ensure improved quality of research studies but would be of immense help to allow authorities to compare the results across geographies for area-specific policies and programs.

Theme selection: One of the theme communicated by the MoHFW to the PRCs during the year 2020-21 was “**Impact of lockdown on RCH services**”. The participating PRCs agreed to undertake the collaborative research exercise on this theme and decided to move forward for the study on utilization of RCH services during the pandemic.

Expected outcome: The collaboration is expected to further strengthen the capacity of the PRC staffs in developing study designs, sample size and research instruments more effectively with hand on exercise experience. The participating PRCs shared the responsibilities on various aspects of the study by further forming study subgroups and working collaboratively on assigned tasks and finalizing the methods and tools together.

1.2 About Pune District (Maharashtra)

Pune District located in the Western part of the Indian state of Maharashtra. The district has geographical area of 15.642 sq. Kms and is located 150 Kilometers south-east of Mumbai. The landscape of Pune district is distributed triangularly in western Maharashtra at the foothills of the Sahyadri mountains and is divided into three parts “Ghatmatha;,” “Maval”; and “Desh”. Population of Pune district as per 2011 Census is 94,29,408 of which, 49,24,105 are males and remaining 45,05,303 are females and hence sex ratio of the district is 915 females per 1000 males. Rural population is 36,78,236 (40%) and that of urban is 57,51,182 (60%). It is the second largest city in the state after Mumbai, and is an important city in terms of its economical and industrial growth. The city leads as the “Veritable heartland” of cultural Maharashtra. Pune also has made its mark as the educational epicenter winning itself the sobriquet, “The oxford of the East”. The city has emerged as a major educational hub in recent decades, with nearly half of the total number of international students in the country studying in Pune. Research Institute of Information technology, education, management and training attract students and professionals from India and Overseas. Not just that, it has a growing industrial hinterland, with information technology, engineering and automotive companies

sprouting. The city is known for cultural activities like classical music, spirituality, theatre, sports and literature.

As per NFHS-4, sex ratio of the total population for Pune is 924 females per 1000 males and sex ratio at birth is 927 females per 1000 males. The district records around 95% households with electricity, 95% having access to safe drinking water, 63% using improved sanitation facility and 81% using clean fuel for cooking. As per NFHS-4, literacy level in the district is 87% for women and 98% for men in the age group 15-49 years. Current use of family planning method among currently married women aged 15-49 years is around 70% and unmet need of family planning is 8.5%.

Under maternal and child health, the district has 88% of first trimester ANC registrations and 84% of pregnant women received at least 4 ANC check-ups. Proportion of institutional deliveries during previous 5 years was 93% in the district of which 67% occurred in public health facilities. Full immunization among children 12-23 months is 81% in the district. Prevalence of diarrhea during previous 2 weeks was 7.9% in the district among children below 5 years. Prevalence of anemia among children below 5 years was 53% and it was 50% among women aged 15-49% as per NFHS-4.

1.3 Survey instruments

The study used one questionnaire for collection of information from women aged 15-49 years. The questionnaire covered the following topics:

Section 1 - Background characteristics

This section collected information on the main source of drinking water, type of toilet facility, type of cooking fuel, type of house, if the house had a designated area for hand washing and ownership of other selected items. Questions on age, education, religion, caste, marital status, employment status during pre-pandemic and pandemic period of the women were also collected in this section. Additionally, a few questions on the employment status during pre-pandemic and pandemic period of the woman's husband is included in the section. The details of the woman's reproductive history in terms of children ever born, children surviving and children dead of the woman is also included in the section. Finally, the section also collected information was obtained from each woman about her current pregnancy status

at the time of survey and number of abortions, stillbirths and live births by the women during past two years (between January 1, 2019 and survey date).

Section 2 - Current pregnancy

This section collected information about antenatal care utilization, pregnancy complications, treatment seeking for pregnancy complications, difficulties experienced in seeking antenatal care and/or treatment for complications during pandemic and reasons for not seeking antenatal care / treatment for complications during the current pregnancy. Information about contact with the health / ICDS worker during the pandemic related to the current pregnancy were also included in the section.

Section 3 - Abortion

This section collected information about antenatal, natal and postnatal care utilization, pregnancy/post-delivery complications, treatment seeking for pregnancy/post-delivery complications, difficulties experienced in seeking antenatal care and/or treatment for complications during pandemic and reasons for not seeking antenatal care / treatment for pregnancy/post-delivery complications. Information about contact with the health / ICDS worker during the pandemic related to the abortion were also included in the section. Information on ultrasound, sources and quality of antenatal, natal and postnatal services, expenditure on abortion etc. were also collected in this section.

Section 4 and 5 – Stillbirth and Livebirth

This section collected information about antenatal, natal and postnatal care utilization, pregnancy/delivery/post-delivery complications, treatment seeking for pregnancy/delivery/post-delivery complications, difficulties experienced in seeking antenatal care and/or treatment for complications during pandemic and reasons for not seeking antenatal care / treatment for pregnancy/ delivery/post-delivery complications. Information about contact with the health / ICDS worker during the pandemic related to the stillbirth/livebirth were also included in the section. Information on ultrasound, sources and quality of antenatal, natal and postnatal services, C-section deliveries, expenditure on delivery etc. were also collected in this section.

Section 6 – Contraception

The section collected information on ever/current use of methods to delay/avoid pregnancy, method use, place of sterilization, sources of obtaining modern spacing methods, duration of method currently used, side effects of method used, treatment seeking in case of side effects of method, difficulties experienced in accessing method, treatment for side effects, during pandemic, money spent on current method, reasons for non-use of a method to delay/avoid pregnancy.

The women were also asked about menstruation and problems experienced during menstruation and in seeking treatment for menstrual problems during pandemic. Information about contact with the health / ICDS worker during the pandemic related to contraception services were also included in the section.

Section 7 – Immunization

The information on immunization/vaccination of children during pandemic, place of immunization, difficulties faced in immunization and reason for change of place of immunization and non-immunization of the children during the pandemic were collected in this section. Information about contact with the health / ICDS worker during the pandemic related to child immunization services were also included in the section.

Section 8 – Child health

The section gathered information on children who fell ill during pandemic, nature of illness, treatment sought for illness, difficulties experienced in seeking treatment for ill child, reason for not seeking treatment, money spent on treatment included. Information about contact with the health / ICDS worker during the pandemic related to the child health care services were also included in the section.

Section 9 – ICDS services

Information about children attending ICDS/AWC during pre-pandemic and pandemic, whether children received and/or consumed food given the anganwadi, frequency and quality of food provided by the ICDS were collected. Information on woman perception on

change in the quantity and quality of food at the anganwadi, other services by the anganwadi during the pandemic were also collected. Reason for children not attending the anganwadi were also obtained in this section.

1.4 Survey Design and Sample Implementation

It was decided to implement the study in one district of each of the five participating states. The five districts are – Kamrup in Assam, Patna in Bihar, Pulwama in Jammu and Kashmir, Pune in Maharashtra and Dharwad in Karnataka. The same was designed to provide estimates for district as a whole. The sample size of the study is not adequate enough to provide separate estimates for urban and rural areas of the district for all indicators. A target sample of 500 eligible women aged 15-49 years were divided between urban and rural sample by allocating the sample proportionately to the population of these two areas according the district population share in 2011 census. In view of the pandemic conditions, a non-response rate of 30% was used to estimate the sample size to provide reliable estimates of targeted indicators with 95% confidence. As a result, target sample was set at 500 completed interviews of the eligible women in each district. The data was collected by face-to-face interviews and telephone interview as convenient given the pandemic.

Sample Design

We used multi-stage stratified sampling design with probability proportional to size (PPS) within each of the sampling domains of urban and rural areas.

Sample Selection in Rural Areas

In rural areas, three Community Health Centers (CHCs) were selected such that one of the selected CHC was located farthest from the district head quarter, one located at the mid-distance and another closest to the district head quarter. In the next stage, from each selected CHC, we selected two Primary Health Centres (PHCs) based on distance from the selected CHC (one attached to the CHC and another far away from the CHC); making a total of six-PHCs (3x2). From each selected PHC, we next selected two Sub Health Centers (SHCs) based on distance from the selected PHC (one attached to the PHC and another far away from the PHC); making a total of 12-SHCs (6x2). From selected SHC, we selected two villages – one SHC village and another non-SHC village served by the selected SHC; making it 24-

villages (12x2). Finally, required number of eligible women were selected from the list of reproductive age group women available with the health worker of the selected SHC with equal probability in each selected village using systematic sampling. The list was updated by the field teams before the launch of the data collection work.

Sample Selection in Urban Areas

Of the three selected CHCs, we first identified the catchment area of the CHC. For each CHC, we selected two catchment areas – one closest to the CHC and another farthest from the CHC. In the next stage, required number of eligible women were selected from the list of reproductive age group women available with the health worker of the selected catchment areas with equal probability in each selected catchment area using systematic sampling. The list was updated by the field teams before the launch of the data collection work.

In all, a total of 24 PSUs (Four in urban areas and 20 in the rural areas) were selected for undertaking the data collection work for the study. The field work for the study was between November 2020 and February 2021.

1.5 Recruitment, Training, and Fieldwork

The PRC field investigators collected the data for the study. Each member of the field teams was trained for two-days on the study instrument before the main data collection.

1.6 Data Processing

The data processing was done by the PRC staff. The data processing team consisted of office editor, coder, data entry operator. The data entry was done in CSpro. We did 100% double entry to avoid the data entry errors. The data validation was done by the PRC themselves.

Background characteristics of the households and respondents

This chapter presents a profile of the demographic and socioeconomic characteristics of the households in which the survey was conducted. The chapter also provides details of the total children ever born, live and dead of the eligible women at the time of survey. Additionally, the chapter includes information on the total number of live births, stillbirths and abortions the eligible

Background characteristics of the households and respondents

Table 2.1: Population surveyed by gender and place of residence, Punjab (2020-21)

Characteristic	Urban	Rural	Combined
Male	515	800	1,315
Female	583	582	1,165
Person	1,098	1,382	2,480
Overall sex ratio (males per 1,000 female population) of all			
aged	712	840	776
Total eligible women surveyed	381	299	680

2.1 Housing and Household Characteristics

Table 2.2 and Figure 2.2 provide information on selected housing characteristics of the houses in which the eligible women resided by residence. About 6.3% of households in Punjab are katcha houses made with mud, thatch or other low-quality materials. 1.4% of the women live in semi-pucca houses made of materials of partly low-quality and partly high-quality, and 76.2% live in pucca houses that were made with high-quality materials. The roof, walls and floor. Slightly higher proportions of the rural women than the urban women live in katcha houses (11.5% versus 7.8%). Substantially higher proportions of the urban women live in pucca houses (92.4%) than the rural women (53.6%).

Water sources, sanitation facilities and fuel used for cooking may have an important influence on the health of household members, especially children and women. The survey

Chapter 2

Background characteristics of the households and respondents

This chapter presents a profile of the demographic and socioeconomic characteristics of households in which interviewed eligible women resided and the characteristics of the surveyed eligible women. The chapter also provides details of the total children ever born, surviving and dead of the eligible women at the time of survey. Additionally, the chapter includes information on the total number of livebirths, stillbirths and abortions the eligible women had during the period preceding two-years prior to the survey (from January 1, 2019 to the survey date) and if the woman was pregnant at the time of survey.

Table 2.1 provides population by gender and place of residence along with overall sex ratio of the surveyed population. The total population of all surveyed 500 households is 2,112 people, of which 1,015 are males and 1,097 are females. The overall sex ratio of the population is 912 males per 1000 female population. The sex ratio is higher in the rural areas (940) compared to the urban areas (912).

Table 2.1: Population surveyed by gender and place of residence, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Male	515	500	1,015
Female	565	532	1,097
Person	1,080	1,032	2,112
Overall sex ratio (males per 1000 female population of all ages)	912	940	925
Total eligible women surveyed	291	299	500

2.1 Housing and Household Characteristics

Table 2.2 and Figure 2.2 provide information on selected housing characteristics of the houses in which the eligible women resided by residence. About 6.4% of households in Pune live in *kachcha* houses made with mud, thatch, or other low-quality materials, 17.4% percent live in semi-*pucca* houses made of materials of partly low-quality and partly high-quality, and 76.2% live in *pucca* houses that were made with high-quality materials used for the roof, walls, and floor. Slightly higher proportions of the rural women than the urban women live in *kachcha* houses (11.5% vers. 2.8%). Substantially higher proportions of the urban women live in *pucca* houses (92.4%) than the rural women (53.6%).

Water sources, sanitation facilities and fuel used for cooking may have an important influence on the health of household members, especially children and women. The survey

gathered information about these aspects. Eighty-four percent of the women live in houses that use piped drinking water; much higher in the urban areas (99.0%) than the rural areas (64.6%). A little less than 11% of the women live in houses that use tube well/borehole drinking water. Proportions of women in houses using well/borehole drinking water was over 25.8% in rural areas and less than 1% in the urban areas.

Only 61.6% of households have a flush or pour toilet (using either piped water or water from a bucket for flushing) followed by pit latrines (37.6%). The urban-rural divide is significant; 74.6% of urban women live in houses that have a flush/pour toilet as against of 43.5% among rural women. In contrast, substantially higher percentages of rural women (54.6%) live in houses that have a pit latrine than the urban women (25.4%). About 0.8% women reportedly live in houses that did not have any toilet facility and used open spaces for defecation; higher in rural areas (2%).

Overall rural-urban divide is prominently in terms of pucca type of house (53% rural, 92% urban); piped drinking water (64% rural, 98 % urban); flushed sanitation facility (43 %rural, 74 % urban).

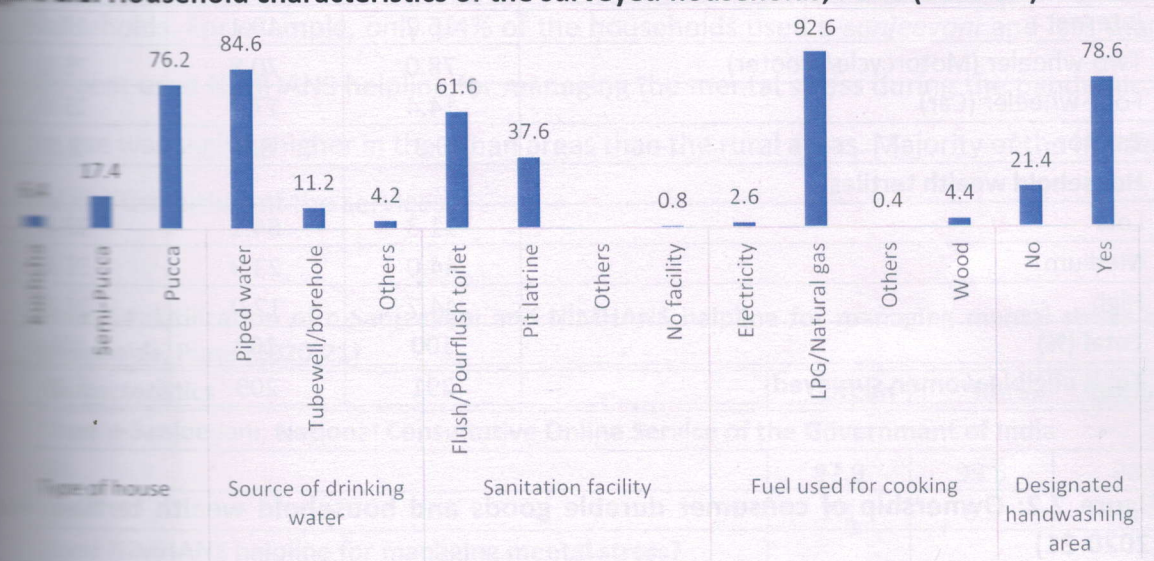
Table 2.2: Selected background characteristics of the households' women resided in Pune 2020-21)

Characteristics	Urban	Rural	Combined
Type of house			
Kuchcha	2.8	11.5	6.4
Semi-Pucca	4.8	34.9	17.4
Pucca	92.4	53.6	76.2
Source of drinking water to the household			
Piped water	99.0	64.6	84.6
Tube well / borehole	0.7	25.8	11.2
Dug well	0.0	5.7	2.4
Cart with small tank	0.0	0.0	0.0
Surface water (river, dam, lake, pond, stream, canal, etc.)	0.0	0.0	0.0
Bottled water	0.0	2.9	1.2
Community RO plant	0.3	1.0	0.6
Sanitation facility			
Flush or Pour flush toilet	74.6	43.5	61.6
Pit latrine	25.4	54.6	37.6
Twin pit / Composting toilet	0.0	0.0	0.0
Dry latrine	0.0	0.0	0.0
No facility/ open space/field	0.0	1.9	0.8
Type of fuel used for cooking			
Electricity	0.7	5.3	2.6

LPG/Natural gas	99.0	83.7	92.6
Biogas	0.3	0.5	0.4
Kerosene	0.0	0.0	0.0
Wood	0.0	10.5	4.4
Has a designated area for handwashing			
No	11.7	34.9	21.4
Yes	88.3	65.1	78.6
Total (%)	100	100	100
Total eligible women surveyed	291	209	500

Households use several types of fuel for cooking, ranging from wood, kerosene, biogas, natural gas, electricity etc. In Pune, 92.6% of the households use liquid petroleum gas/natural gas for cooking followed by wood (4.4%). Once again, rural-urban divide was huge. For example, 99.0% of the households in urban areas compared to only 83.7% in rural areas used liquid petroleum gas/natural gas for cooking. 10.5% of the rural households used wood for cooking, whereas, no one in urban area were using wood for cooking. Nobody in the rural and urban households used kerosene for cooking.

Figure 2.1: Household characteristics of the surveyed households, Pune (2020-21)



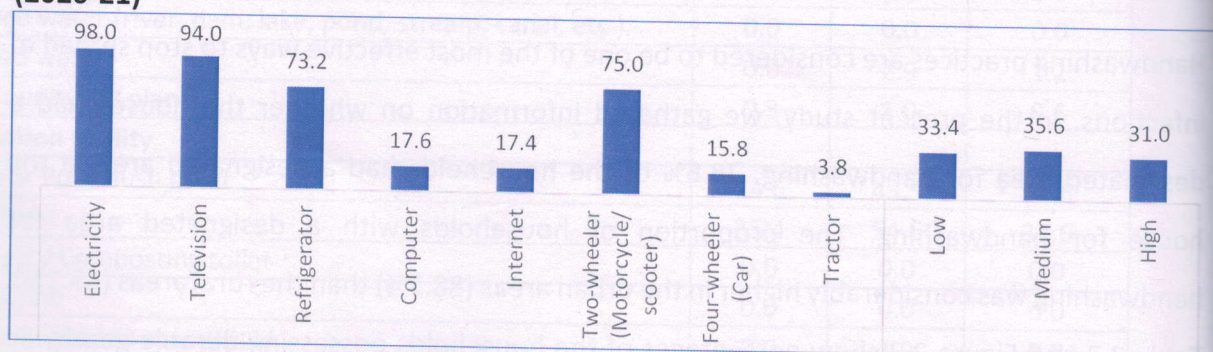
Handwashing practices are considered to be one of the most effective ways to stop spread of infections. In the present study, we gathered information on whether the houses had a designated area for handwashing. 78.6% of the households had a designated area in the house for handwashing. The proportion of households with a designated area for handwashing was considerably higher in the urban areas (88.3%) than the rural areas (65.1%). Table 2.3 and Figure 2.2 show percentages of the households possessing durable goods, an indicator of a household's socioeconomic level. The data shows that overall 98% of the

households have electricity. 97.6% Urban households and 98.6% of rural households of Pune district have electricity. Majority of the households have television (94.0%). 73.2% of the households have refrigerators; higher in urban areas (74.6%) than the rural areas (71.3%). 17.6% of the households have computer and 17.4% have internet. More urban households than the rural households have computer and/or internet. Nearly 75% of the households have motorcycle, higher in rural areas (78%) than the urban areas (70.8%). Significant minorities of the households (15.8%) have car and 4% have tractor (more in rural areas – 8.6%). Only 25 percent of the households have car in rural households (17.7%) have a slight edge over their urban counterparts (14.4%).

Table 2.3: Ownership of selected consumer durable goods and households by wealth tertiles by the households, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Households own following items (%)			
Electricity	97.6	98.6	98.0
Television	94.9	92.8	94.0
Refrigerator	74.6	71.3	73.2
Computer	17.5	17.7	17.6
Internet	16.2	19.1	17.4
Two-wheeler (Motorcycle/scooter)	78.0	70.8	75.0
Four-wheeler (Car)	14.4	17.7	15.8
Tractor	0.3	8.6	3.8
Household wealth tertiles			
Low	11.3	64.1	33.4
Medium	44.0	23.9	35.6
High	44.7	12.0	31.0
Total (%)	100	100	100
Total eligible women surveyed	291	209	500

Figure 2.2: Ownership of consumer durable goods and household wealth tertiles, Pune (2020-21)



We constructed wealth tertiles using data on following items: source of drinking water (classified as piped, well, and other sources), type of toilet (classified as Flush/Pour, Pit, no toilet), type of fuel used for cooking (classified as LPG, Coal and other sources), type of house (classified as *pucca*, *Semi-pucca*, *kachcha*), have a designated area in the house for handwashing, electricity in the house, possession of durable goods including television, refrigerator, computer, internet, motorcycle/scooter, car and tractor. We used Principal component analysis (PCA) and predicted scores for each item and created household wealth tertiles. The results are included in Table 2.3. One-fifth of the households in Pune belong to high wealth tertile and 33% in low wealth tertile. All the wealth quartile has proportionately equivalent distribution of the households. 64.1% percent of the rural households and 11.3% of the urban households belong to low tertile. Conversely, 44.7% of urban household and only 12.0% of the rural households belong to high wealth tertile.

Table 2.4 provides information of utilization of the *e-sanjeevani* national consultative online service of the Government of India and NIMHANS helpline for managing mental stress. The data shows that the uptake of both the services was very minimal among the surveyed households. For example, only 1.4% of the households used *e-sanjeevani* and less than one per cent used NIMHANS helpline for managing the mental stress during the pandemic. Even so, use was slightly higher in the urban areas than the rural areas. Majority of the households did not use either of the services.

Table 2.4: Utilization of e-Sanjeevani and NIMHANS helpline for managing mental stress by the households, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Used e-Sanjeevani, National Consultative Online Service of the Government of India			
No	97.9	99.5	98.6
Yes	2.1	0.5	1.4
Used NIMHANS helpline for managing mental stress?			
No	100.0	98.1	99.2
Yes	0.0	1.9	0.8
Total (%)	100	100	100
Total eligible women surveyed	291	209	500

2.2 Background characteristics of the respondents

The background characteristics of the women such as their age, marital status, religion, and caste, education, and work status has association with women's demographic and health-

seeking behavior. For example, influence of educational attainment and engagement in economic activities have been found to be significant catalysts for favorable changes in demographic and socioeconomic changes. They promote positive reproductive attitudes and utilization of available health care services including reproductive and child health services and thereby improving health and well-being of women themselves, their families and more importantly of their children. Similarly, age at marriage has strong correlation with the reproductive and child health outcomes in a population. In this section, we discuss key background characteristics of the surveyed women. The survey collected information on age, educational attainment, religion, caste, marital status, age at marriage, work status and if woman owned a bank/post office account and also operated the same. Besides, information on the work status of her husband was also collected. The results of the same are presented in Table 2.5 and Figure 2.3.

