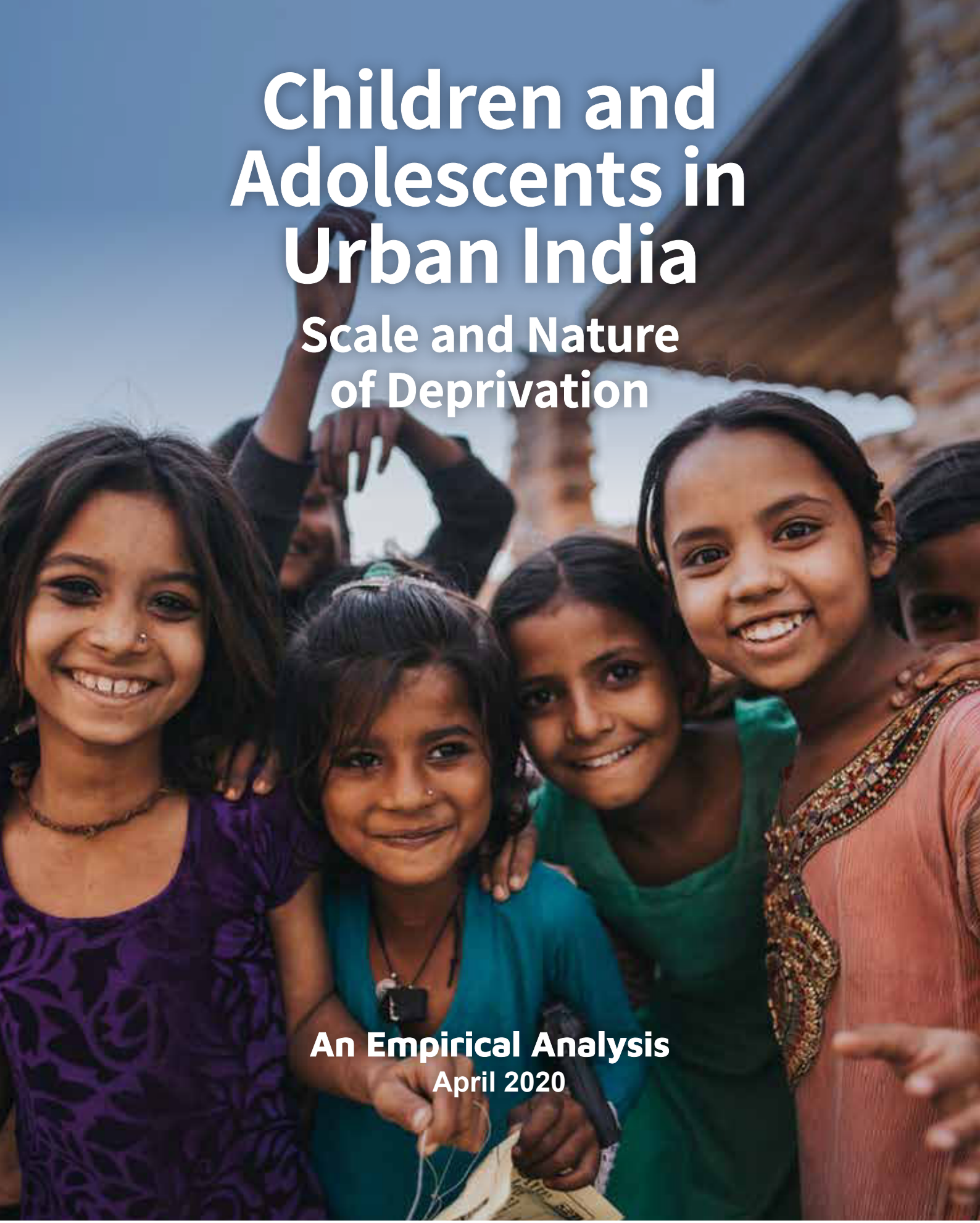
Children and Adolescents in Urban India

Scale and Nature of Deprivation



An Empirical Analysis

April 2020

Supported by:

unicef for every child

National Institute of Urban Affairs

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Foreword

Urban India is home to the largest number of children and adolescents in the world. They have a significant contribution in determining the developmental trajectory of urban India. The Sustainable Development Goals (SDGs) of the United Nations recognise early childhood and adolescence as a significant phase of development throughout the lifespan of an individual, which forms the basis of later life outcomes. In fact, SDGs on poverty (goal 1), zero hunger (goal 2), good health and well-being (goal 3), quality education (goal 4), gender equality (goal 5), clean water and sanitation (goal 6), reduced inequality (goal 10), sustainable cities and communities (goal 11) are directly linked to the overall development of children and adolescents. Achievement of these goals would be a positive move towards the implementation of the 'New Urban Agenda' (Habitat III, 2016), leaving no one behind in the process of development. The principle is that cities need to invest in their clusters of human capital. At this juncture, it is important to understand the scale and nature of deprivation among children and adolescents in India.

The United Nations Children