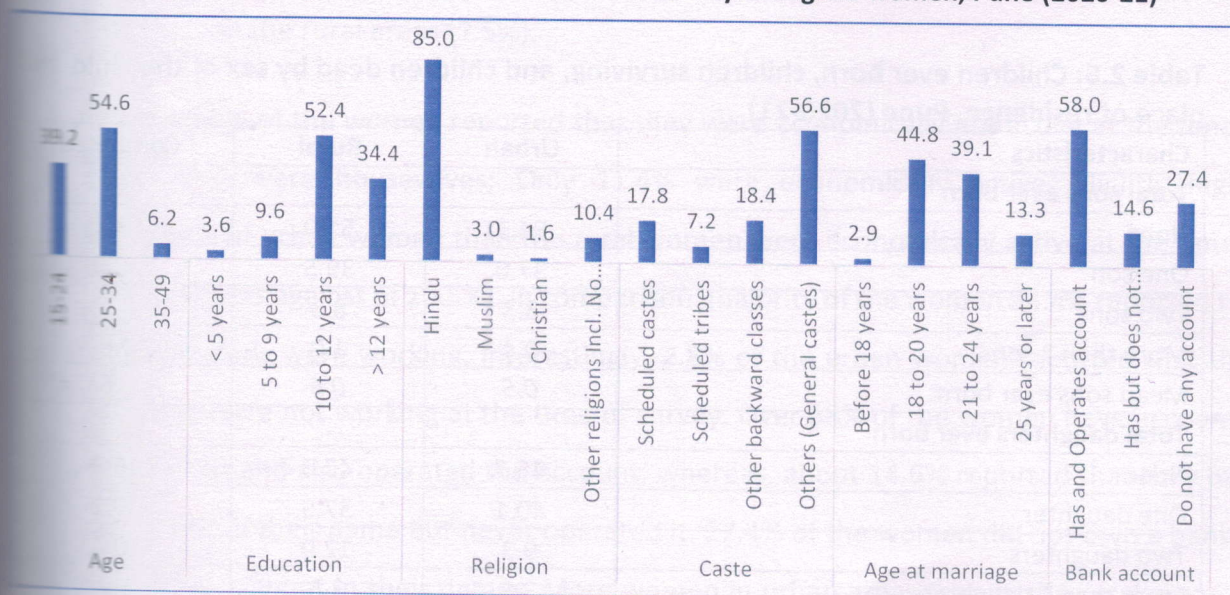
More than half the respondents were in the broader age group 25-34 years of age and near about 39 percent of women were in the age group 15-24 years of age. A little over 6% of the surveyed women were aged 35 years or older. As many as 43.5% of the rural women were in the age group 15-24 years compared to 36.1% in the urban areas.

Table 2.5: Selected background characteristics of the surveyed eligible women, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Woman age			
15-24	36.1	43.5	39.2
25-34	59.5	47.9	54.6
35-49	4.5	8.6	6.2
<i>Median age of the women</i>	<i>26.0</i>	<i>25.0</i>	<i>26.0</i>
Woman education			
Fewer than 5 years incl. never went to school	3.4	3.8	3.6
5 to 9 years	7.9	12.0	9.6
10 to 12 years	48.8	57.4	52.4
More than 12 years	39.9	26.8	34.4
<i>Median years of schooling</i>	<i>12.0</i>	<i>12.0</i>	<i>12.0</i>
Woman religion			
Hindu	82.5	88.5	85.0
Muslim	3.1	2.9	3.0
Christian	0.0	3.8	1.6
Other religions Incl. No religion	14.4	4.8	10.4
Woman caste			
Scheduled castes	23.0	10.5	17.8
Scheduled tribes	3.4	12.4	7.2

Other backward classes	16.5	21.1	18.4
Others (General castes)	57.0	56.0	56.6
Woman marital status			
Never married	0.7	4.3	2.2
Currently Married	97.6	91.4	95.0
Widowed/Divorced/Separated/Deserted	1.7	4.3	2.8
Woman age at marriage			
Before 18 years	1.7	4.5	2.9
18 to 20 years	40.8	50.5	44.8
21 to 24 years	40.1	37.5	39.1
25 years or later	17.3	7.5	13.3
Woman current work status			
Currently working	12.0	10.5	11.4
Housewife / Not working	88.0	89.5	88.6
Woman husband current work status			
Currently working	97.2	90.1	94.4
Househusband / Not working	2.8	9.9	5.7
Bank account			
Has and Operates account	63.6	49.8	58.0
Has but does not operates account	7.9	23.9	14.6
Do not have any account	28.2	26.3	27.4
Total (%)	100	100	100
Total eligible women surveyed	291	209	500

Figure 2.3: Selected background characteristics of the surveyed eligible women, Pune (2020-21)



More than one-third of the women had completed more than 12 years of schooling and about 3.6% completed fewer than five years of schooling (including those who never attended school). Near about half the number of women (52.4%) completed 10 to 12 years

of schooling and the remaining 9.6% completed 5 to 9 years of schooling. Notably higher percentages of women in the urban areas than the rural areas have completed more than 11 years of schooling 39.9% as against of 26.8%). Majority of the women were Hindu – 85% higher in rural areas (88.5%) than the urban areas (82.5%). About 3% of the women were Muslim. Urban areas have more Muslim respondent (3.1%) than the rural areas (2.9%). More than ten per cent of the women belong to other religions including Christian and no religion. Nearly three-fifths of the women (56.6%) belonged to the other castes (general category) followed by other backward classes (18.4%). The scheduled castes and scheduled tribe women comprised of 17.8% and 7.2%, respectively, of all respondents. Share of other backward classes and scheduled castes was higher in the urban areas (16.5% and 23.0%, respectively) compared to the rural areas (21.1% and 10.5%, respectively). Conversely, share of scheduled tribe and other caste respondents was lower in the rural areas (12.4% and 56.0% respectively) compared to the urban areas (3.4% and 57.1%, respectively).

Table 2.6 provides details on the children ever born, surviving, dead by gender of the child of the respondents. Mean number of sons ever born was 0.6 and mean number of daughters born was 0.7 Mean number sons/daughter born was higher in the rural areas as compared to the urban areas.

Table 2.6: Children ever born, children surviving, and children dead by sex of the child and place of residence, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Total sons ever born			
None	54.3	51.0	53.0
One son	37.0	39.5	38.0
Two sons	8.3	8.5	8.4
More than 2 sons	0.4	1.0	0.6
Mean sons ever born	0.5	0.6	0.6
Total daughters ever born			
None	46.7	47.0	46.8
One daughter	40.1	37.5	39.1
Two daughters	9.3	12.0	10.4
More than 2 daughters	3.8	3.5	3.7
Mean daughters ever born	0.7	0.8	0.7
Total sons surviving			
None	55.0	51.5	53.6
One son	37.0	40.0	38.2
Two sons	8.0	8.0	8.0

More than 2 sons	0.0	0.5	0.2
Mean sons alive	0.5	0.6	0.5
Total daughters surviving			
None	47.4	47.7	47.5
One daughter	39.8	37.2	38.7
Two daughters	9.3	12.1	10.5
More than 2 daughters	3.5	3.0	3.3
Mean daughters alive	0.7	0.7	0.7
Total sons dead			
None	99.0	98.5	98.8
One son	1.0	1.5	1.2
Total daughters dead			
None	99.7	99.5	99.6
One daughter	0.4	0.5	0.4
Total (%)	100	100	100
Total eligible women surveyed	291	209	500

Nearly 95% of the women were married at the time of survey. 1.7 % of the urban women were either widowed or divorced or separated. A significant minority of the respondents (3%) were married before age 18 years. Another about 44.8% were married at ages 18 to 20 years (higher in rural areas – 50.5% than the urban areas – 40.1%). 39.1% of the women were married at ages 21 to 24 years and nearly 13.3% married at ages 25 years or later. The share of women married at ages 25 years or later was considerably higher in the urban areas (17.3%) than the rural areas (7.5%).

Nearly 88.6% of the women reported that they were economically not active at the time of survey and were housewives; Only 11.4% were economically active. Slightly higher proportion of urban women than the rural women were economically active at the time of survey (12% as against of 10.5%). In comparison, majority of the women 94.4% reported that their husbands were working. Interestingly, 2.8% of the urban women reported that their husbands were not working at the time of survey. Over 58% of the women have account in their names and also operated the account, whereas, about 14.6% reported that they have an account in their name but never operated it. 27.4% of the women did not own a bank or post office account in their names. More women in urban areas than in the rural areas did not own any account (28.2% compared to 26.3%).

38.2% and 38.7% of the women, respectively, had one son or one daughter alive at the time of survey. About 0.2-3.3% women had more than two sons or daughters alive at the time of

survey. While majority of the women did not experience any child loss, there were 1.2% of the women who had lost one or more sons and less than 1% who lost one or more daughters. Share of women who experienced child loss was higher in the rural areas compared to the urban areas.

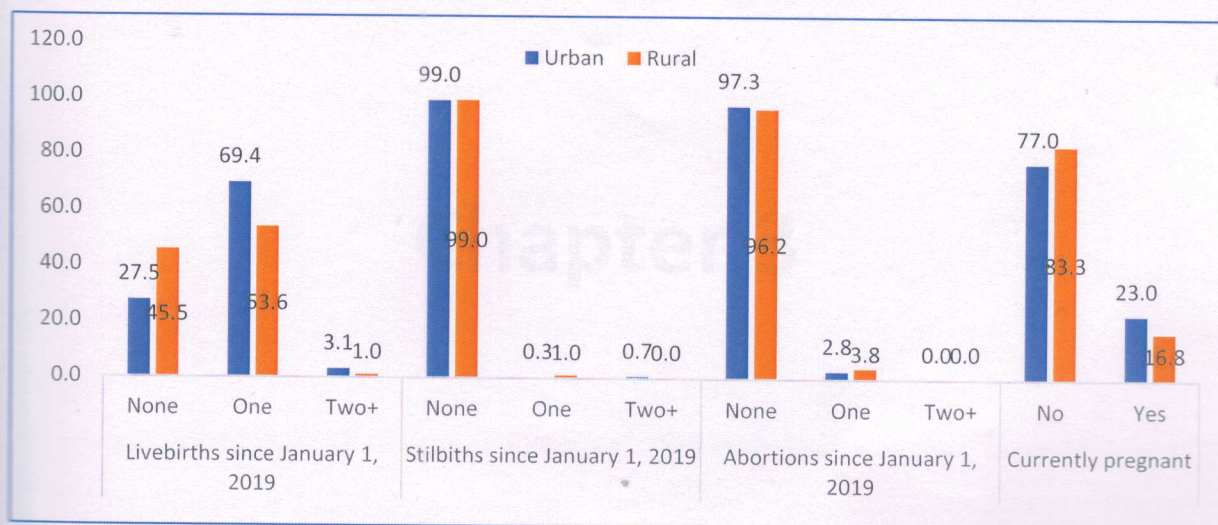
2.3 Livebirths, Abortions, Stillbirths during the reference period and current pregnancy status

Table 2.7 and Figure 2.4 provide distribution of women who had one or more livebirths, stillbirths and abortion during the past two years preceding the survey date, that is, from January 1, 2019 to the date of survey. The pregnancy status of the women at the time of survey is also included in the table. This information is useful for gathering information on subsequent sections on utilization of reproductive and child health care services including nutrition during the pandemic. 64.8% of women had at least one live birth during the reference period and 1% had one or more still births. Higher percentages of urban women (69.4%) than rural women (53.6%) had one or more live births. Little more than 3% of the women reported that they had abortions during the reference period. 20.4% of women were pregnant at the time of survey; notably higher in the urban areas (23.0%) than the rural areas (16.8%).

Table 2.7: Number of live births, stillbirths, abortions women had during January 2019 to survey date and her current pregnancy status, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Livebirths since January 1, 2019			
None	27.8	45.5	35.2
One	69.4	53.6	62.8
Two or more	2.8	1.0	2.0
Stillbirths since January 1, 2019			
None	99.0	99.0	99.0
One	0.3	1.0	0.6
Two or more	0.7	0.0	0.4
Abortions since January 1, 2019			
None	97.3	96.2	96.8
One	2.8	3.8	3.2
Two or more	0.0	0.0	0.0
Currently pregnant			
No	77.0	83.3	79.6
Yes	23.0	16.8	20.4
Total (%)	100	100	100
Total eligible women surveyed	291	209	500

Figure 2.4: Percentages of women who reported one or more live births, stillbirths, abortions during January 2019 to survey date and current pregnancy status for rural and urban areas, Pune (2020-21)



Chapter 3

Utilization of the maternal health care services by mothers for live births

Chapter 3

Utilization of the maternal health care services by mothers for live births

The present study obtained information from the eligible women about the utilization of health care -services during pregnancy, delivery and during the post-partum period from women who had one or more live birth during the two years prior to the survey (from January 1, 2019). The questions covered range of issues – starting from registration of pregnancy, early registration, number of antenatal care visits, various services received by the women during antenatal, place of service, complications experienced and treatment seeking for complications, difficulties faced by the women in seeking services during antenatal, natal and post-natal period etc. Information was also collected about services provided by the health workers, especially ASHAs during pandemic and if women received supplementary nutrition from the anganawadi centers/ICDS. This chapter presents results for all live births that occurred during the reference period.

3.1 Background characteristics of the live births

The Table 3.1 and Figure 3.1 provide distribution of all live births enumerated during the reference period by selected maternal and household background characteristics for Pune district. A total of 336 live births enumerated (65%; 219 in urban areas and 35%; 117 in the rural areas) among 500 surveyed eligible women. 28.3% of the live births in Pune district occurred in 2019, 67.0% in 2020 and 4.8% in 2021. 43.5% of the live births were male and 56.6% female. Distribution of male births and female births was almost same for rural and urban areas. About 60% of the births were of first birth order, 33.6% of the births were of second birth order and only 7% were of birth order three or higher (more in rural areas than the urban areas; 8.6% and 5.9%, respectively). Only 3.3% of total births were pre-term births (gestation of less than nine months). Share of pre-term births was higher in the rural areas (5.1%) compared to the urban areas (2.3%).

The distribution of birth was equiproportional among women in low, medium and high wealth tertile households. Thirty-four percent of the births occurred to the mothers in the poor households and about 33% in the rich households. In urban areas share of birth in rich households is higher compared to the rural areas (45.7% and 9.4%, respectively). In contrast, 74.4% of the births in the rural areas were in the poor households, whereas their share in

urban areas was 12.3%. With respect to maternal age, 37.2% of all births took place among younger mothers (aged 15-24 years) and 59.2% were among mothers (aged 25-34 years). Share of births among young mothers was considerably lower in the urban areas (32.4%) than in the rural areas (46.2%). Majority of the births belong to Hindu mothers (83.6%). In urban areas, share of births among Muslim mothers was slightly higher than in the rural areas (2.7% as against of 0.9%). Whereas the share of other religions was almost double (16.4% in urban areas) as compared to 7.7 % in rural areas. Moreover, about fifty-eight percent of the births were among mothers of general castes followed by scheduled caste (20.8%). More than 53% of the births were among mothers who had completed 10 to 12 years of schooling and 32.1% among mother with more than 12 years of schooling.

Table 3.1: Distribution of livebirth during the reference period by year of birth, gender, birth order and duration of gestation and a few maternal characteristics by place of residence, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Year of birth			
2019			
2020	29.7	25.6	28.3
2021	64.4	71.8	67.0
	5.9	2.6	4.8
Gender			
Boy			
Girl	42.9	44.4	43.5
	57.1	55.6	56.6
Birth Order			
One			
Two	59.4	59.8	59.5
Three or higher	34.7	31.6	33.6
	5.9	8.6	6.9
Completed months of pregnancy at birth			
7 months			
8 months			
9 months	2.3	5.1	3.3
	97.7	94.9	96.7
Household wealth tertile			
Low			
Medium	12.3	74.4	33.9
High	42.0	16.2	33.0
	45.7	9.4	33.0
Maternal age			
15-24			
25-34	32.4	46.2	37.2
35-49	62.6	53.0	59.2
	5.0	0.9	3.6
Maternal religion			
Hindu			
Muslim	80.8	88.9	83.6
Christian	2.7	0.9	2.1
Other Religions	0.0	2.6	0.9
	16.4	7.7	13.4
Maternal caste			

Scheduled castes	26.0	11.1	20.8
Scheduled tribes	2.7	7.7	4.5
Other backward classes	14.6	21.4	17.0
Others (General castes)	56.6	59.8	57.7
Maternal education			
Fewer than 5 years incl. never went to school	3.2	5.1	3.9
5 to 9 years	9.1	13.7	10.7
10 to 12 years	48.4	62.4	53.3
More than 12 years	39.3	18.8	32.1
Overall (%)	100	100	100
Number of live births	219	117	336

Figure 3.1: Percent distribution of the births during the reference period by background characteristics, Pune (2020-21)

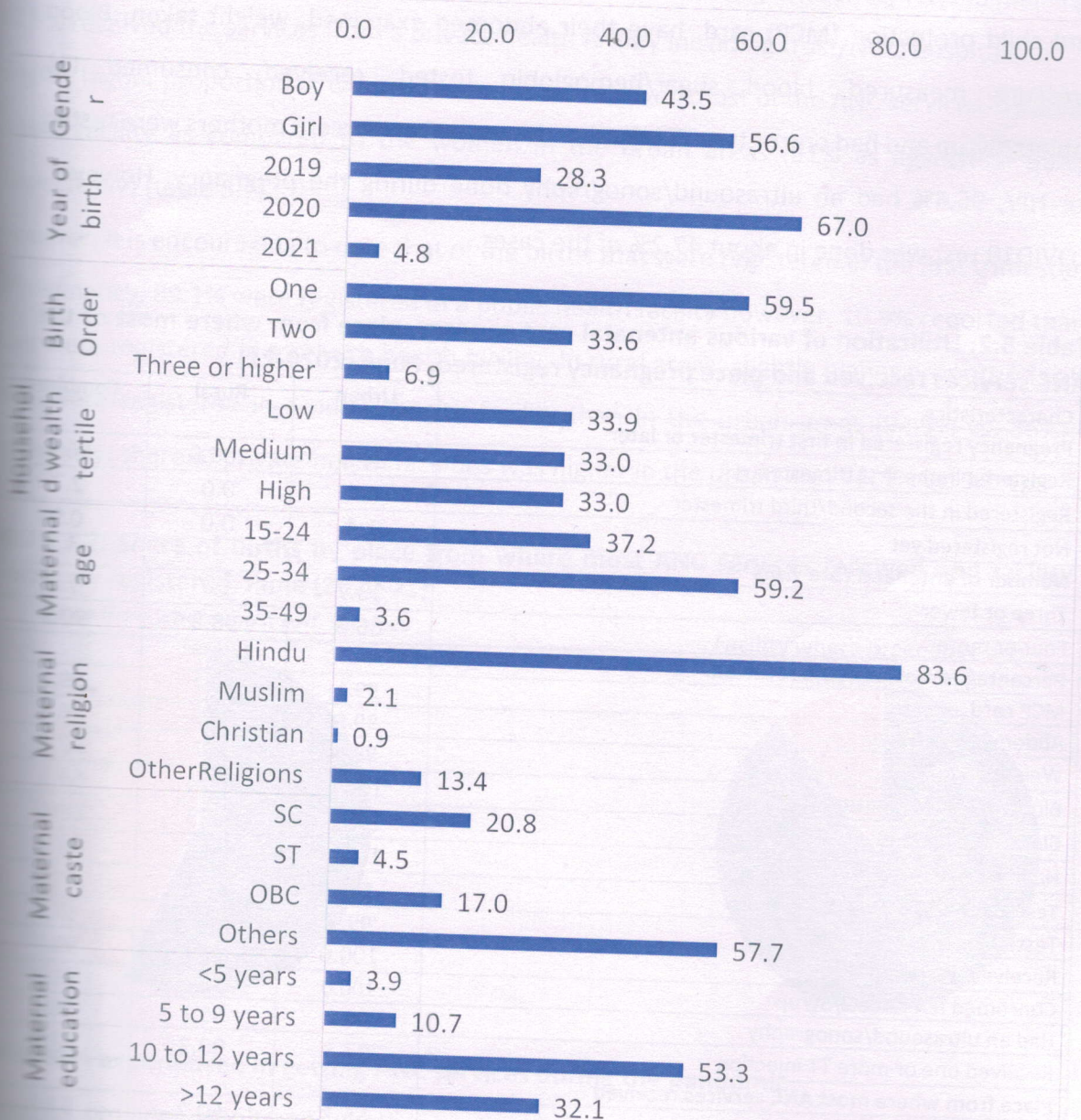


Table 3.2 provides information on several antenatal care services utilized by the mothers during pregnancy for births during the reference period.

Table depicts that more than Ninety-six per cent pregnancies were registered in the first trimester. It is encouraging to note that in rural areas 100% pregnancies were registered in the first trimester.

About Ninety-one percent of mothers received four or more antenatal care visits during pregnancy, whereas percentage was 98.3% in rural area as compared to urban area (86.3%). Nonetheless, in less than 2% of mothers in the rural areas made three or fewer ANC visits during the pregnancy. About all the mothers (98.8%-99.7%) received a mother and child protection (MCP) card, have their abdomen examined, weight taken, Blood pressure measured, blood sugar/hemoglobin tested, received, consumed IFA tablets/Syrup and had one or two TT injection. Ninety-seven percent mothers were tested for HIV, 96.4% had an ultrasound/sonography done during the pregnancy. However, COVID19 test was done in about 47.2% of the cases.

Table 3.2: Utilization of various antenatal care services, place from where most of the ANC services received and place pregnancy registered, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Pregnancy registered in first trimester or later			
Registered in the first trimester	94.5	100.0	96.4
Registered in the second/third trimester	4.1	0.0	2.7
Not registered yet	1.4	0.0	0.9
Number of antenatal care visits			
Three or fewer	13.7	1.7	9.5
Four or more	86.3	98.3	90.5
Percentages mothers who received:			
MCP card	99.1	99.2	99.1
Abdomen examines	99.5	98.3	99.1
Weight taken	98.6	99.2	98.8
Blood pressure measured	100.0	97.4	99.1
Blood sugar tested	100.0	98.3	99.4
Haemoglobin tested	100.0	96.6	98.8
Tested for COVID19	57.8	27.4	47.2
Tested for HIV	99.1	94.0	97.3
Received IFA tablets/Syrup	100.0	99.2	99.7
Consumed IFA tablets/Syrup	100.0	99.1	99.7
Had an ultrasound/sonography	96.8	95.7	96.4
Received one or more TT injection	97.3	98.3	97.6
Place from where most ANC services received			
Public health facility incl. ICDS center	55.3	60.7	57.1
Private facility, service providers incl. NGO/Trust	44.8	39.3	42.9
Registered pregnancy, place pregnancy registered			

Public health facility incl. ICDS center	86.0	94.9	89.1
Private facility, service providers incl. NGO/Trust	14.0	5.1	10.9
Number of live births	219	117	336

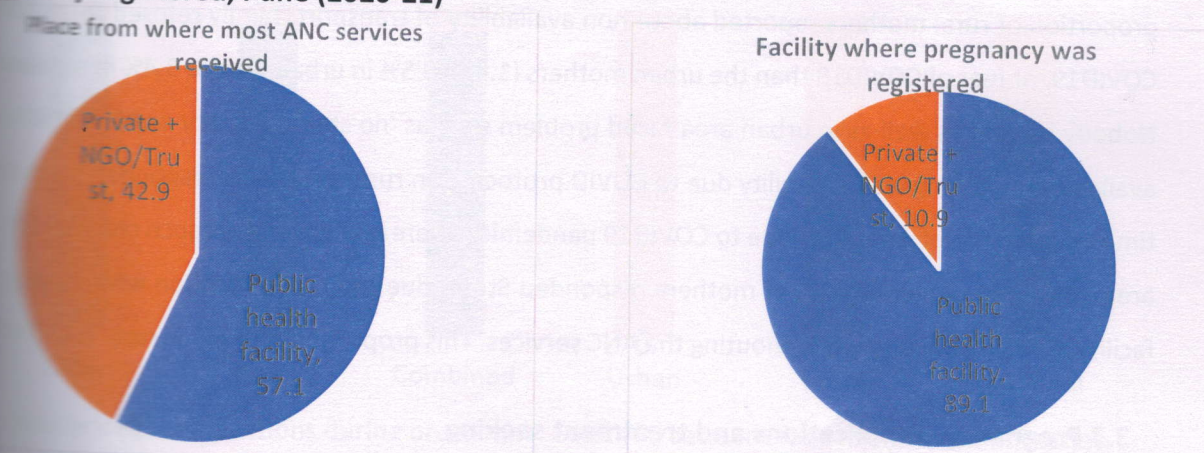
Place of ANC services

Information have been collected about the place from where they received most of the ANC services during pregnancy for all births during the reference period. The data shows that of all births which registered pregnancy, 57.1% received most of the ANC services from a public health facility (including State/municipality hospital, district hospital, community health center, primary health center, health sub-center, and ICDS/anganwadi center). Remaining 42.9% received the services from a private health facility including trust/NGO hospitals.

Slightly higher proportion of women in rural areas received most of the ANC services in public health facility as compared to the women in the urban areas (61% as against of 55%, respectively) (table 3.2).

However, it is encouraging to note that of the births that were registered in the first trimester of pregnancy, 89.1% were registered in a public health facility however, 10.9% reported that they were registered in a private health facility. In rural areas, slightly higher proportions of births were registered in a public health facility than in the urban areas (94.9% vs. 86%); conversely, share of private health facilities was higher in the urban areas (14% vs. 5.1%).

Figure 3.2: Share of births by place from where most ANC services received and facility pregnancy registered, Pune (2020-21)



Difficulties experienced in getting ANC services during the pandemic

Table 3.3 provides results on whether mothers experienced any difficulties while seeking antenatal care during the pandemic and if so, what was the nature of difficulty experienced.

In overwhelmingly large proportions of mothers did not experience any difficulty (96.7%).

Table 3.3: Difficulties experienced by the mothers in seeking ANC during the pregnancy due to pandemic, how often mothers faced difficulties and nature of difficulty, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Frequency of experiencing difficulties in seeking ANC			
Every time/Most of the time	0.0	4.3	1.5
Sometimes/Rarely	2.3	0.9	1.8
Never	97.7	94.9	96.7
Nature of difficulty experienced (%)			
No transport facility	1.4	3.4	2.1
Family did not allow due to COVID19	0.5	3.4	1.5
Family refused to accompany due to COVID19 fear	0.5	3.4	1.5
Facility closed	0.0	0.9	0.3
No staff at facility	0.0	0.0	0.0
Staff refused to provide service due to COVID19	0.5	0.9	0.6
ASHA/ANM not available	0.0	0.0	0.0
No money	0.0	0.9	0.3
Health facility converted to COVID hospital	0.0	0.9	0.3
Too much time for travel due to COVID restrictions/checks	0.0	4.3	1.5
Too long wait at facility due to COVID protocol	0.0	0.0	0.0
Stressed due to strict COVID protocols	0.0	4.3	1.5
Stress due to COVID infection while waiting at facility	0.0	3.4	1.2
Number of live births	219	117	336

Nonetheless, only 1.5% mothers reported that they faced difficulty every time /most of the time they sought ANC during the pandemic; slightly higher in rural areas than urban one. Another 1.8% mothers experienced difficulty sometimes or rarely. Non-availability of the transport to reach facility for the ANC was the most common difficulty experienced by the mothers (2.1%). Once again, higher proportion of rural mothers reported about non availability of transport, family refused to go due to COVID19, or fear of COVID19 than the urban mothers (1.4 to 0.5% in urban area to 3.4% in rural area). Nobody in rural as well as in urban area faced problem such as 'no staff at facility or ASHA/ANM not available or too long wait at facility due to COVID protocol'. In rural area 4.3% respondents reported time taken to travel was much due to COVID19 pandemic, whereas there was no such reason in urban area. Moreover, overall 1.2% of mothers responded Stress due to COVID infection while waiting at facility as main difficulty while seeking the ANC services. This proportion is larger in rural area (3.4%).

3.3 Pregnancy complications and treatment seeking

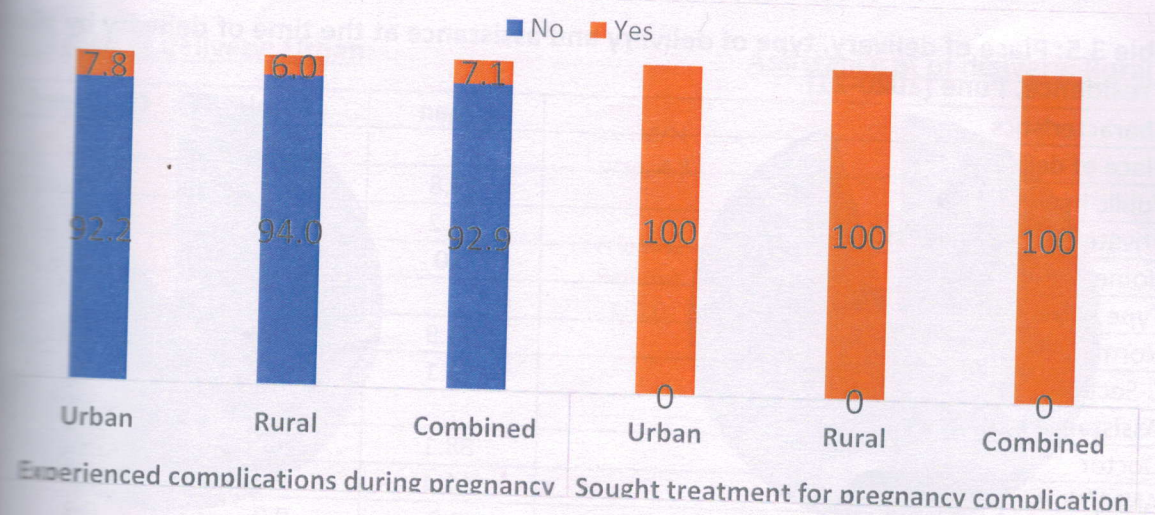
Table 3.4 and Figure 3.3 provide results on whether the mothers experienced any complication when they were pregnant, type of complications experienced and if they sought treatment for complication(s). The data suggests that 7% (slightly higher in urban areas – 8%) of mother experienced one or more pregnancy complication during the pregnancy. Overall,

in 3.6% cases, mothers suffered from swelling on leg, body, face followed by excessive vomiting (3.3%), Convulsion not from fever (1.8%), Weakness / Excessive fatigue (1.2%).

Table 3.4: Experienced pregnancy complication, type of complication experienced and treatment sought for pregnancy complication, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Experienced any complications during pregnancy			
No	92.2	94.0	92.9
Yes	7.8	6.0	7.1
Type of pregnancy complication (%)			
Difficulty with vision during daylight	0.5	0.9	0.6
Convulsions (not from fever)	1.4	2.6	1.8
Swelling on legs, body, face	3.7	3.4	3.6
Bleeding / Spotting	0.9	0.9	0.9
Excessive vomiting	2.7	4.3	3.3
Headache	0.9	0.0	0.6
Weakness / Excessive fatigue	0.9	1.7	1.2
Weak or no fetus movement	0.0	0.0	0.0
Abnormal fetus position	0.0	0.0	0.0
Vaginal discharge	0.9	0.0	0.6
Abdominal pain	0.0	0.9	0.3
Other complications	1.8	0.9	1.5
Number of live births	219	117	336
Sought treatment for pregnancy complication(s)			
No	0	0	0
Yes	100	100	100
No. of births, mother experienced complication	17	7	24

Figure 3.3: Experienced pregnancy complication and sought treatment for pregnancy complication, Pune (2020-21)



Notably higher percentages of mothers suffered from excessive vomiting and Convulsions (not from fever) in the rural areas (4.3% and 2.6%, respectively) than in the urban areas (2.7% and 1.4%, respectively). Similarly, vaginal discharge and Swelling on legs, body, face was more

common in the urban areas. On the other hand, more mothers in the rural areas reported suffered from Weakness / Excessive fatigue and Abdominal pain (1.7% and 0.9%, respectively) than in the urban areas (1% or less).

All the mothers who were suffered from pregnancy complications were sought treatment for complication during pregnancy.

3.4: Natal care

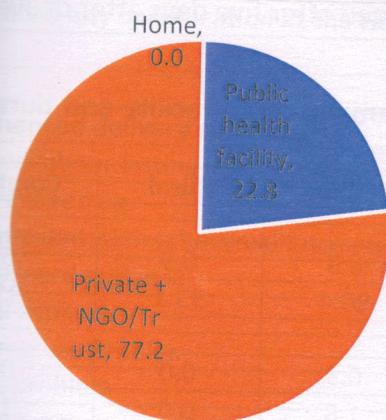
Table 3.5 and Figure 3.4 provide results on place of delivery, type of delivery and assistance at the time of delivery. Except one all the births took place in health facilities. However, while 23.5% of the births took place in a public health facility, 76.2% took place in a private health facility. Share of private facility deliveries were higher in the urban areas (77.2%) than the rural areas (74.4%). A little more than half (54.5%) of deliveries were normal; c section deliveries were (45.5%) and both normal and c section deliveries were almost same in rural and urban areas (44.4% in rural and 46.1% in urban area). About 90% of all births (88.1% in urban areas and 94.9% in the rural areas) were conducted by a doctor. However, 8.9% of all births were conducted by an ANM/Nurse midwife/LHV. Share of births assisted by nurse/midwife was higher in the urban areas (11.4%) than in the urban areas (4.3%). Only one woman in urban areas delivered at home and she cited 'No nearby facility' as the most important reason for not delivering at a health facility.

Table 3.5: Place of delivery, type of delivery and assistance at the time of delivery by place of residence, Pune (2020-21)

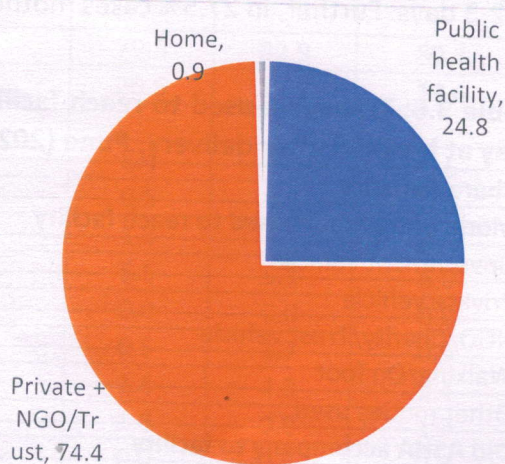
Characteristics	Urban	Rural	Combined
Place of delivery			
Public health facility	22.8	24.8	23.5
Private health facility incl. NGO/Trust	77.2	74.4	76.2
Home	0.0	0.9	0.3
Type of delivery			
Normal	53.9	55.6	54.5
C-Section	46.1	44.4	45.5
Assistance at delivery			
Doctor	88.1	94.9	90.5
ANM/Nurse/LHV	11.4	4.3	8.9
Traditional Birth Attendant	0.0	0.9	0.3
Friends / Relatives	0.5	0.0	0.3
Overall	100	100	100
Number of live births	219	117	336

Figure 3.4: Place, type and assistance at delivery by place of residence, Pune (2020-21)

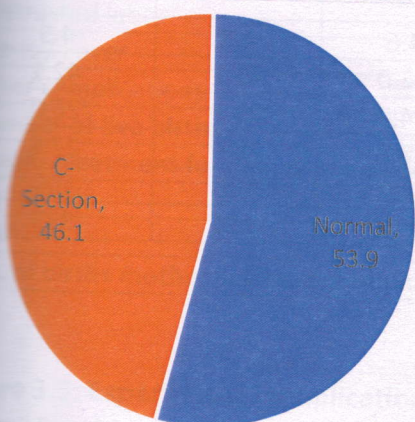
Place of delivery: Urban



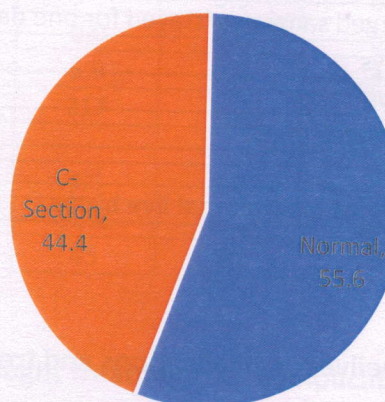
Place of delivery: Rural



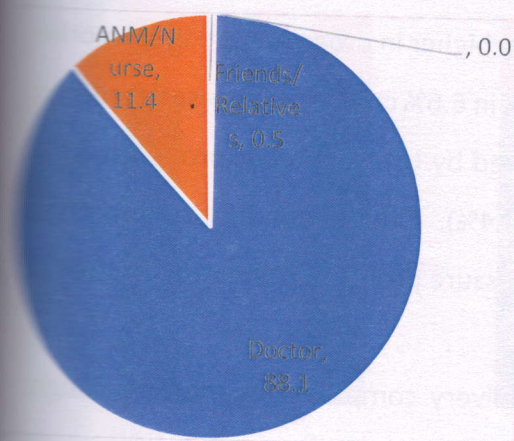
Type of delivery: Urban



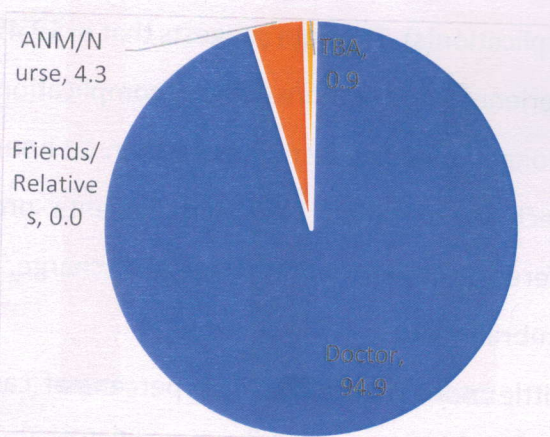
Type of delivery: Rural



Assistance at delivery: Urban



Assistance at of delivery: Rural



The results in Table 3.6 show that a private vehicle was used to reach health facility for delivery in majority of the cases (91.3%). Public transport was used in only 6.9% of the cases. Private vehicle use was slightly higher in the rural areas (93.1%) as compared to urban areas

(90.4%). ASHA accompanied mother to the hospital in about 21.8% of the cases; higher in rural areas (31.9%). In about 42% of the cases mother was discharged from the health facility in 2-3 days. Further, in 27.5% cases mother was discharged after five days after delivery.

Table 3.6: Transport used to reach facility, ASHA accompanied to facility and duration of stay at hospital after delivery, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Mode of transport used to reach facility			
Government vehicle	6.9	6.9	6.9
Private vehicle	90.4	93.1	91.9
NGO/Charity/Trust vehicle			
Walking/On foot	0.9	0.0	0.6
Other modes used	1.8	0.0	1.2
Did ASHA accompany to facility			
No	83.6	68.1	78.2
Yes	16.4	31.9	21.8
Duration of stay in the health facility			
Discharged same day/stayed for one day	4.6	4.3	4.5
2- 3 days	42.0	42.2	42.1
4-5 days	24.7	28.5	26.0
More than 5 days	28.8	25.0	27.5
Overall	100	100	100
Number of Institutional live births	219	116	335

3.5: Delivery complications and treatment seeking

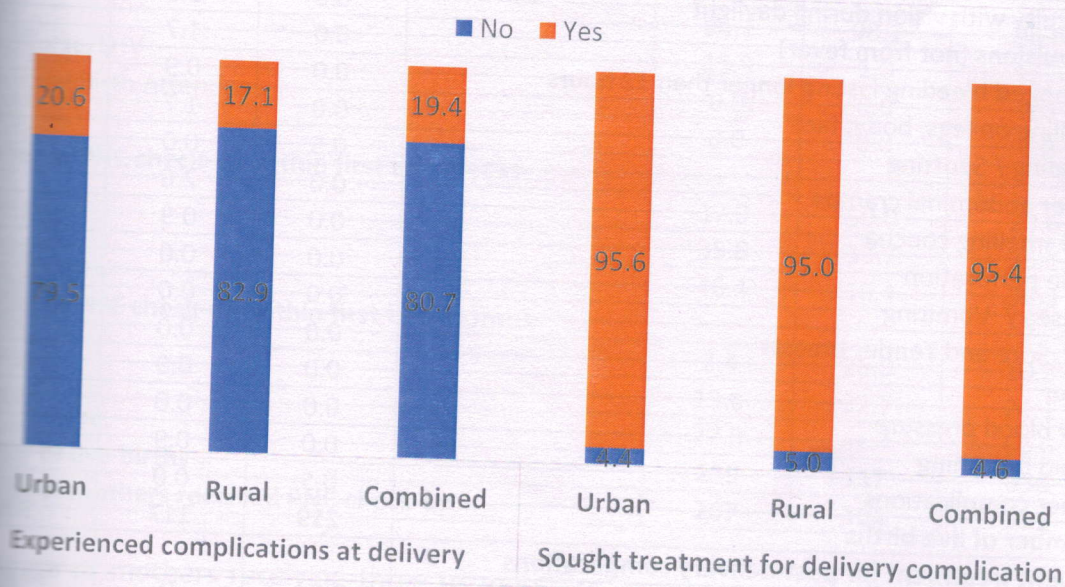
Table 3.7 provides results on whether the mothers experienced any complication at the time of delivery, type of complications experienced and if they sought treatment for complication(s). The data suggests that in 19.4% (slightly higher in urban areas – 21%) mothers experienced one or more delivery complication. Overall, in 6.6% cases, mothers suffered from prolonged bleeding lasting more than 12 hours, followed by Umbilical cord prolapsed (5%), Breech presentation (3%) and Placenta problem (2.4%). Other complications mothers suffered at delivery were – Vaginal discharge, Blood pressure problem, premature rupture of membrane, etc.

In little more than ninety-five percent of cases of delivery complications mothers sought treatment.

Table 3.7: Experienced complication at delivery, type of complication experienced and sought treatment for delivery complication for livebirths, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Experienced any complication at the time of delivery			
No	79.5	82.9	80.7
Yes	20.6	17.1	19.4
% Experienced delivery complication(s)			
Prolonged labour lasting longer than 12 hours	6.4	6.8	6.6
Excessive bleeding	0.5	0.9	0.6
Breech presentation (abnormal fetus position)	1.8	5.1	3.0
Umbilical cord prolapse	6.5	5.1	6.0
Perinatal asphyxia	0.0	0.0	0.0
Blood pressure problem	0.5	1.7	0.9
Placenta problem	1.4	4.3	2.4
Vaginal discharge	1.8	0.0	1.2
Weak/No fetus movement	0.0	0.9	0.3
Premature rupture of membranes	1.8	0.9	1.5
Preterm labor	0.0	0.9	0.3
Obstructed labor	0.0	0.9	0.3
Sepsis / Fever	0.0	0.0	0.0
Other complications	5.9	0.0	3.9
Number of live births	217	117	336
Sought treatment for delivery complications			
No	4.4	5.0	4.6
Yes	95.6	95.0	95.4
% of births mother suffered complication	45	20	65

Figure 3.5: Experienced complications at delivery and sought treatment for complication by place of residence, Pune (2020-21)



3.6 Post-delivery complications and treatment seeking

Table 3.8 provides results on whether the mothers experienced any complication post delivery during post-partum, type of complications experienced and if they sought treatment for complication(s). The data suggests that in 3% (higher in rural areas – 6.8%) mothers experienced one or more post-delivery complication. Overall, in 0.9% of cases mother suffered from lower abdominal cramps followed by Convulsions and swelling on legs, body, face (0.6%) of cases. Other complications mothers suffered during post-partum period were – prolonged bleeding lasting longer than 12 hours, bleeding/spotting, foul smelling, fever, rapid breathing, etc.

Considerably higher percentage of mothers in the rural areas (2.6%) reported that they suffered lower abdominal cramp. Also 1.7% mothers reported convulsions (not from fever) and swelling on legs, body, face as post-delivery complication. It is encouraging to note that all mothers who suffered from a post-delivery complication sought treatment for the complication.

Table 3.8: Experienced complication after delivery during post-partum, type of complication experienced and sought treatment for complication for livebirths, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Experienced any complication post delivery			
No	99.1	93.2	97.0
Yes	0.9	6.8	3.0
% Experienced post-delivery complication(s)			
Difficulty with vision during daylight	0.0	0.0	0.0
Convulsions (not from fever)	0.0	1.7	0.6
Prolonged bleeding lasting longer than 12 hours	0.0	0.9	0.3
Swelling on legs, body, face	0.0	1.7	0.6
Bleeding / Spotting	0.5	0.0	0.3
Lower abdominal cramps	0.0	2.6	0.9
Foul smelling coucha	0.0	0.9	0.3
Urine perforation	0.0	0.0	0.0
Nausea / Vomiting	0.0	0.0	0.0
Red, Sore and Tender breasts	0.0	0.0	0.0
Fever	0.0	0.9	0.3
Low blood pressure	0.0	0.0	0.0
Rapid breathing	0.0	0.9	0.3
Other complications	0.5	0.0	0.3
Number of live births	219	117	336
Sought treatment for post-delivery complications			
No	0	0	0
Yes	100	100	100
No. of births, mother suffered complication	2	8	10

3.7: Health checkups during Post-partum period

Table 3.9 provides results on health checkups for mother during post-partum, place of health checkup, person conducted health checkup and total number of health checkups within the first two weeks and two months after delivery. It is encouraging to note that nearly 93% of the mothers had their first post-natal checkup within 24 hours of delivery. About eight percent (higher in the rural areas, 11.1%) didn't receive any PNC checkup by the time data was collected. Further, 73% of the mothers had their first post-natal checkup at a private health facility and 27% at a public health facility. In 89% of the cases, mother was checked by the doctor and remaining 11.3% by a nurse/midwife. Higher proportion of the mothers in urban areas reported that they received their first post-natal checkup from a nurse/midwife than in the rural areas (16% versus 2%).

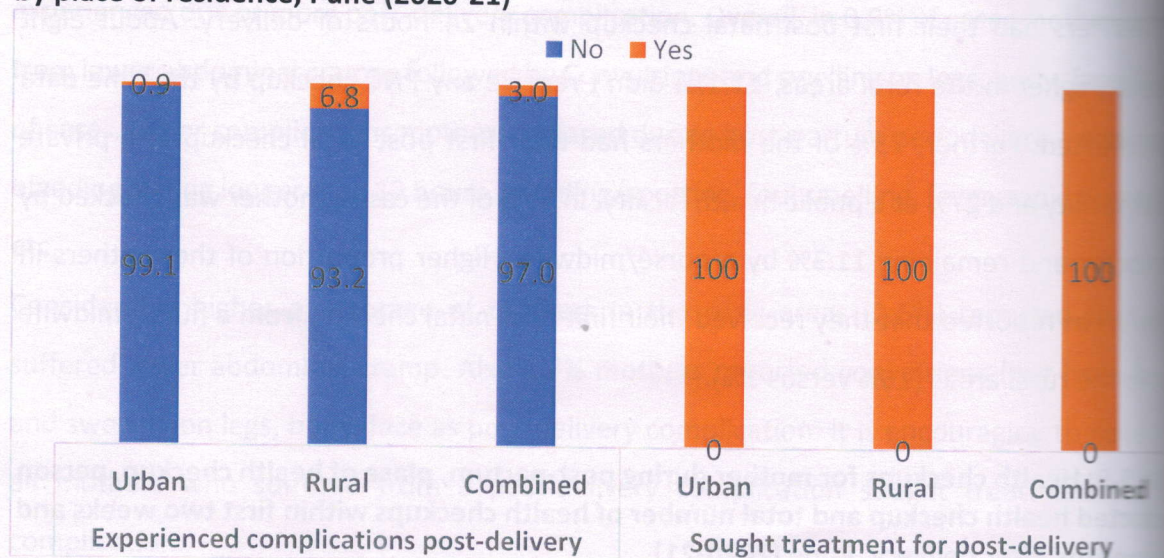
Table 3.9: Health checkups for mother during post-partum, place of health checkup, person conducted health checkup and total number of health checkups within first two weeks and two months after delivery, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Time since delivery mother had first PNC check-up			
Within 24 hours	94.5	88.9	92.6
After 24 hours	0.0	0.0	0.0
Did not have PNC check-up	5.5	11.1	7.4
Place of first post-delivery PNC check-up			
Public health facility incl. ICDS centre	25.1	30.8	27.0
Private facility, service providers incl. NGO/Trust	74.9	69.2	73.0
Person who did first post-delivery PNC check-up			
Doctor	84.1	98.1	88.8
Nurse/LHV	15.9	1.9	11.3
Traditional Birth Attendant	0.0	0.0	0.0
Others	0.0	0.0	0.0
Number of PNC check-up within first two weeks			
One	17.9	50.0	28.6
Two	35.8	33.7	35.1
Three or more	46.4	16.4	36.3
Number of PNC check-up within first two months			
One	2.4	26.0	10.3
Two	19.8	32.7	24.1
Three or more	77.8	41.4	65.6
Number of live births	219	117	336
Number of mothers received PNC check-up	207	104	311

Percentage of mothers receiving three or more post-natal care within first two weeks is higher (36.3%) than receiving one or two post-natal checkups (28.6% & 35.1%). Also percentage of mothers receiving post-natal checkup within first two months is higher (65.6%)

than receiving one or two post-natal checkups within first two months (10.3 & 24.1 percent respectively). Majority of the mothers from urban area (77.8%) had three or more post-natal checkups within first two months as compared rural areas 41.4%.

Figure 3.6: Experienced complications post-delivery and sought treatment for complications by place of residence, Pune (2020-21)



3.8: Money spent on delivery, benefits received under JSY

Table 3.10 provides results on money spent on delivery, received JSY benefits and amount received under JSY by the mothers. An average of Rs. 25117 was spent on delivery; higher in the urban areas (Rs. 26897/-) compared to the rural areas (Rs. 21,772/-). In about 15% of the cases (11.9% in urban areas and 20.5% in rural areas), delivery was free and families did not spend any money on it. An amount of more than 5000 was spent in as many as 75% of births (75.8% in urban areas and 73.5% in rural areas). Very few cases, about 0.6% of the cases, mothers were unable to recall the **amount spent on delivery**. In nearly one-fifths of cases, mothers had not received JSY benefits. More rural mothers reported not receiving JSY benefits than the urban mothers (84.6% versus 75.3%). Among mother who received JSY benefits, they got an average of Rs. 1596. Majority of the mother received amount in slab of above six hundred to fourteen hundred rupees in cash benefit, much higher proportions in the rural areas (55.6%) than the urban areas (48.2%). Forty-eight per cent of mothers (52% in urban areas and 39% in the rural areas) received more than 1400.00 rupees under JSY.

Table 3.10: Money spent on delivery, received JSY incentives and amount received under JSY, Pune (2020-21)

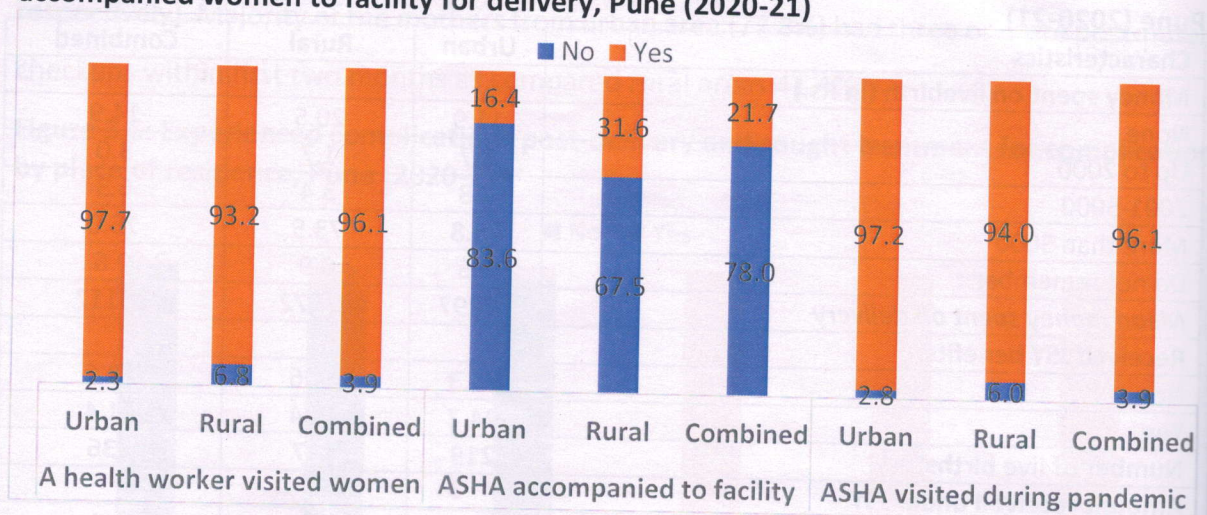
Characteristics	Urban	Rural	Combined
Money spent on livebirth (in Rs.)			
None	11.9	20.5	14.9
Up to 2000	3.7	1.7	3.0
2001-5000	7.8	3.4	6.3
More than 5000	75.8	73.5	75.0
Cannot remember	0.5	0.9	0.6
Mean money spent on delivery	26897	21772	25117
Received JSY benefits			
Yes	75.3	84.6	78.6
No	24.7	15.4	21.4
Number of live births	219	117	336
Amount received under JSY			
Up to 600 Rs.	0.0	5.6	1.4
601 to 1400 Rs.	48.2	55.6	50.0
More than 1400 Rs.	51.9	38.9	48.6
Mean money received under JSY	1467	1983	1596
% of birth for which mothers received JSY money	54	18	72

3.3.3 Contact with the health worker/ASHA

Table 3.11 provides results on woman's contact with the health worker and services they received from the health worker when contacted during the pregnancy/delivery or post-delivery. Overwhelmingly large proportions of the mothers (96%) reported that a health worker or an ICDS workers has visited them during the pregnancy. Further, majority of the mother (91%) also reported that the health worker visited them during their pregnancy and 88% visited after the delivery. However, about 38% of the mothers reported that a health worker visited them at the time of delivery.

The urban-rural gap was wider for health worker visit at the time of delivery. Majority of the mothers (97%) reported that the ASHA advised them. Relatively fewer mothers (13) reported that ASHA accompanied them to the facility and another 11% reported that the ASHA arranged vehicle for them during the pregnancy when needed. In 96% of the cases, ASHA accompanied the mothers to the hospital for delivery.

Figure 3.7: Health worker, ASHA visit to women during pregnancy or pandemic and whether accompanied women to facility for delivery, Pune (2020-21)



The information was also collected on whether ASHA contacted mothers and if they contacted ASHA for any help related to birth of the child during the pandemic and whether ASHA helped them. Nine-six percent mothers reported that the ASHA visited them during the pandemic to check about the pregnancy/childbirth related matters. Proportions of mothers who ASHA visited by was much higher in the urban areas (97.2%) than the rural areas (94%). 92% of the mothers contacted ASHA for help during the pandemic and also received help from her. Nonetheless, there were a few mothers (0.9%) who reached out to ASHA but did not get needed help. Further, 7.4% of the mothers reported that they did not reach out to ASHA for any help related to the pregnancy/childbirth during the pandemic.

Almost all mothers (96.8%) reported that ASHA advised them when they contacted her and 81.8% mothers got medicines from them. Further, 10.7% of the mothers who contacted ASHA during pandemic reported that ASHA accompanied them to the facility. About 6% of the mothers reported that ASHA arranged a vehicle to go to facility.

Table 3.11: Health worker(s) visited mother, mother contacted ASHA for pregnancy related help and type of help ASHA provided during the pandemic, Pune (2020-21)

Characteristics	Urban	Rural	Combined
ASHA/ANM/AWW/TBA visited during pregnancy			
No	2.3	6.8	3.9
Yes	97.7	93.2	96.1
% visited by the health worker:			
During pregnancy	92.2	88.9	91.1
At the time of delivery	44.8	25.6	38.1
After delivery	73.5	59.8	68.8
Type of help ASHA provided during pregnancy			
Arranged vehicle to go to facility	12.3	9.4	11.3

Accompanied to facility	10.5	17.1	12.8
Gave advice	92.7	91.5	92.3
Other help	4.1	3.4	3.9
ASHA visited during pandemic			
No	2.8	6.0	3.9
Yes	97.2	94.0	96.1
ASHA accompanied to health facility for delivery			
No	83.6	67.5	78.0
Yes	16.4	31.6	21.7
Mother contacted ASHA for help and if ASHA helped			
Contacted ASHA and got help	93.6	88.0	91.7
Contacted ASHA, did not get help	1.4	0.0	0.9
Did not contact ASHA	5.0	12.0	7.4
Number of live births	219	117	336
Type of help ASHA provided when contacted			
Got medicine	85.4	74.8	81.8
Arranged vehicle to go to facility	4.9	6.8	5.5
Accompanied to facility	9.8	12.6	10.7
Gave advice	97.6	95.2	96.8
Number of births, mother contacted ASHA	208	103	311

3.10 Supplementary nutrition

Table 3.12 provides results on distribution of the live births by whether mothers received supplementary nutrition during pandemic from the Anganwadi and the reason if they did not receive the supplementary nutrition. Nearly 28% of the mothers reported that they received supplementary nutrition almost every day from the ICDS during the pandemic when they were pregnant and another 28% got it on most of the days. Nonetheless, 35.1% of the mothers reported that they rarely/never received the supplementary nutrition and 9.5% received for fewer than half of the days. The mothers who reportedly rarely/never received the supplementary nutrition were further asked about the reason for the same. Of those who rarely/never received supplementary nutrition majority of the mothers (72%) reported other reasons, whereas 15.34% mothers reported they were not allowed by their families to go to AWC due to COVID19 and 9.3% reported cited the reason as ICDS/AWC closed due to COVID-

Post-delivery complications were more common among rural mothers, younger mothers, and from mothers from general caste than their respective counterparts. Finally, higher percentages of rural mothers, and from medium households received JSY money than their respective counterparts.

Chapter 4

Utilization of the maternal health care services during currently pregnancy, abortion and stillbirth

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Over the past few decades, the Indian government has heavily placed its emphasis and promoted maternal and child health services extensively in order to reduce maternal and childhood morbidity and mortality by enhancing level of utilization of services including nutrition related services. The main objective of these efforts is to ensure a minimum level of public health services for the expectant/lactating mothers and infants and children. Last 10-15 years have particularly been important as under the national health mission several programs and interventions have been launched to curtail the higher childhood and maternal morbidity and mortality rates. The antenatal care (ANC) refers to pregnancy-related health care provided by a doctor or a health worker in a medical facility or at home.

An important aspect of the antenatal care is to ensure monitoring of a pregnancy for any signs of complications, detect and treat the complication(s). The pregnant women with pre-existing conditions should be advised and counselled on preventive care, diet during pregnancy, delivery care, postnatal care, and other related issues. As per the current Reproductive and Child Health Program, a pregnant woman must receive two doses of tetanus toxoid vaccine, adequate amounts of iron and folic acid tablets or syrup to prevent and treat anemia, and must have a minimum of four antenatal check-ups that include testing for blood pressure, sugar levels, HIV, anemia, fetal growth etc. For the natal care, the program emphasizes on promotion of institutional deliveries and skilled birth attendance for all home deliveries where institutional deliveries are difficult. Further, the program emphasizes on the follow-up of the mother and newborn children during the post-partum period by way of having a minimum of three post-natal check of the mother and the newborn within the two months of delivery, of which first health checkup should happen within 24 hours of the delivery and by health personnel.

The public health facilities that provide health care services for maternal and child health have been substantially strengthened, especially in the rural and remote areas of the country. The female paramedical worker, auxiliary nurse midwife (ANM) and Accredited Social Health activists (ASHA) are posted at health sub-centers to provide basic maternal health, child health, and family welfare services to women and children in homes or health clinic. The

National Population Policy 2000 adopted by the Government of India in emphasizes the commitment of the government to the safe motherhood programs. The present study obtained information from the eligible women about the utilization of health care -services during pregnancy, delivery and during the post-partum period. The information was collected separately for the currently pregnant women for their currently pregnancy, abortions, stillbirths and live births among the women during the during past two years prior to the survey (from January 1, 2019). The questions covered range of issues – starting from registration of pregnancy, early registration, number of antenatal care visits, various services received by the women during antenatal, place of service, complications experienced and treatment seeking for complications, difficulties faced by the women in seeking services during antenatal, natal and post-natal period etc. Information was also collected about services provided by the health workers, especially ASHA during pandemic and if women received supplementary nutrition from the Anganwadi centers/ICDS. This chapter presents some of these aspects for the women who were pregnant at the time of data collection.

4.1 Background characteristics of the currently pregnant women

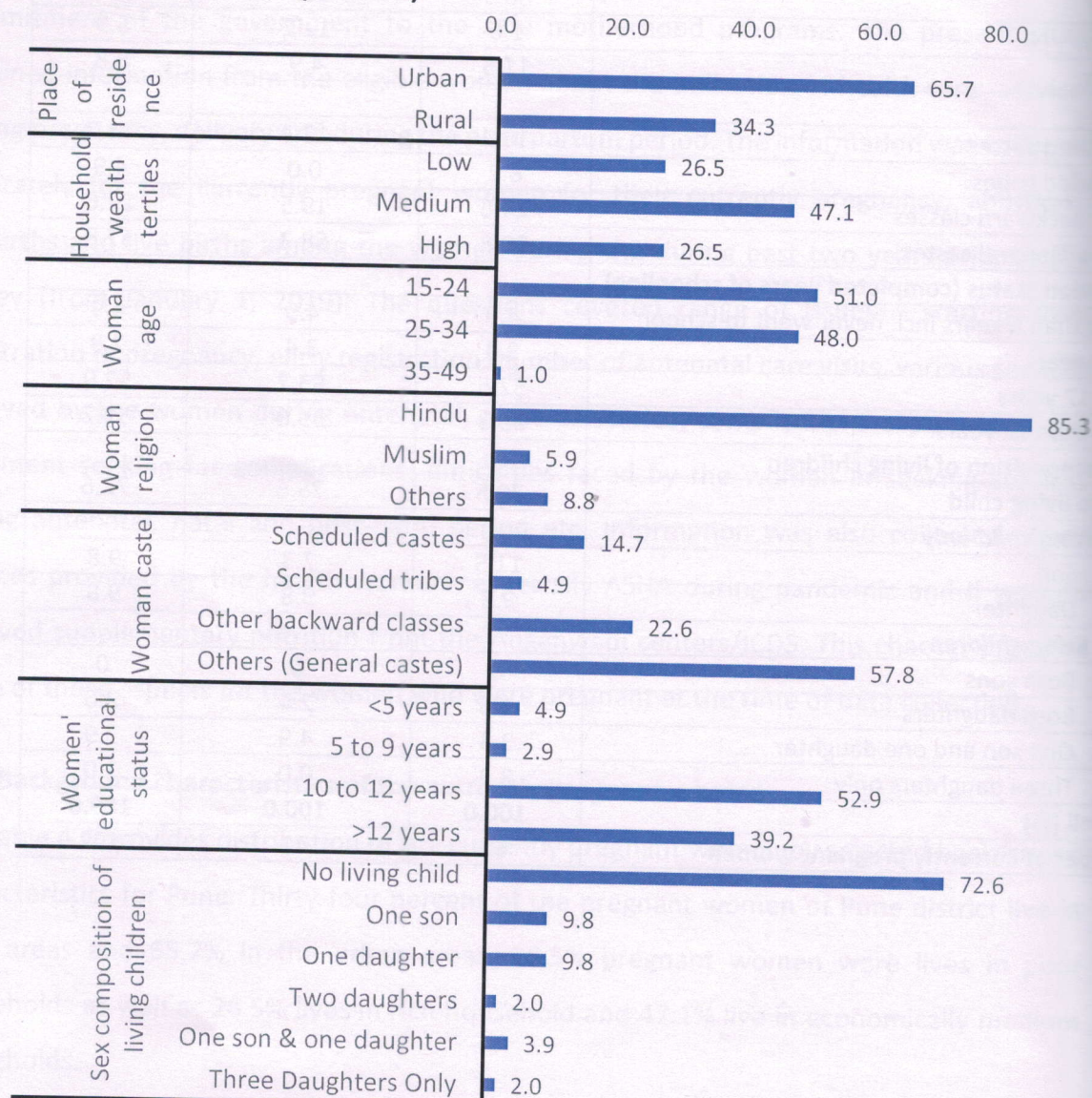
The table 4.1 provides distribution of the currently pregnant women by selected background characteristics for Pune. Thirty-four percent of the pregnant women of Pune district live in rural areas and 65.7% in the urban areas. 26.5% pregnant women were lives in poor households as well as 26.5% lives in rich household and 47.1% live in economically medium households.

Table 4.1: Background characteristics of the currently pregnant women by gestation period completed, Pune (2020-21)

Characteristics	Completed gestation (in months)		All
	<=6 months	> 6 months	
Place of residence			
Urban	65.6	65.9	65.7
Rural	34.4	34.2	34.3
Household wealth tertiles			
Low	21.3	34.2	26.5
Medium	54.1	36.6	47.1
High	24.6	29.3	26.5
Age			
15-24	47.5	56.1	51.0
25-34	50.8	43.9	48.0
35-49	1.6	0.0	1.0

Religion			
Hindu	86.9	82.9	85.3
Muslim	1.6	12.2	5.9
Others	11.5	4.9	8.8
Caste			
Scheduled castes	16.4	12.2	14.7
Scheduled tribes	8.2	0.0	4.9
Other backward classes	24.6	19.5	22.6
Others (General castes)	50.8	68.3	57.8
Education status (completed years of schooling)			
Less than 5 years incl. never went to school	4.9	4.9	4.9
5 to 9 years	3.3	2.4	2.9
10 to 12 years	52.5	53.7	52.9
More than 12 years	39.3	39.0	39.2
Sex composition of living children			
No living child			
No living child	70.5	75.6	72.6
One living child only			
Son	11.5	7.3	9.8
Daughter	9.8	9.8	9.8
Two living children			
Both sons	0	0	0
Both daughters	1.6	2.4	2.0
One son and one daughter	3.3	4.9	3.9
Three daughters only	3.3	0.0	2.0
Overall (%)	100.0	100.0	100.0
Number of currently pregnant women	61	41	102

Figure 4.1: Distribution of currently pregnant women by selected background characteristics, Pune (2020-21)



Half (51.0%) of the pregnant women belonged to 15-24 years of age. Only 1% of the pregnant women were aged 35 years or older. 85.3% pregnant women were Hindu, 6% were Muslim, and 8.8% were of other religion. 57.8% of the currently pregnant women belong to general caste category followed by other backward classes (22.6%). About fifty-three percent pregnant women have completed 10 to 12 years of schooling and another 39.2% have more than 12 years of education. There were 5% of the women who had fewer than 5 years of schooling. 72.6% of pregnant women among currently pregnant women did not had any living child at the time of survey. Ten percent of the pregnant women each have only one son or only one daughter living at the time of survey. About four percent pregnant women had one son and one daughter living at the time of survey. Two percent of the women who were

pregnant had 2 living daughters and another 2% had three living daughters at the time survey.

4.2 Antenatal care

Table 4.2 provides information on several antenatal care services utilized by the currently pregnant woman during this pregnancy.

Ninety-eight percent of the currently pregnant women registered their pregnancy in the first trimester. There were only 2% who registered their pregnancy after completing three-months of pregnancy.

Table 4.2: Utilization of various antenatal care services, place from where most of the ANC services received and place pregnancy registered, Pune (2020-21)

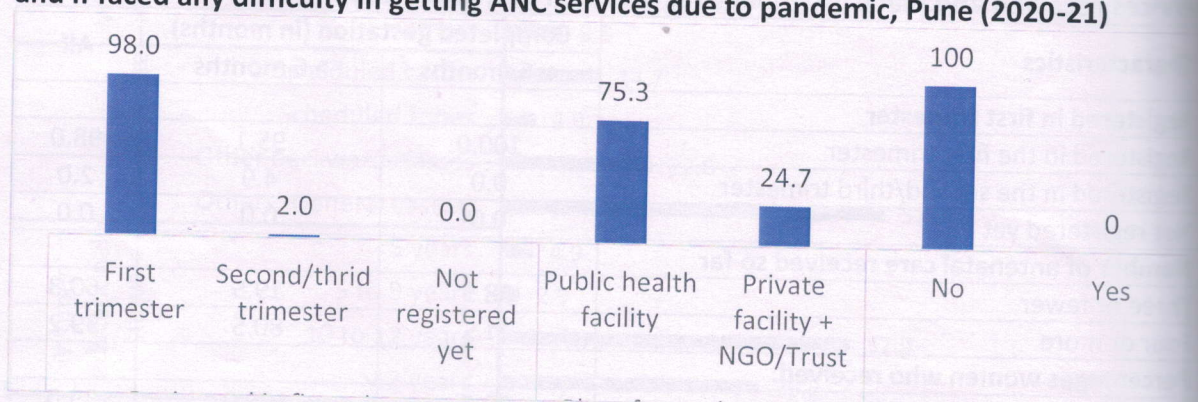
Characteristics	Completed gestation (in months)		All
	<=6 months	> 6 months	
Registered in first trimester			
Registered in the first trimester	100.0	95.1	98.0
Registered in the second/third trimester	0.0	4.9	2.0
Not registered yet	0.0	0.0	0.0
Number of antenatal care received so far			
Three or fewer	88.5	19.5	60.8
Four or more	11.5	80.5	39.2
Percentages women who received:			
MCP card	98.2	100.0	99.0
Abdomen examines	96.4	100.0	97.9
Weight taken	100.0	100.0	100.0
Blood pressure measured	96.4	97.6	96.9
Blood sugar tested	94.6	100.0	96.9
Haemoglobin tested	91.1	100.0	94.9
Tested for COVID19	16.1	39.0	25.8
Tested for HIV	66.1	92.7	77.3
Received IFA tablets/Syrup	85.7	100.0	91.8
Consumed IFA tablets/Syrup	100.0	100.0	100.0
Had an ultrasound/sonography	-	-	-
Received one or more TT injection	57.1	92.7	72.2
Place from where most ANC services received			
Public health facility incl. ICDS center	76.8	73.2	75.3
Private facility, service providers incl. NGO/Trust	23.2	26.8	24.7
Number of currently pregnant women	61	41	102
Registered pregnancy, place pregnancy registered			
Public health facility incl. ICDS center	95.1	97.6	96.1
Private facility, service providers incl. NGO/Trust	4.9	2.4	3.9
Number of women registered pregnancy	61	41	102

ANC visits and services received during the visit

Moreover, 39.2% of currently pregnant women have made four or more antenatal care visits

for their current pregnancy. 92 to 99% of the currently pregnant women had received a mother and child protection (MCP) card, have their abdomen examined, weight taken, Blood pressure & blood sugar measured, hemoglobin tasted, received and consumed IFA tablets/Syrup. Out of these services 100% pregnant women have their weight taken. There was 100% consumption of IFA tablets/Syrup. However, 77.3% of the pregnant women tested for HIV. As far as COVID-19 concerned, 25.8% of the currently pregnant woman had been tested for COVID19. There are no women who reported that they have undertaken ultrasound/sonography during their current pregnancy.

Figure 4.2: Pregnancy registration in the first trimester place received most ANC services and if faced any difficulty in getting ANC services due to pandemic, Pune (2020-21)



Place of ANC services

Information have been collected from all the currently pregnant women about the place from where they received most of the ANC services so far during this pregnancy. The data shows that out of the currently pregnant women who registered pregnancy, 75.3% of pregnant women received most of the ANC services from a public health facility (including State/municipality hospital, district hospital, community health centre, primary health centre, health sub-centre, and ICDS/Anganwadi centre), whereas, 24.7% received the services from a private health facility including trust/NGO hospitals. Slightly higher percentages of the pregnant women who were in first/second trimester (76.8%) reported getting most ANCs from a public health facility. Of all pregnant women who registered their pregnancy, 96% registered at a public health facility and 3.9% at a private health facility.

4.3 Pregnancy complications and treatment seeking

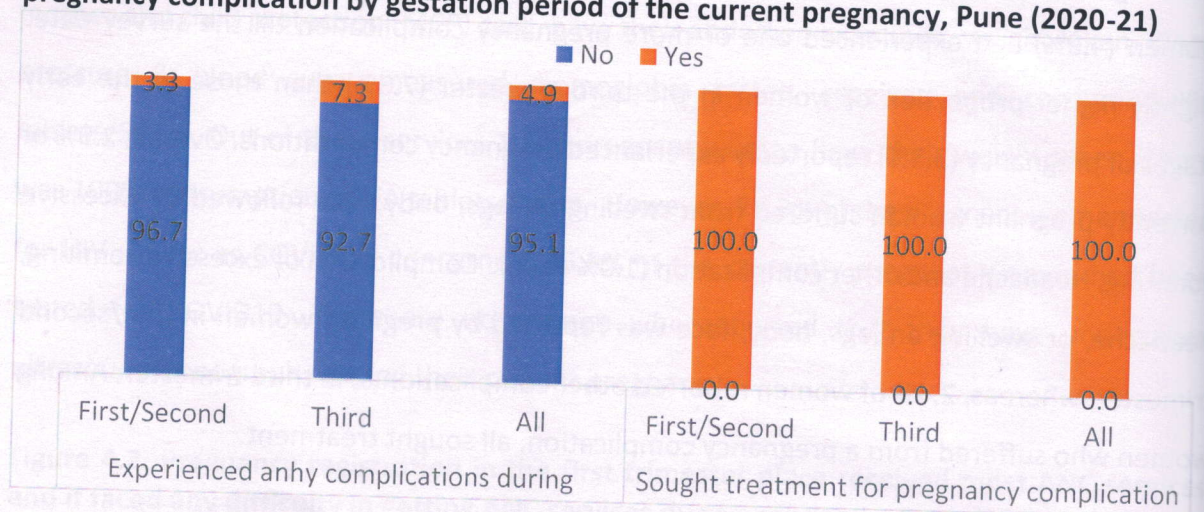
Table 4.3 provides results on whether the currently pregnant woman experienced any complication during her current pregnancy, type of complications women experienced and if

she sought treatment for complication(s). The data suggests that very few currently pregnant women (4.9%) had experienced one or more pregnancy complication till the survey date. Slightly higher proportion of women in the third trimester (7.3%) than those in the early stages of pregnancy (3.3%) reportedly experienced pregnancy complications. Overall, 2.9% of currently pregnant woman suffered from swelling on legs, body, face followed by excessive vomiting, Headache and other complication (1.0% each). Complication of excessive vomiting, headache, or swelling on legs, body, face was reported by pregnant women in first/second trimester, whereas, 2.4% of women reported other complication(s) in third trimester. Among women who suffered from a pregnancy complication, all sought treatment.

Table 4.3: Pregnant women experienced pregnancy complication, type of complication experienced and sought treatment for pregnancy complication, Pune (2020-21)

Indicator	Completed gestation (in months)		All
	<=6 months	> 6 months	
Experienced any complications during pregnancy			
No	96.7	92.7	95.1
Yes	3.3	7.3	4.9
Type of pregnancy complication (%)			
SWELLING on leg, Body and Face	1.6	4.9	2.9
Excessive vomiting	1.6	0.0	1.0
Headache	1.6	0.0	1.0
Weakness / Excessive fatigue	0.0	0.0	0.0
Abnormal fetus position	0.0	0.0	0.0
Abdominal pain	0.0	0.0	0.0
Other complications	0.0	2.4	1.0
Number of currently pregnant women	61	41	102
Sought treatment for pregnancy complication(s)			
No	0	0	0
Yes	100	100	100
Number of women experienced complications	2	3	5

Figure 4.3: Women experienced pregnancy complication and sought treatment for pregnancy complication by gestation period of the current pregnancy, Pune (2020-21)



4.4 Contact with the health worker/ASHA

received from the health worker when contacted. Overwhelmingly large proportions of the currently pregnant women (96%) reported that a health and/or a ICDS workers has visited them during the pandemic related to the current pregnancy. Majority of the pregnant women (96%) who reached out to the ASHA for help related to the pregnancy during the pandemic and reported that the ASHA helped them. However, 3% of the women reported that they did not reach out to ASHA for any help related to the pregnancy during the pandemic.

More women in the early stage of pregnancy (9.67%) than those in the advance stage (95.1%) contacted ASHA and also got help. All women reported that ASHA advised them during their contact. Further, 73.5% of the women who contacted ASHA during pandemic reported that ASHA gave medicines and 94.9% pregnant women reported that ASHA gave them advice.

Percentage of women who got advice from ASHA among women in later stage of pregnancy was 100% than those in the early stage (91.4%). In 18.4% cases ASHA accompanied to the health facility.

Also, proportion of women who got medicine was higher among women in the later stage of pregnancy (82.5%) than those in the early stage (67.2%). It may be noted that 2% women reported that ASHA arranged for the vehicle when they contacted her for help during the pandemic.

Table 4.4: Health worker(s) visited pregnant women, woman contacted ASHA for pregnancy related help and type of help ASHA provided during the pandemic, Pune (2020-21)

Characteristics	Completed gestation (in months)		All
	<=6 months	> 6 months	
Health worker (ASHA/ANM/AWW/TBA) visited during pregnancy			
No	3.3	4.9	3.9
Yes	96.7	95.1	96.1
Between March 1, 2020 to survey date, contacted ASHA for help and if ASHA helped			
Contacted ASHA and got help	95.1	97.6	96.1
Contacted ASHA, did not get help	1.6	0.0	1.0
Did not contact ASHA	3.3	2.4	2.9
Overall (%)	100.0	100.0	100.0
Number of currently pregnant women	61	41	102
Type of help ASHA provided when contacted			
Got medicine	67.2	82.5	73.5
Arranged vehicle to go to facility	3.5	0.0	2.0
Accompanied to facility	20.7	15.0	18.4
Gave advice	91.4	100.0	94.9
Other help	3.5	2.5	3.1
Overall (%)	100	100	100
Number of pregnant women contacted ASHA	59	40	99

4.5 Supplementary nutrition

Table 4.5 provides results on distribution of the currently pregnant woman whether they received supplementary food during pandemic from the Anganwadi and the reason if they did not receive it. Thirty-four percent currently pregnant women reported that they received supplementary nutrition from the ICDS during the pandemic related to the current pregnancy almost every day and 16.7% got it on most of the days. Percentage of the women who didn't receive or rarely received the supplementary food from ICDS/AWC was 39.2%. Percentage of not receiving or rarely receiving supplementary food was higher (54.1%) in early stage of pregnancy than those in later stage of their pregnancy (17.1%). Also, 10% currently pregnant women received for fewer than half of the days.

The women who reportedly rarely/never received the supplementary nutrition were further asked about the reason for the same. The main reported reasons were – ICDS/AWC was closed due to COVID19 (12.5%), Anganwadi worker did not provide at home (2.5%), not allowed to go to the Anganwadi due to pandemic (2.5%). The majority (82.5%) of currently pregnant women cited other reason for rarely/never received Supplementary food. This may be due to majority of women were in their early stage of pregnancy, so didn't register at AWC.

Table 4.5: Pregnant women received supplementary nutrition (SN) from the ICDS during the pandemic, Pune (2020-21)

Characteristics	Completed gestation (in months)		All
	<=6 months	> 6 months	
Received supplementary nutrition from ICDS/AWC			
Almost everyday	27.9	43.9	34.3
Most of the days	8.2	29.3	16.7
Fewer than half of the days	9.8	9.8	9.8
Rarely / Never	54.1	17.1	39.2
Overall (%)	100.0	100.0	100.0
Number of currently pregnant women	61	41	102
Reason women rarely/never received SN			
ICDS/AWC closed due to COVID19	12.1	14.3	12.5
AWW did not provide at home	3.0	0.0	2.5
Not allowed to go to AWC due to COVID19	0.0	14.3	2.5
AWC did not receive supply due to COVID19	0.0	0.0	0.0
Other reasons	84.9	71.4	82.5
Number of women rarely/never received SN	33	7	40

4.6 Selected indicators by socio-demographic characteristics

Table 4.6 results data on the percentages of pregnant women who registered for ANC, registered in the first trimester, faced difficulty in getting ANC services during pandemic and women who received supplementary nutrition by place of residence, household wealth tertile, woman's age, religion, caste, and her educational status.

The registration for ANC among currently pregnant women was universal in Pune district. However relatively lower percentages of women from the medium household wealth categories, younger women aged 15-24 years, Hindu religion, from other caste group, and with more than 12 years of education registered the pregnancy in the first trimester than their respective counterparts. It is pleasant to see that no one had faced any difficulty in accessing the ANC during the pandemic.

Further, lower percentages of women in the urban areas, from rich households, follower of Hindu Religion, belongs to scheduled caste and tribes and completed more than 12 years of education received supplementary nutrition during the pandemic than their respective counterparts. However, these lower percent in the respective categories might be because of less sample size.

Table 4.6: Selected indicators of antenatal care for currently pregnant women by selected background characteristics, Pune (2020-21)

Background characteristics	% registered for ANC	% registered in the first trimester	% faced difficulty in getting ANC	Got SN All/Most days	No. of pregnant women
Place of residence					
Urban	100.0	97.0	0.0	40.3	67
Rural	100.0	100.0	0.0	71.4	35
Household wealth tertile					
Low	100.0	100.0	0.0	77.8	27
Medium	100.0	95.8	0.0	39.6	48
High	100.0	100.0	0.0	44.4	27
Age					
15-24	100.0	98.1	0.0	50.0	52
25-34	100.0	98.0	0.0	53.1	49
35-49	100.0	100.0	0.0	0.0	1
Religion					
Hindu	100.0	97.7	0.0	47.1	87
Muslim	100.0	100.0	0.0	100.0	6
Other religions	100.0	100.0	0.0	55.6	9
Caste					
Scheduled castes	100.0	100.0	0.0	40.0	15
Scheduled tribes	100.0	100.0	0.0	40.0	5
Other backward classes	100.0	100.0	0.0	52.2	23
Others (General castes)	100.0	96.6	0.0	54.2	59
Education					
Fewer than 5 years + never went to school	100.0	100.0	0.0	80.0	5
5 to 9 years	100.0	100.0	0.0	33.3	3
10 to 12 years	100.0	100.0	0.0	59.3	54
More than 12 years	100.0	95.0	0.0	37.5	40
Overall	100.0	98.0	0.0	51.0	102

4.7 Abortions and Stillbirths: Background characteristics

The table 4.7 provides distribution of abortions and stillbirths by selected background characteristics of the women for Pune district. Out of 16 abortions, 8 abortions (50.0%) are in urban area. 37.5% abortions were in rich households, 62.5% in women aged 25-34 years, 93.8% among the Hindu women and 62.5% among women from General caste groups. Interestingly, the rate of abortion was higher among respondent who had no living child (31.3%) followed by among those who had only one daughter or one son and daughter (25.0%).

Total 5 still births had occurred during the reference period in the district. Out of 5 still

births, 3 still births occurred in urban area, women belong to High tertile households, belongs to other caste group, had 10 to 12 years of schooling. 4 still births occurred among women belonged to age group 15-24 years, among Hindu women, had only one living son. 2 still births had occurred among women belonged scheduled caste, had 5 to 9 years of education.

Table 4.7: Abortions and Still births by selected background characteristics of the women, Pune (2020-21)

Characteristics	Abortions		Stillbirths	
	%	Number	%	Number
Place of residence				
Urban	50.0	8	60.0	3
Rural	50.0	8	40.0	2
Household wealth tertile				
Low	31.3	5	40.0	2
Medium	37.5	6	0.0	0
High	31.3	5	60.0	3
Age				
15-24	31.3	5	80.0	4
25-34	62.5	10	20.0	1
35-49	6.3	1	0.0	0
Religion				
Hindu	93.8	15	80.0	4
Non-Hindu	6.3	1	20.0	1
Caste				
Scheduled castes	12.5	2	40.0	2
Scheduled tribes			0.0	0
Other backward classes	25.0	4	0.0	0
Others (General castes)	62.5	10	60.0	3
Education				
Fewer than 5 years incl. never went to school	0.0	0	0.0	0
5 to 9 years	0.0	0	40.0	2
10 to 12 years	50.0	8	60.0	3
More than 12 years	50.0	8	0.0	0
Sex composition of living children				
No living child	31.3	5	0.0	0
One living child only				
Son	12.5	2	80.0	4
Daughter	25.0	4	0.0	0
Two living children				
Both sons	6.3	1	20.0	1
Both daughters	0.0	0	0.0	0
One son and one daughter	25.0	4	0.0	0
Overall / no. of abortions / stillbirths	100	16	100	5

4.8 Abortions: Maternal health care utilization

Of 16 abortions, 7 women have registered pregnancy for antenatal care and 6 have made three or fewer antenatal visits before abortion. All the registered women had received a MCP card, 6 had their abdomen examined, weight taken, blood pressure measured, blood sugar tested, hemoglobin tested. Only one women had test for COVID-19, 3 women had test for HIV, 2 had received one of more TT Injection, 3 had received and consumed IFA tablets and all had an ultrasound done as a part of the antenatal care. Most of the women received most ANC services from the Public health service providers/facility (4). The good side of this is that no one had faced difficulties in seeking antenatal care.

Six of the 16 women experienced a pregnancy complication, mainly abdominal pain (4), bleeding/Spotting (3), excessive vomiting (3), weakness/excessive fatigue (3), swelling on leg, face, body, week or no fetus movement (2 each). 5 out of six women sought treatment for pregnancy complications.

In 8 cases, abortion took place in Private health facilities/ service provider including the NGO/Trust hospitals followed by Public health facility (4). In two cases, abortion took place in homes using emergency contraceptive pills or other home remedies.

Of the twelve abortions that took place in a health facility, seven women were discharged on the same day, four stayed for 2 to 3 days and one stayed 4 to 5 days in the hospital after abortion. Of four abortions that took place outside health facility, the reason was mainly - not necessary (2 cases), no facility nearby (1) others (1).

No one experienced post-abortion complication. Moreover, in 7 of the 16 cases, woman did not receive any post-abortion health checkup, nonetheless, 3 informed that they had a post-abortion checkup within 24 hours and another six after one day. Seven of the 9 women who received a post-abortion checkup had it in a private health facility and all from a doctor.

12 of the 16 women reported that a health worker visited them; 9 were visited during pregnancy, four at the time of abortion and eight after delivery. Nine of the 16 women reported that ASHA visited them during pandemic (between march 1, 2020 and survey date). Eight of the women contacted ASHA for help during the pandemic and all received help from ASHA. Thirteen of the 16 women did not receive any supplementary food from the ICDS during pregnancy. Twelves of the women reported that they did not receive supplementary nutrition food due to the other reasons and only one women reported that she did not receive supplementary food due to the Anganwadi centre closed due to the COVID-19 pandemic.

4.9 Stillbirth: Maternal health care utilization

Of 5 stillbirths, all have registered pregnancy for antenatal care in the first trimester of the pregnancy and four women had made four or more antenatal visits before delivery. All have received MCP card, had their abdomen examined, weight taken, blood pressure measured, blood sugar tested, Hemoglobin tested, 3 had tested for COVID19, 4 had tested for HIV, all had received one or more TT injection, only 3 had an ultrasound done as a part of the antenatal care. Three received most ANC services from the public health facility and remaining 2 from the private health service providers/facility. None of the women faced any difficulty in seeking antenatal care.

Two of five women experienced a pregnancy complication; difficulty with Bleeding/spotting (2). In three of the five cases, delivery took place in a private health facility and in the remaining two cases at a public health facility. All women had used a private vehicle to reach health facility for delivery. Three delivers were C-section and remaining 2 were normal. Only one woman said that ASHA accompanied her to the facility for delivery. Two women stayed in the health facility for 3 to 5 days and remaining three for seven days after the delivery.

Two women suffered from Perinatal Asphyxia and one each woman suffered from prolonged labour, blood pressure problem and others. Three of the women suffered from post-delivery complications – convulsion (not from fever) (2), Bleeding/spotting (2) and one reported as other complications. In all cases, women sought treatment for delivery / post-delivery complications.

All 5 woman received post-natal health checkup after delivery within 24 hours; 3 from a Private health facility and 2 from a Public health facility. All 5 women got their post-natal checkup done by a doctor.

All the women reported that a health worker visited them; 3 were visited during pregnancy, 2 at the delivery. In the all the cases ASHA gave advise to women. Further, all the women reported that the ASHA visited them during the pandemic related to this pregnancy and the women also reported that they contacted ASHA for help during the pandemic related to this pregnancy and also got help from ASHA. All five women got medicines from ASHA and four women received advice from her. Four of the 5 women received supplementary food from the ICDS during pregnancy. However, one woman reported that she received supplementary nutrition only on few days. One women reported that she did not receive supplementary food because Anganwadi centre was closed due to the COVID-19 pandemic.

Utilization of immunization, child health and ICDS services

This chapter discusses level of utilization of immunization, child health care and ICDS services among children during the pandemic period. The Government of India has made remarkable efforts over the last two-three decades particularly to strengthen maternal and child health services in India. These include enhanced activities of the Family Welfare Programme, introduction of the Child Survival and Development Programme, various social projects that include the Oral Rehydration Therapy (ORT) programme, the Universal Immunization Programme, and the Maternal and Child Health Supplemental Programme within the Postpartum Programme. While the government-run Primary Health Centres and Health sub-centres are mainly responsible for the maternal and child health services, the ICDS centres, hospitals and private health facilities also play a significant role in providing these services.

Utilization of immunization, child health and ICDS services

The vaccination of children against six preventable diseases, viz. tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles, is an important component of a child survival programme in India. The Expanded Programme on Immunization (EPI) was started in 1979, aimed at reducing morbidity, mortality, and disabilities from these six diseases among children by making free vaccination services to all children eligible. The mothers were asked to report if their child had received the listed vaccine or not. The specific vaccines included in the present study are: BCG, Polio (I), Hepatitis B0, Pentavalent (first, second and third doses), Measles and Rubella, Rotavirus (first, second and third doses), DPT booster and Vitamin A (first and last doses). The mothers were asked to report place of vaccination, if the place of vaccination has to be changed and the reason for the change of place and reason for not vaccinating the child. This information was collected for each child and for each vaccine separately. Besides, mothers were also asked if they experienced any difficulty in getting child vaccinated during pandemic and the nature of difficulties experienced. Finally, the mothers were asked if a health worker visited them for child vaccination or if they contacted ASHA for any help related to child vaccination during the pandemic.

With respect to child health, the study collected information on if child fell ill and the type of

Chapter 5

Utilization of immunization, child health and ICDS services

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The vaccination of children against six preventable diseases, viz. tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles has been an important component of the child survival program in India. The Expanded Programme on Immunization (EPI), initiated in 1978, aimed at reducing morbidity, mortality, and disabilities from these six diseases among children by making free vaccination services to all children eligible. The mothers were asked to report if their child had received the listed vaccine or not. The specific vaccines included in the present study are: BCG, Polio-0, Hepatitis-B0, Pentavalent (first, second and third doses), Measles and Rubella, Rotavirus (first, second and third doses), DPT booster and Vitamin-A (first and last doses). The mothers were asked to report place of vaccination, if the place of vaccination has to be changed and the reason for the change of place and reason for not vaccinating the child. This information was collected for each child and for each vaccine separately. Besides, mothers were also asked if they experienced any difficulty in getting child vaccinated during pandemic and the nature of difficulties experienced. Finally, the mothers were asked if a health worker visited them for child vaccination or if they contacted ASHA for any help related to child vaccination during the pandemic.

With respect to child health, the study collected information on if child fell ill and the type of

disease(s) child suffered during the pandemic. For all children who suffered from an illness during the pandemic information was collected about the treatment, place of treatment, any difficulty experienced in seeking treatment of ill child and reason for not seeking treatment for ill child. Further information was obtained on if a health worker visited them for child health related matters if they contacted ASHA for any help related to child health care during the pandemic and the assistance received from ASHA. The information on child immunization and child health and health-care utilization for illness from mothers for all children born since 1 January 2019.

The study also collected information on the utilization of ICDS services by the children below six-years of age. All mothers were asked to report if their child attended or registered at the anganwadi center before and during pandemic and whether children received and/or consumed food given to them by the anganwadi. Information was also collected on main reason for not attending the anganwadi for all children who never attended/registered under ICDS. The mothers who reported that their children received food from the anganwadi during both periods (that is, pre-pandemic and pandemic), information was collected about their views on change in the quantity and quality of food given to the children and change in other services provided to the children by the anganwadi during the pandemic.

5.1 Child Immunization

Table 5.1 gives age distribution of the children by age (in months), gender and birth order by place of residence. A total of 335 children (219 in the urban areas and 117 in the rural areas) were enumerated who were born between January 1, 2019 and the survey date. Of these, 36.4% were aged up to six months and 29% were aged 7 to 12 months. Forty-three percent were boys and 56% were girls; share of girl children was slightly higher in the urban areas (57.1%) than the rural areas (55.2%). Near about 7% of these children were of third or higher order. Share of third or higher order birth was higher in the rural areas (7.8%) than in the urban areas (6%).

Table 5.1: Distribution of surviving children born during the reference period by age, gender and birth order by place of residence, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Age of the child			
0-6 months	37.4	35.3	36.4
7-12 months	26.9	32.8	29.0
More than 12 months	35.6	31.9	34.3
Gender			
Boy	42.9	44.8	43.6
Girl	57.1	55.2	56.4
Birth Order			
First	59.4	60.3	59.7
Second	34.7	31.9	33.7
Third or higher	5.9	7.8	6.5
Overall (%)	100	100	100
Number of children	219	117	336

Figure 5.1: Distribution of children born during the reference period by selected background characteristics, Pune (2020-21)

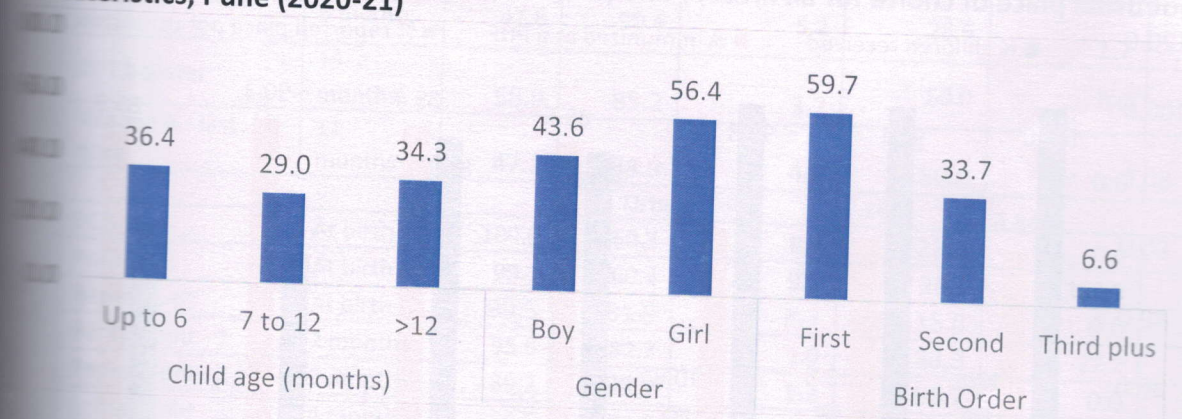


Table 5.2 provides details of each vaccine children received during the pandemic. In the same table we have also given the age of the child considered for vaccination. The information is presented for urban and rural areas separately and combined. Almost all the children received doses of BCG, Polio-0, Hepatitis-B0. 95.3% of children received Pentavalent (first dose). Relatively fewer children received measles and rubella (86%), only about 51-56% children received rotavirus first, second and third doses and less than 59% children received DPT booster. About 47% children received Vitamin-A first dose and same as received Vitamin-A second dose. Majority of the children were vaccinated at a public health facility, however, far fewer children got BCG (59%), Polio-0 (61%) and Hepatitis-B0 (62.8%) from a public health facility. Although the place of immunization during the pandemic was same as the usual place of choice, a few mothers said that the place was not a usual place of vaccination. Except for

Measles & Rubella 1	9 months	86.6	89.7	8.6	0.0	8.3	67
Rotavirus – 1	2 months	58.0	87.7	7.7	100.0	4.3	112
Rotavirus – 2	3 months	57.0	87.1	6.6	75.0	0.0	107
Rotavirus – 3	4 months	49.5	87.8	4.0	100.0	2.0	99
Vitamin A – 1 st dose	6 month	50.6	86.7	6.5	50.0	2.4	85
DPT booster	15 months	60.7	83.3	11.1	50.0	0.0	28
Vitamin A - last dose	11 months	56.3	82.8	6.9	33.3	0.0	48

Table 5.3 provides results of selected indicators by background characteristics. There were not much gender differentials in immunization of children. Relatively, overall a higher percentage of female children as compared to male children received immunization and most received vaccines at a public health facility. Higher proportions of the children in rich families received Measles Rubella and rotavirus-3, whereas higher percentages of children from poor households got DPT booster, last dose of Vitamin-A, and received the vaccine at a public health facility. Children born to older mothers aged 35-49 years were in advantaged position compared to the children born to younger mothers. Similarly, children born to Hindu and Christian mothers, mothers from other back ward classes and other castes scheduled tribes generally had advantage. Further, children born to mothers with 5 to 9 years of education in general had in advantage position to receive the vaccination.

Table 5.3: Immunization indicators by selected background characteristics, Pune (2020-21)

Characteristics	% received Measles Rubella	% received Rotavirus3	% received DPT booster	% received Vitamin-A last dose	% received BCG at PHF
Gender					
Male	85.9	49.6	58.8	40.0	51.4
Female	86.1	53.2	60.0	53.0	64.6
Household wealth tertile					
Low	84.4	51.0	61.5	53.1	66.4
Medium	81.5	54.2	55.6	40.4	48.2
High	93.1	48.9	60.7	48.8	61.3
Maternal age					
15-24	79.4	45.1	58.6	42.0	64.0
25-34	89.9	54.1	55.6	47.1	54.8
35-49	90.0	80.0	85.7	77.8	66.7
Maternal religion					

Hindu	87.9	51.1	58.8	50.0	58.0
Muslim	66.7	50.0	0.0	0.0	85.7
Christian	100.0	100.0	100.0	50.0	66.7
Other religions	76.0	51.3	55.6	36.8	57.8
Maternal caste					
Scheduled castes	80.0	51.7	50.0	38.5	61.4
Scheduled tribes	100.0	81.8	87.5	75.0	80.0
Other backward classes	93.8	58.0	60.0	56.5	49.1
Others (General castes)	84.7	47.2	56.3	44.8	58.8
Maternal education					
Fewer than 5 years	100.0	57.1	66.7	50.0	92.3
5 to 9 years	60.0	44.8	42.9	45.5	63.9
10 to 12 years	88.9	49.4	61.7	45.6	60.3
More than 12 years	88.9	57.0	57.6	50.0	50.0
Overall	86.1	51.4	58.9	47.2	58.6

Figure 5.3A: Percentages of children received measles and rubella by selected characteristic for all areas, Pune (2020-21)

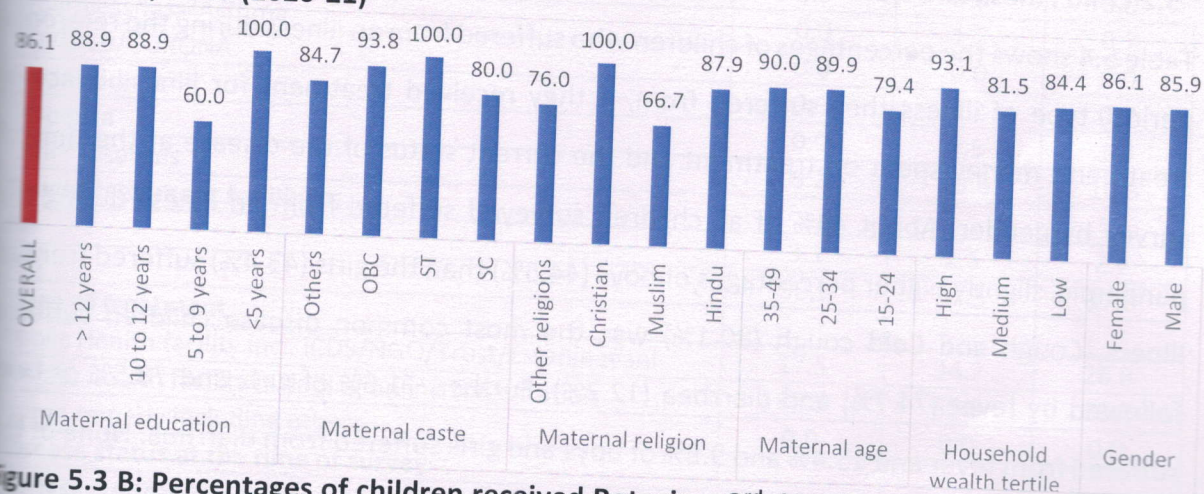


Figure 5.3 B: Percentages of children received Rotavirus 3rd dose by selected characteristic for all areas, Pune (2020-21)

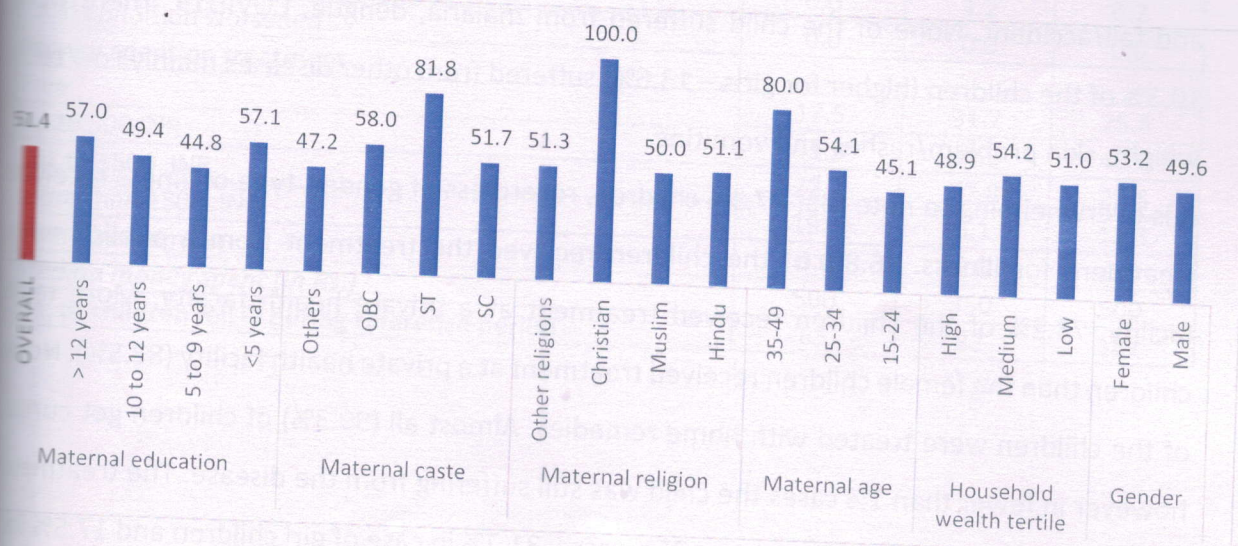
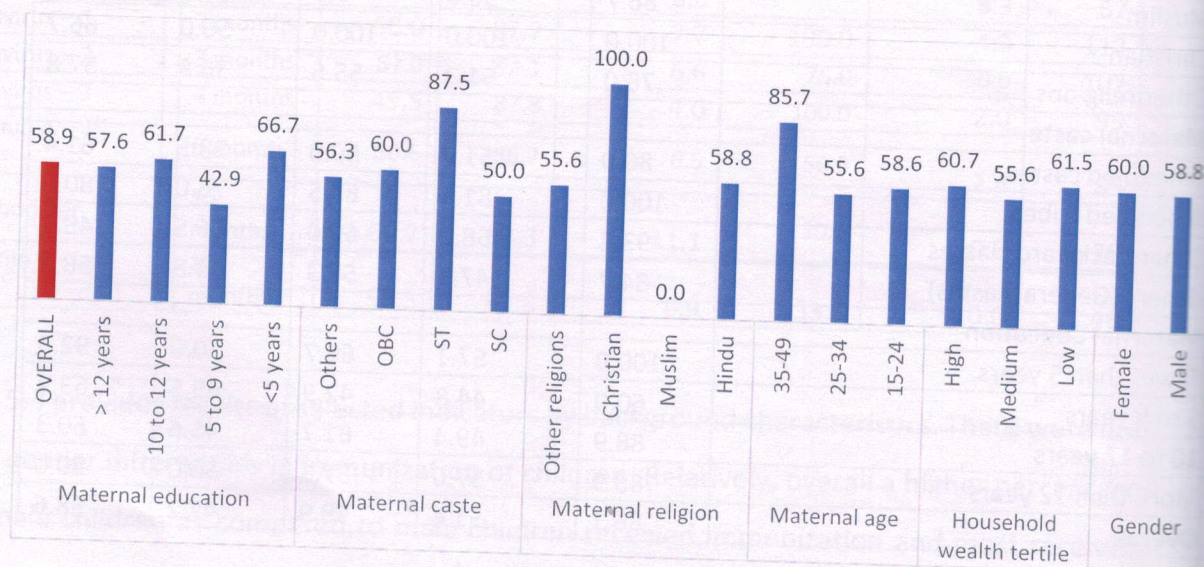


Figure 5.3C: Percentages of children received DPT booster by selected characteristic for all areas, Pune (2020-21)



5.2 Child illness and treatment seeking

Table 5.4 shows the percentages of children who suffered from an illness during the reference period, type of illness they suffered from, if they received treatment for illness, place of treatment, money spent on treatment and the current status of the disease at the time of survey by gender. About 44% of all children surveyed suffered from an illness during the pandemic, slightly higher percentages of boys (44.5%) than the girls (43.4%) suffered from an illness. Cough and Cold cough (80.1%) was the most common disease children suffered followed by fever (74.7%) and diarrhea (12.2%). Further, 71.6% of girls and 78.5% of boys suffered from fever and 15.4% and 9.8% of boys and girls suffered from diarrhea. None of the children suffered from jaundice. Fewer of 1% children suffered from breathlessness/asthma and fall/accident. None of the child suffered from malaria, dengue, COVID19. There were 10.3% of the children (higher for girls – 13.6%) suffered from other diseases mainly Low birth weight, skin problem/rashes and vomiting.

It is overwhelming to note that 97.3% children, regardless of gender, type of illness received treatment for illness. 26.8% of the children received the treatment from a public health facility. 73.2% of the children received treatment at a private health facility. More male children than the female children received treatment at a private health facility (82.5%). None of the children were treated with home remedies. Almost all (99.3%) of children got cured, however in fewer than 1% cases the child was still suffering from the disease. The treatment for child illness was free in as many as 25% cases; 31.7% in case of girl children and 17.5% for

...in 11.3% of cases, more than 1500 rupees was spent on the treatment. The median money spent on treatment was rupees 500.

Table 5.4: Illness among children, type of illness, treatment seeking for illness, place of treatment, money spent on treatment and health status of the child at the time of survey by gender, Pune (2020-21)

Indicator	Boy	Girl	Both
Children fell ill during pandemic			
%	55.5	56.6	56.1
%	44.5	43.4	43.9
No. of Children	146	190	336
Out of those fell ill, % suffered from:			
Diarrhea	15.4	9.8	12.2
Fever	78.5	71.6	74.7
Cough and Cold	76.9	82.7	80.1
Malaria	0.0	0.0	0.0
Dyspepsia	0.0	0.0	0.0
Jaundice	0.0	0.0	0.0
Wheeziness/Asthma	0.0	1.2	0.7
COVID-19/CORONA	0.0	0.0	0.0
Traffic Accident	0.0	1.2	0.7
Influenza	0.0	2.5	1.4
Other diseases	6.2	13.6	10.3
Sought treatment for illness			
%	3.1	2.5	2.7
%	96.9	97.5	97.3
Place of treatment			
Public Health facility incl. ICDS/NGO/Trust/E-sanjeevani	17.5	34.2	26.8
Private health facility including online consultation	82.5	65.8	73.2
Home remedy including others	0.0	0.0	0.0
Disease status at the time of survey			
Disease cured	100.0	98.8	99.3
Child still suffering	0.0	1.2	0.7
Child condition worsened	0.0	0.0	0.0
Money spent on treatment			
%	17.5	31.7	25.4
Less than 500 INR	41.3	40.5	40.9
500 to 1500 INR	22.2	22.8	22.5
More than 1500 INR	19.1	5.1	11.3
Don't remember	0.0	0.0	0.0
Median money spent (In Rs.)	500	350	500
No. of children fell ill during reference period	65	82	147

Figure 5.4: Percentages of children fell ill during pandemic and percentages suffered from diarrhea, fever and could-cough, Pune (2020-21)

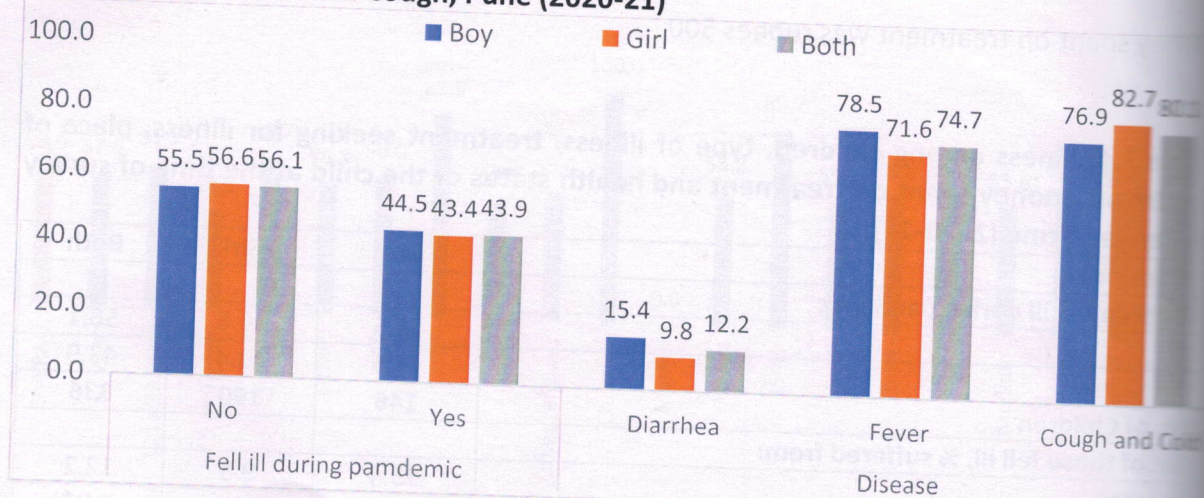
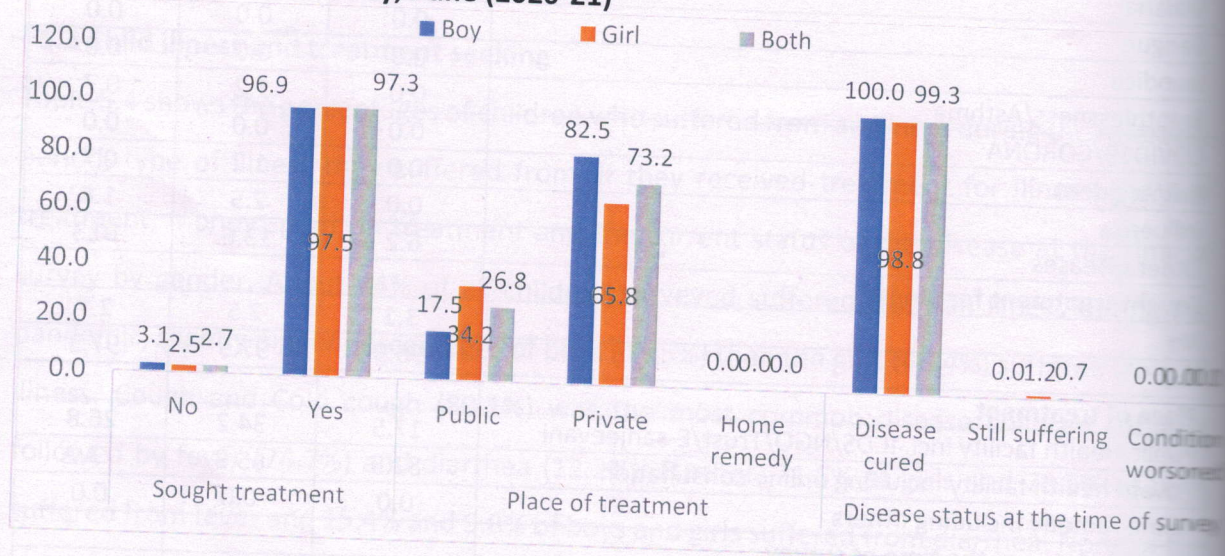


Figure 5.5: Percentages of ill children received treatment, place of treatment and child health at the time of survey, Pune (2020-21)



Selected indicators of child health care utilization by background characteristics are provided in Table 5.5. The data suggest that higher percentages of children in the urban areas suffered from an illness (54.8%) and sought treatment (30.2%) from a public health facility compared to the children in the rural areas. Interestingly, more urban mothers contacted ASHA for child health matters during the pandemic than the rural mothers. Further, relatively higher percentages of children in medium income households or born to older mothers suffered from an illness and/or received treatment at a public health facility.

The prevalence of illness during the reference period was more common among the children born to Muslim mothers, from scheduled caste and children born to mothers who had more than 12 years of education. More children in medium income households and born to

mothers from General caste and children born to mother with fewer than 5 years of education were treated at a public health facility than their respective counterparts.

Table 5.5: Selected child health indicators by background characteristics, Pune (2020-21)

Characteristics	% children fell ill during pandemic	% sought treatment from a public health facility	% Mothers contacted ASHA for child health
Place of residence			
Urban	54.8	30.2	95.0
Rural	23.3	11.1	85.2
Household wealth tertile			
Low	31.9	94.4	97.1
Medium	59.5	95.5	95.1
High	40.5	88.6	88.4
Maternal age			
15-24	45.6	21.4	98.3
25-34	41.9	29.3	90.4
35-49	58.3	40.0	83.3
Maternal religion			
Hindu	42.9	26.7	92.4
Muslim	57.1	25.0	100.0
Christian	0.0		
Other religions Incl. No religion	51.1	26.1	95.7
Maternal caste			
Scheduled castes	55.7	26.3	94.9
Scheduled tribes	46.7	14.3	71.4
Other backward classes	42.1	16.7	91.7
Others (General castes)	39.9	31.1	94.7
Maternal education			
Fewer than 5 years	15.4	50.0	100.0
5 to 9 years	36.1	33.3	76.9
10 to 12 years	46.1	24.7	95.1
More than 12 years	46.3	27.1	93.9
OVERALL	43.9	26.6	93.2

5.3 Utilization of ICDS services

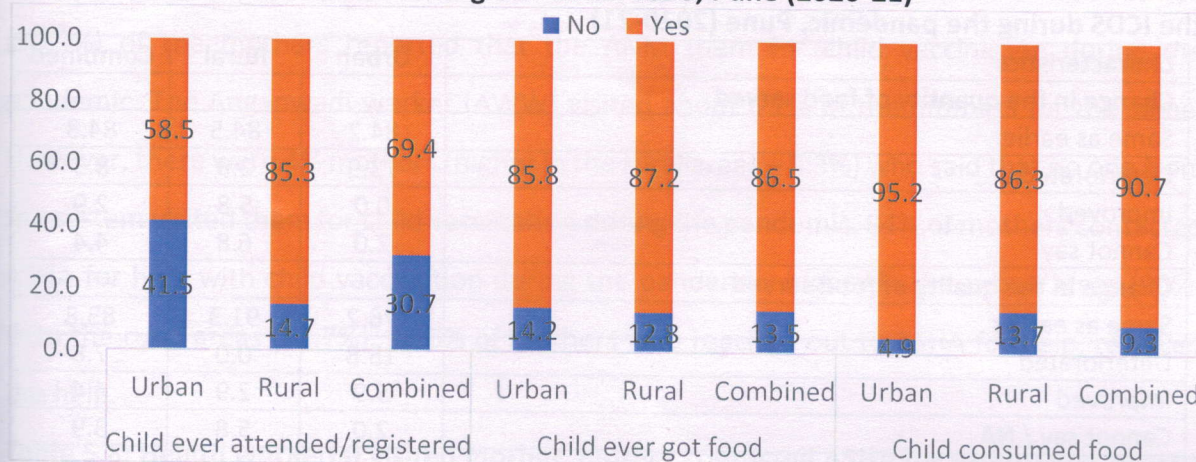
Table 5.6 provides results on children attended ICDS and services they received along with reason for not attending ICDS. The data suggests that 69.4% of the children ever attended/registered AWC and 61.5% attended during the pandemic (between march 1, 2019 and survey date). Significantly higher percentages of children in the rural areas than the urban areas attended AWC ever as well as during pandemic. Eighty-six percent of the children

received food from the AWC ever, however, as against of 92% during the pandemic period. The urban-rural differences were particularly wide during the pandemic period. Further, although smaller proportion, there were about 7-9% of the children who received food from AWC only on some days and another 1-2% never received food from AWC. Overwhelmingly, higher proportions of the children consumed food given to them by the AWC, however, there were about 9.3% of the children who did not consume the food ever received, whereas, 7.9% during the pandemic period. Relatively higher percentages of children in rural areas reportedly did not consume food they received from AWC.

Table 5.6: Children under age six years attended/registered with Anganwadi center (AWC) ever and during pandemic, received and consumed food given by the AWC by place of residence, Pune (2020-21)

Indicator	Ever			During pandemic		
	Urban	Rural	Combined	Urban	Rural	Combined
Child ever attended/registered						
No	41.5	14.7	30.7	49.0	23.1	38.6
Yes	58.5	85.3	69.4	51.0	76.9	61.5
Child ever got food from AWC						
No	14.2	12.8	13.5	5.9	9.8	7.9
Yes	85.8	87.2	86.5	94.1	90.2	92.1
No. of children below 6 years	200	136	336	198	134	332
Frequency of food from AWC						
Almost everyday	51.5	56.9	54.2	49.5	59.8	54.7
Most of the days	40.8	28.4	34.6	42.6	31.4	37.0
Some days only	7.8	10.8	9.3	6.9	8.8	7.9
Rarely / Never	0.0	3.9	2.0	1.0	0.0	0.5
Child consumed food						
No	4.9	13.7	9.3	5.9	9.8	7.9
Yes	95.2	86.3	90.7	94.1	90.2	92.1
Child ever received food from AWC	103	102	205	101	103	204
Main reason not attending AWC						
Unaware of ICDS / AWC	2.4	5.3	3.0	2.7	0.0	2.0
No ICDS in the village/area	0.0	0.0	0.0	0.0	3.9	1.0
No staff at the AWC	0.0	0.0	0.0	0.0	0.0	0.0
AWC too far	0.0	0.0	0.0	1.3	19.2	5.9
No facility at the AWC	0.0	0.0	0.0	0.0	0.0	0.0
Too many children at the AWC	13.4	0.0	10.9	14.7	0.0	10.9
Family did not allow	1.2	5.3	2.0	2.7	0.0	2.0
Child too small	59.8	57.9	59.4	62.7	30.8	54.5
Child refused to go	0.0	0.0	0.0	0.0	3.9	1.0
Fear of getting infection	3.7	10.5	5.0	8.0	15.4	9.9
Other reasons	19.5	21.1	19.8	8.0	26.9	12.9
No. of children did not attend AWC	83	20	103	83	53	136

Figure 5.6: Percentages of children below six years of age ever attended/registered for ICDS, received food and consumed food given under ICDS, Pune (2020-21)



For the children who did not attend/registered with AWC, information was collected on the main reason. It may be noted about 3% of the cases (2.4% in urban areas and 5.3% in the rural areas) mothers reported that their child was never registered with the ICDS as they were unaware of the ICDS/AWC. However, 59.4% of the cases, mother felt that their child was 'too small' to go to the AWC. The main reason for child not attending the AWC during pandemic was slightly different. For example, 2.7% of urban mothers told that their child did not attend AWC during the pandemic as they were unaware of the ICDS. 54.5% of the mothers informed that their child did not attend AWC during pandemic as the child was 'too small'; much higher in the urban rural areas (62.7%) than the rural areas (30.8%). The other reasons reported for child not attending during the pandemic were – child refused to go (1%), fear of getting infection (9.9%), too many children at the AWC (10.9%) and AWC too far (5.9%). The percentages of mother reporting 'Fear of getting infection' was 5% in case of never attended AWC.

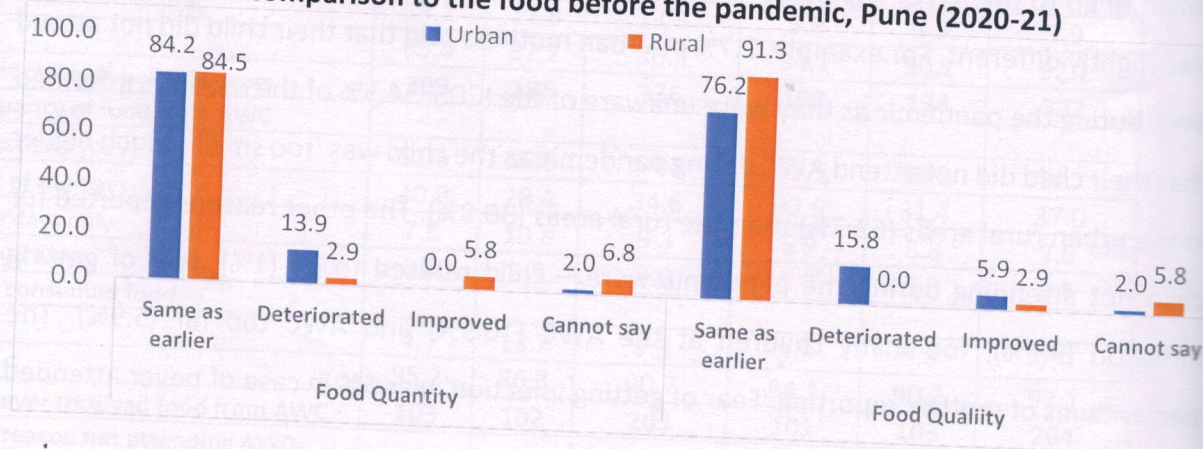
Table 5.7 provides results of perception of mothers about change in quantity and quality of food and other services given by the AWC during the pandemic. 84.3% and 83.5% of the mothers expressed that the quantity as well as quality of the food has remained same as it was earlier (76-84.2% in urban areas and 84.5-91.3% in the rural areas). 2.9 -4.4% of mothers expressed the quality and quantity of food served has improved during the pandemic.

Nonetheless, there were about 8.3% and 7.8% of mothers, respectively, who felt that the quantity and quality of the food has deteriorated during the pandemic. 4.4-4.9% of mothers were not able to comment anything on this. With respect to the other services, only 5.4% felt that the other services have reduced/deteriorated; mostly in urban area (10.9%).

Table 5.7: Perception of mothers on change during pandemic in comparison to the pre pandemic period in the quantity and quality of food served and other services provided by the ICDS during the pandemic, Pune (2020-21)

Characteristics	Urban	Rural	Combined
Change in the quantity of food served			
Same as earlier			
Deteriorated	84.2	84.5	84.3
Improved	13.9	2.9	8.3
Cannot say	0.0	5.8	2.9
	2.0	6.8	4.4
Change in the quality of food served			
Same as earlier			
Deteriorated	76.2	91.3	83.8
Improved	15.8	0.0	7.8
Cannot say / NA	5.9	2.9	4.4
	2.0	5.8	3.9
Quantum of other services provided			
Same as earlier			
Deteriorated	82.2	83.5	82.8
Improved	10.9	0.0	5.4
Cannot say / NA	3.0	10.7	6.9
	4.0	5.8	4.9
No. of children attended during pre and pandemic periods	101	103	204

Figure 5.7: Perceptions of mothers regarding quantity and quality of food from ICDS during the pandemic in comparison to the food before the pandemic, Pune (2020-21)



5.4 Contacts with health worker during the pandemic

The health or ICDS workers are required to visit the household in the area under their service jurisdiction and monitor various aspects of the health of women and children, provide information related to health and family welfare, counsel and motivate women/mothers to promote better practices and deliver other selected services as needed. These visits work as catalyst and enhance the credibility of services and inculcate client faith in the public health delivery system. The results on the mother's contact with the health and ICDS workers are provided in the Table 5.8.

For child vaccination

About 96% of mothers (93.2% in the rural areas) reported that the ASHA and about half (50.9%) of the mothers reported that the ANM them for child vaccination during the pandemic. The Anganwadi worker (AWW) visited about 6.2% of the mothers for the same. However, there were 4% mothers (higher in the rural areas – 5.3%) who said that no one from the system visited them for child vaccination during the pandemic. 84% of mothers contacted ASHA for help with child vaccination during the pandemic; higher in the urban areas (90%) than the rural areas (72.7%). 98.6% of mothers who reached out to ASHA for help, received the help.

Table 5.8: Health worker(s) visited mother, mother contacted ASHA for vaccination related issues and type of help ASHA provided during the pandemic, Pune (2020-21)

Indicator	Vaccination			Child health care		
	Urban	Rural	Combined	Urban	Rural	Combined
Health worker visit						
No one	2.8	5.3	3.7	5.8	3.7	5.4
AWW	6.2	53.7	22.3	5.0	44.4	12.2
ANM	50.9	73.2	58.4	40.8	44.4	41.5
ASHA	95.9	93.2	94.9	87.5	96.3	89.1
No. of mothers/ No. of children	219	117	336	120	27	147
Mothers contacted ASHA for help						
No	10.1	27.4	16.1	5.8	14.8	7.5
Yes	90.0	72.7	83.9	94.2	85.2	92.5
No. of mothers / ill children	219	117	336	120	27	147
ASHA helped mother						
No	2.0	0.0	1.4	2.7	0.0	2.2
Yes	98.0	100.0	98.6	97.4	100.0	97.8
Type of help ASHA provided						
Gave medicine				86.4	60.9	82.0
Arranged vehicle to go to facility				0.9	0.0	0.8
Accompanied to facility				10.0	0.0	8.3
Gave advice				97.3	91.3	96.2
Other help				0.9	0.0	0.8
Mothers contacted ASHA for help	197	85	282	110	23	133

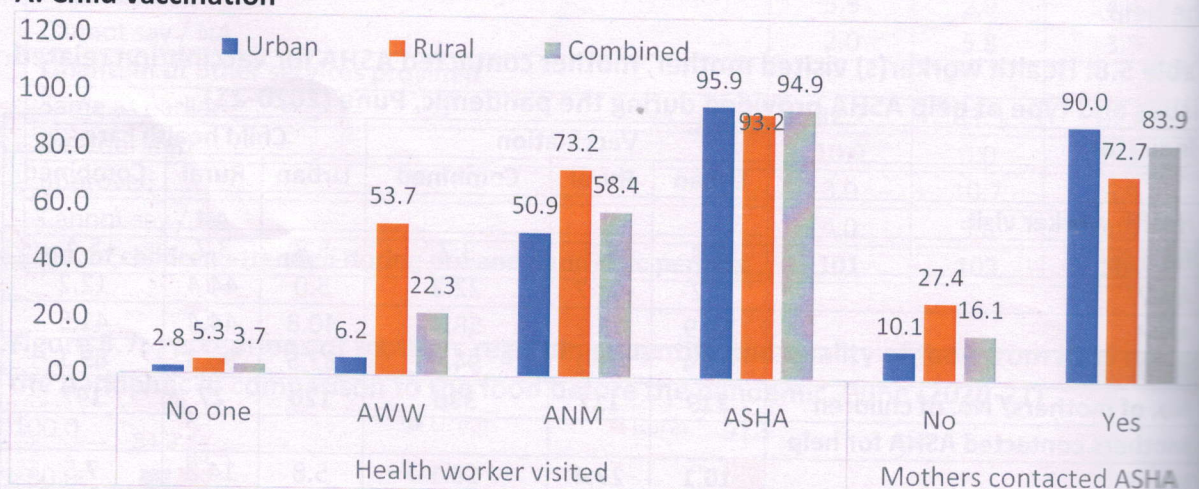
For child health care

Overwhelmingly, higher percentages of children had a visit to their homes from ASHA; 89.1% overall, 87.5% in urban areas and 96.3% in the rural areas. In 12.2% and 41.5% cases, AWW and ANM, respectively visited children's households for child health care related matters during the pandemic. However, 5.4% children were not visited by any grass root level worker during the pandemic. This percentage was considerably higher in the urban areas as compared to the rural areas (5.8% versus 3.7%). 92.5% of mothers reached out to ASHA for

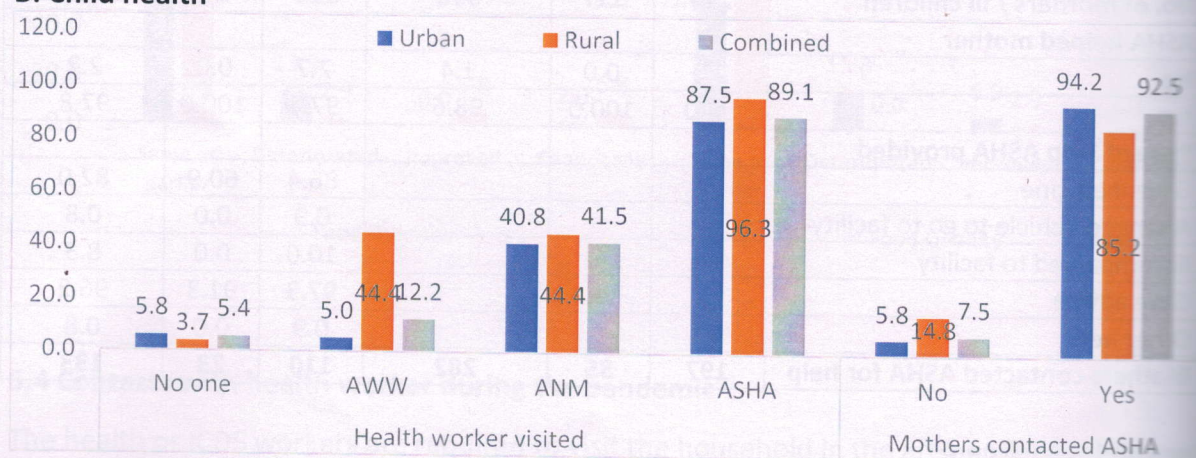
help related to the care of their ill child and except 2% cases, ASHA helped mothers when they contacted. In 8.3% of the cases, ASHA accompanied mothers to the health facility for health care of the ill children. Further, 82% of mothers reported that ASHA gave them medicines and fewer of 1% of mothers reported that ASHA arranged for transport to go to health facility with ill child.

Figure 5.8: Health worker / ASHA contact with mothers for child vaccination and child health during the pandemic, Pune (2020-21)

A: Child vaccination



B: Child health



5.5 Experienced difficulties in getting vaccination or child health care services

Table 5.9 provides data on mother whether mothers experienced any difficulty in seeking vaccination of their children and/or health care for their ill child during the pandemic. It is encouraging to note that 96-98.6% of the mothers did not face any difficulty during the pandemic related to these aspects. However, about 4% of the mothers each reported that

they encountered difficulties in seeking vaccination of children and 1.4% for treatment of ill child. The mothers were further asked about the nature of difficulty. Out of thirteen mothers who faced difficulties in vaccinating their children, 61.5% faced difficulties due to COVID-19 pandemic related and 38.5% due to Non-COVID-19 related. And, 50% of the mothers (all in the urban areas) attributed difficulties in seeking care for ill child to the pandemic related reasons.

Table 5.9: Cases when mothers faced difficulties in getting the child vaccinated or health care for ill children and the nature of difficulties experienced by place of residence, Pune (2020-21)

Indicator	Difficulties related to vaccinating child			Difficulties related to treatment of ill child		
	Urban	Rural	Combined	Urban	Rural	Combined
Faced difficulties during pandemic						
No	95.0	98.3	96.1	98.3	100.0	98.6
Yes	5.0	1.7	3.9	1.7	0.0	1.4
No. of children / No. of ill children	219	117	336	120	27	147
Nature of difficulties due to						
COVID19 pandemic related	63.6	50.0	61.5	50.0	0.0	50.0
Non-COVID19 related	36.4	50.0	38.5	0.0	0.0	0.0
No. mothers faced difficulties	11	2	13	2	0	2

Chapter 6

Utilization of contraceptive and menstrual services by the women

6.1 Ever and current FP users

6.1.1 Eligible women interviewed in the study in Zone district, 78.2% reported that their husband never did something/used a method to delay/avoid pregnancy. The remaining 21.8% said they/their husband ever used a method to delay/avoid pregnancy. Significantly higher percentages of urban women than the rural women (34.5% and 2.2%, respectively) ever used a method to delay/avoid pregnancy. The information on contraceptive method use was collected from the non-pregnant women – total of 39% of the 500 women interviewed were not pregnant at the time of data collection. Of these non-pregnant women, about 30% women were using a method to delay/avoid pregnancy at the time of survey. Once again, notably higher proportions of the non-pregnant women in urban areas reported using a method to delay/avoid pregnancy than those in the rural areas (33.5% vs

Chapter 6:

Utilization of contraceptive and menstrual services by the women

Couples can use family planning methods / contraceptives to delay and/or avoid pregnancy as to space or limit number of children they want to have and the time when they want to have a child. This chapter presents information on ever and current use of contraceptive methods (including traditional methods), sources of obtaining contraceptive methods during pandemic, choice of place for obtaining the methods, difficulties experienced in obtaining the method, side effects of the method and money spent on method during the most recent time and reason for currently using contraceptives. We included both modern as well as traditional methods of family planning. The modern methods included Sterilization (male or female), Intrauterine device/Post-partum intrauterine device (IUD/PPIUD), Injectable (including Anghara), Oral pills, Condom (Nirodh), Female condom, Diaphragm, Foam/Jelly, and any other modern methods used by the couple. The traditional methods included Standard days method, Lactational amenorrhea method (LAM), Rhythm method, Withdrawal, or any other local method used by the couple to delay/avoid pregnancy. The information was collected from the women about the method used by her and/or her spouse/partner.

In the same chapter, we have also discussed if the menstruating women suffered from any menstrual problem during the pandemic and whether they sought treatment for the problem and the reason in case they did not seek treatment for the menstrual problem they suffered.

6.1 Ever and current FP users

Of 500 eligible women interviewed in the study in Pune district, 78.2% reported that they/their husband never did something/used a method to delay/avoid pregnancy (Table 6.1). The remaining 21.8% said they/their husband ever used a method to delay/avoid pregnancy. Significantly higher percentages of urban women than the rural women (24.4% and 18.2%, respectively) ever used a method to delay/avoid pregnancy. The information on current method use was collected from the non-pregnant women. A total of 398 of the 500 women interviewed were not pregnant at the time of data collection. Of these non-pregnant women, about 30% women were using a method to delay/avoid pregnancy at the time of survey. Once again notably higher proportions of the non-pregnant women in urban areas reported using a method to delay/avoid pregnancy than those in the rural areas (33.5% as

against of 25.3%).

Currently use: modern methods

28% of the respondents used female sterilization and None of the women reported use of male sterilization in urban as well as rural areas. Further 6.8% of the couples used IUD/PPIUD. The percentage of respondents who used IUD/PPIUD is considerably higher in the rural areas (9.3%) than the urban areas (5.3%). About 7% of the couples were currently using Oral pill and 50.4% couples are using Condom (nirodh). Oral pill use is more common among the couples in the urban areas (8%) than in the rural areas (4.8%). However, Condom is considerably higher used in urban areas 54.7% and rural areas 42.9%. little more than 5% of the couple (7.1% in rural areas and 4% in urban areas) reportedly use injectable to delay/avoid pregnancy. 5.2% of the couple used female condom. Only 1.7% were using standard days method (2.7% in urban area and no one in rural area) to avoid/delay in pregnancy.

Figure 6.1A: Family planning use - Ever users and Current users (out of non-pregnant women) by place of residence, Pune (2020-21)

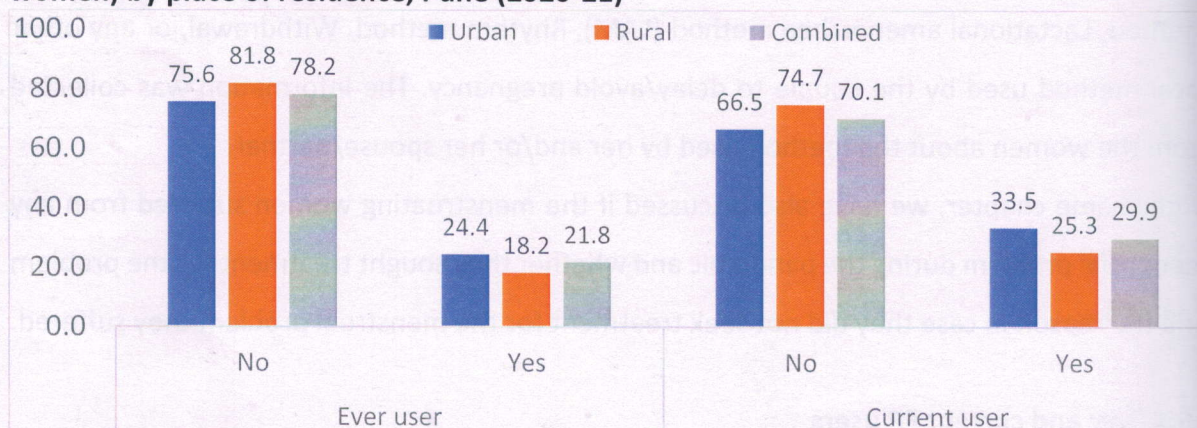


Figure 6.1B: percent distribution Current users by method by place of residence, Pune (2020-21)

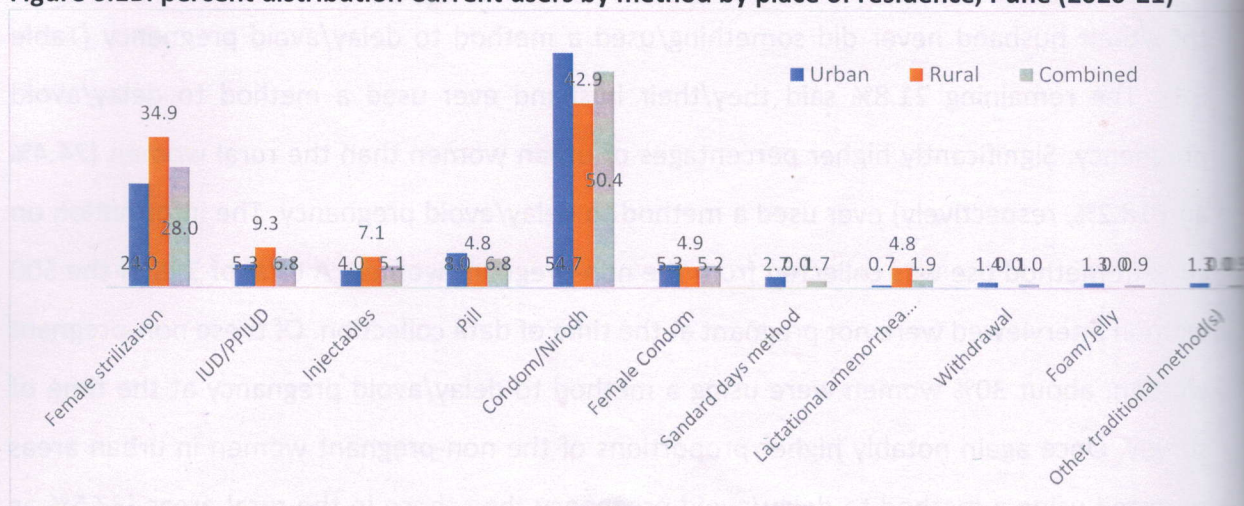


Table 6.1: Ever and current users of family planning method and method currently used by place of residence, Pune (2020-21)

Indicator	Urban	Rural	Combined
Ever used anything to delay/avoid pregnancy			
No	75.6	81.8	78.2
Yes	24.4	18.2	21.8
Number of women	291	209	500
Currently using anything to delay/avoid pregnancy			
No	66.5	74.7	70.1
Yes	33.5	25.3	29.9
Number of women currently not pregnant	224	174	398
Method currently using			
Female sterilization	24.0	34.9	28.0
Male sterilization	0.0	0.0	0.0
IUD/PPIUD	5.3	9.3	6.8
Injectable (Anthara)	4.0	7.1	5.1
Oral Pill	8.0	4.8	6.8
Condom/Nirodh	54.7	42.9	50.4
Female condom	5.3	4.9	5.2
Diaphragm	0.0	0.0	0.0
Foam/Jelly	1.3	0.0	0.9
Standard days method	2.7	0.0	1.7
Lactational amenorrhea method	0.0	0.0	0.0
Rhythm method	0.0	0.0	0.0
Withdrawal	0.0	0.0	0.0
Other traditional method(s)	1.3	0.0	0.9
Other modern method(s)	0.0	0.0	0.0
No. of women currently using a method	75	44	119

Currently use: traditional methods

The data shows that the traditional methods are relatively less common in the study area. About 2% of the couples (all in the urban areas and none of reported in rural areas) reported using standard days method. Fewer of 1% couples (all in the urban areas) use other traditional method to delay/avoid pregnancy. None of the women reported using Lactational amenorrhea method, rhythm method, withdrawal method and any other modern method to delay/avoid pregnancy.

6.2 Sterilization use during pandemic

Table 6.2 provides information on the timing of sterilization (before or during pandemic), place of sterilization, choice of place for sterilization, money spent on sterilization and cash incentive received for sterilization by the women who underwent sterilization during the pandemic by place of residence. Out of the 33 users of sterilization (both male and female),

60.6% had been sterilized before pandemic, that is, before March 1, 2020. The remaining 39.4% got sterilized during the pandemic, that is, between March 1, 2020 and survey date. Considerably higher proportion of women in the urban areas (50%) than the rural areas (26.7%) informed that they got sterilized during the pandemic. 46.2% of the couples were sterilized at a public health facility and the remaining at a private health facility including NGO/charitable trust hospitals. Slightly higher percentages of rural couples had sterilization done at a private health facility.

Table 6.2: Timing of sterilization, place of sterilization, choice of place for sterilization, money spent on sterilization and cash incentive received for sterilization by the women who underwent sterilization during the pandemic by place of residence, Pune (2020-21)

Indicator	Urban	Rural	Combined
Timing of sterilization			
Before pandemic (Before March 1, 2020)	50.0	73.3	60.6
During pandemic (March 1, 2020 or later)	50.0	26.7	39.4
No. of women using sterilization (male+female)	18	15	33
Place of sterilization during pandemic			
Public Health Facility including Anganwadi	44.4	50.0	46.2
Private Health Facility incl. NGO/Trust & Others	55.6	50.0	53.9
Place of sterilization same as preferred place normally			
No	11.1	0.0	7.7
Yes	88.9	100.0	92.3
Money spent on sterilization			
Free	55.6	25.0	46.2
Up to 1500	11.1	25.0	15.4
More than 1500	11.1	0.0	7.7
Do not remember	22.2	50.0	30.8
Median money spent	1750	1000	1500
Received incentive for sterilization			
No	90.0	75.0	85.7
Yes	10.0	25.0	14.3
No. of couples got sterilized during pandemic	9	4	14

Although the place of sterilization during pandemic was same as the usual place of choice for majority of the couples (92.3%), 7.7% of the couples (all in the urban areas) reported that the place where they had their sterilization done was not a usual place of choice. 46.2% of the women reported that they did not spend any money on sterilization. Notably higher percentage of women in the rural areas (55.6%) compared to the urban areas (25%) did not spend any money on sterilization. However, 7.7% reported that they spent more than rupees 1500; much higher in the urban areas (11.1%) and in rural areas (0%). The median money spent on sterilization was rupees 1500. 14.3% of woman received cash incentive of rupees

600 for sterilization, higher percentage of women in the rural areas (25%) and urban (10%). others did not receive any incentive by the time data was collected.

6.3 Modern spacing method use during pandemic

Table 6.3 provides relevant data on the time of initiation of use of modern spacing method (before or during pandemic), source of obtaining the method, money spent on the method and difficulties faced in obtaining the method during the pandemic by place of residence. The data suggest that of all current users of modern spacing methods, 33.7% had started using the method before March 1, 2020 and remaining 66.3% started using method during pandemic.

Considerably higher percentages of urban women than the rural women (68.4% versus 62.1%) started to use method during the pandemic. The women were further asked about the place from where they received the method the last time. Among the user, 86% reported that they obtained the method the last time from a public health facility (including ICDS), 10.5 % got it from the private health facility including NGO/Charitable trust hospitals or medical shop etc. and 3.5% obtained it from their husband, friend, relative and others.

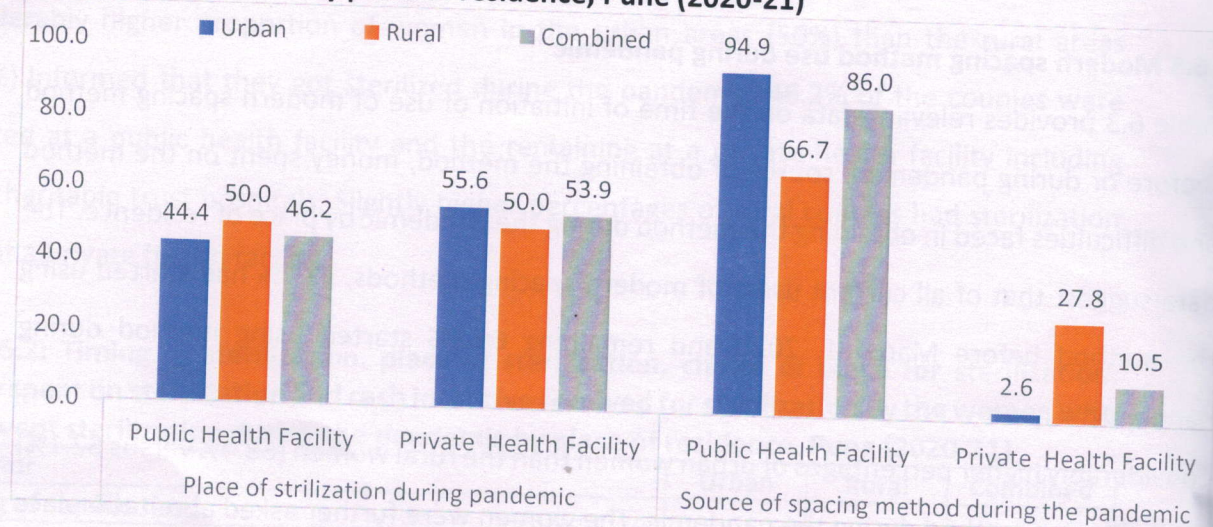
Table 6.3: Timing of initiation of modern spacing method, source of obtaining the method, money spent on the method and difficulties faced in obtaining the method during the pandemic by place of residence, Pune (2020-21)

Indicator	Urban	Rural	Combined
Initiation of use of modern spacing method			
Before pandemic (Before March 1, 2020)	31.6	37.9	33.7
During pandemic (March 1, 2020 or later)	68.4	62.1	66.3
User of modern spacing methods at the time of survey	57	29	86
Place obtained the method the last time			
Public Health Facility including Anganwadi	94.9	66.7	86.0
Private Health Facility incl. NGO/Trust & Others	2.6	27.8	10.5
Husband/Friends/Relatives/Others	2.6	5.6	3.5
Money spent on sterilization			
Free	92.3	66.7	84.2
Some money spent	2.6	5.6	3.5
Do not remember	5.1	27.8	12.3
Experienced difficulty in getting method			
No	100.0	100.0	100.0
Yes	0.0	0.0	0.0
No. of couples obtained method during pandemic	39	18	57

84.2% of the women did not spend any money on the method as they got it for free, however, 3.5% did spend some money. None of the women reported experiencing any difficulty in

obtaining the method during the pandemic, true for urban and rural areas as well.

Figure 6.2: Place of sterilization and source of modern spacing method for most recent use during the pandemic by place of residence, Pune (2020-21)



6.4 Side effects of method used during pandemic

Women did not experience any side effect of the method they use during the pandemic. Same in urban and rural areas.

6.5 Reason for current non-use of FP

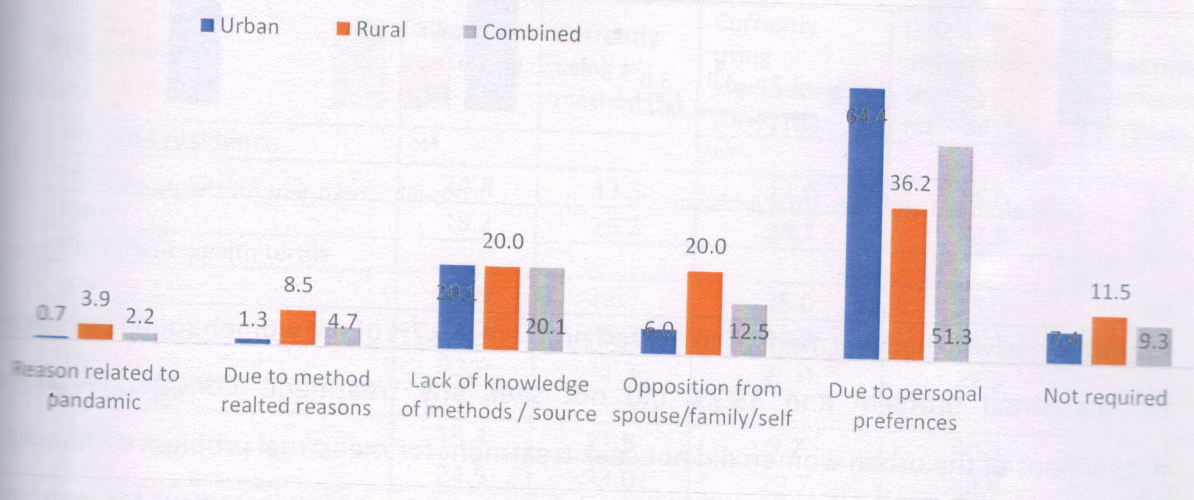
Table 6.5 provides information on reason for not using any family planning at the time of survey by place of residence. We have presented the results in the six broad categories of – reasons related to pandemic, method related reasons, lack of knowledge of method and/or source of obtaining the method, opposition from family, spouse or self, due to personal preferences or not required. Pandemic related reasons included – non availability of services, fear of infection if go to hospital, difficulty in reaching facility, non-availability of transport, non-availability of staff, restrictions on movement etc. The method related reasons included – pain/bleeding after use of method, health problems, fear of side effects, lack of access, cost of method, difficulty/inconvenience in getting/using the method, interference of the method with normal processes of the body. Opposition to use method included opposition by woman herself, husband, other family members, religious prohibition. Personal preferences included – do not like existing methods, afraid of sterilization/method. Not required included - want to have child, not having sex, infrequent sex, husband away, up to God, menopause, hysterectomy, sub-fecund/infecund, post-partum amenorrhea.

The data shows that 51.3% women reportedly did not use a method due to personal preferences followed by 'not required' (9.3%). 20% of women (same in the rural and urban areas) did not use a method as they lack knowledge about method and/or sources for obtaining the method. Further, 12.5% of the women (6% in urban areas and 20% in rural areas) reported nonuse due to method related reasons or opposition from family/spouse/self. Only 2.2% women reasoned nonuse due to pandemic conditions.

Table 6.4: Reason for currently not using any method to delay/avoid pregnancy by place of residence, Pune (2020-21)

Indicator	Urban	Rural	Combined
Reason related to pandemic	0.7	3.9	2.2
Due to method related reasons	1.3	8.5	4.7
Lack of knowledge of methods / source	20.1	20.0	20.1
Opposition from spouse/family/self	6.0	20.0	12.5
Due to personal preferences	64.4	36.2	51.3
Not required	7.4	11.5	9.3
No. of non-users	149	130	279

Figure 6.3: Reasons (in %) for currently not using family planning method by place of residence, Pune (2020-21)



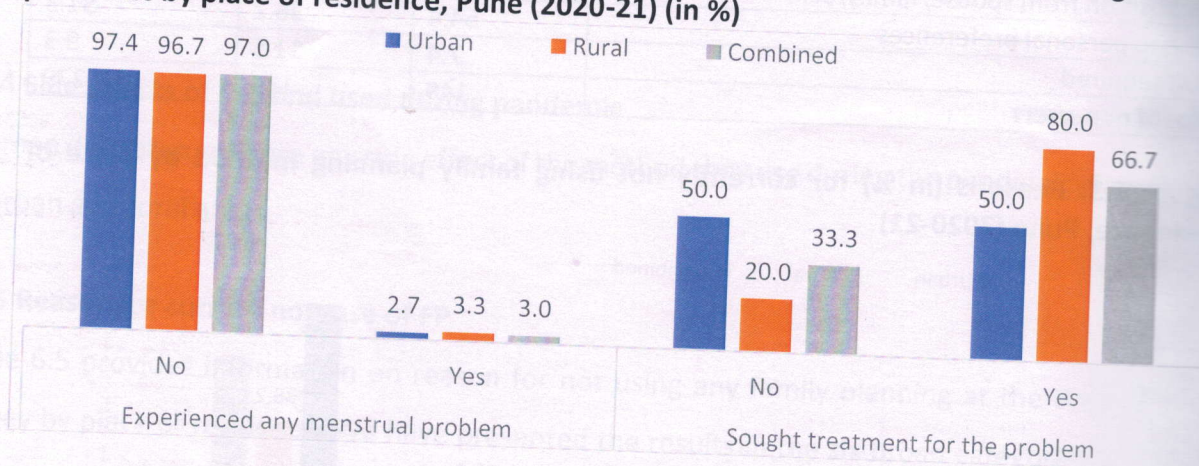
6.5 Menstrual problems and treatment seeking during pandemic

Table 6.6 provides information on the current menstruation status of the women, their experience of any menstrual problem, type of menstrual problems experienced and treatment seeking, and the reason for not seeking treatment for menstrual problem during pandemic by place of residence. Of 398 non-pregnant women, 76.1% were menstruating at the time of survey. Three percent of the menstruating women experienced any menstrual problem during the pandemic; almost same in urban and rural areas.

Table 6.5: Experience of any menstrual problem, type of menstrual problem and treatment seeking during pandemic by place of residence, Pune (2020-21)

Indicator	Urban	Rural	Combined
Currently menstruating			
No			
Yes	32.6	12.6	23.9
No. of women	67.4	87.4	76.1
Experienced any menstrual problem during pandemic	224	174	398
No			
Yes	97.4	96.7	97.0
No. of menstruating women	2.7	3.3	3.0
Sought treatment for the menstrual problem	151	152	303
No			
Yes	50.0	20.0	33.3
No. experienced menstrual problem during pandemic	4	5	9

Figure 6.4: Women experiencing menstrual problem and treatment seeking during pandemic by place of residence, Pune (2020-21) (in %)



Among those who had any menstrual related problem, 66.7% of the women sought treatment for menstrual problem and 33.7% did not seek any treatment. Considerably higher proportions of the urban women did not seek treatment for menstrual problem compared to the rural women (50% versus 20%). Three women who did not seek treatment for menstrual problem during pandemic reported that the problem 'was not severe' and one woman in the urban areas did so as her family did not allow them to go outside due to fear of COVID19 infection.

6.7 Selected indicators by background characteristics

Table 6.7 provides information on a few indicators by the background characteristics of the women. Higher percentages of women from urban area, belongs to rich households, older

women and women from other backward caste ever used or currently using a method to delay/avoid pregnancy than their counterparts in other groups. Ever or current use was higher among women with low education. Use of sterilization was higher among women belongs to middle economic households, from rural area, those aged 35 years or older, among Hindu and Christian women, those from scheduled castes and other backward classes and among those who had less education compared to their respective counterparts. In contrast, spacing method use was more common among urban areas, women from rich households, younger women, general castes and those with higher education.

As far as menstruation related problem is concerned, women from rural area, from low economic status, belong to 25-34 years' age cohort, follower of Hindu religion, belongs to scheduled caste and with less than five years of schooling reported higher experience of menstrual related problems than their respective counterparts.

Table 6.6: Percentages of ever user, current users, users of sterilization, modern spacing methods, and women experienced menstrual problem during pandemic by place of residence, Pune (2020-21)

Characteristics	Ever used a method (%)	Currently using a method (%)	Currently using sterilization (M+F) (%)	Currently using modern spacing method (%)	% experienced menstrual problem
Place of residence					
Urban	24.4	33.5	24.0	76.0	2.7
Rural	18.2	25.3	34.1	63.6	3.3
Household wealth tertile					
Low	16.8	22.9	25.0	75.0	3.5
Medium	24.7	36.2	31.9	68.1	2.1
High	23.9	31.3	25.0	72.5	3.2
Woman age					
15-24	15.3	21.5	9.7	90.3	0.9
25-34	24.5	33.0	29.7	68.9	4.8
35-49	38.7	46.7	57.1	42.9	0.0
Woman religion					
Hindu	21.4	30.5	27.2	71.8	3.5
Muslim	13.3	22.2	0.0	100.0	0.0
Christian	50.0	25.0	100.0	0.0	0.0
Other religions	23.1	27.9	25.0	75.0	0.0
Woman caste					
Scheduled castes	23.6	29.7	31.8	68.2	5.8
Scheduled tribes	30.6	38.7	50.0	50.0	0.0
Other backward castes	28.3	39.1	25.9	70.4	1.8
Others (General castes)	18.0	25.9	22.4	77.6	3.0
Woman education					
< 5 years	22.2	38.5	60.0	40.0	12.5

5 to 9 years	16.7	22.2	90.0	10.0	0.0
10 to 12 years	19.9	27.4	22.8	77.2	3.7
More than 12 years	26.2	35.6	17.0	80.9	1.9
Overall	21.8	29.9	27.7	71.4	3.0

Table 2: Percentage of ever user, current user, users of sterilization, and spacing method, and women experienced menstrual problem during reproductive life of women (2020-21)

Region	Ever user (%)	Current user (%)	Users of sterilization (%)	Users of spacing method (%)	Women experienced menstrual problem (%)
Barisal	24.4	32.2	24.0	28.0	2.1
Chittagong	18.2	22.3	21.1	23.8	3.2
Dhaka	18.8	23.9	22.0	22.0	3.2
Khulna	22.9	21.3	22.0	22.8	3.2
Moulvibazar	22.2	21.0	22.0	22.0	3.2
Rajshahi	24.2	32.0	20.7	24.0	4.8
Sylhet	21.4	21.2	21.2	21.2	3.2
Tangail	20.0	22.0	20.0	20.0	0.0
Comilla	23.1	23.8	22.0	22.0	2.0
Barisal	23.6	22.2	21.8	22.2	2.2
Chittagong	20.6	22.1	20.0	20.0	0.0
Dhaka	18.0	22.9	22.4	22.4	3.0
Khulna	22.2	22.2	20.0	20.0	2.2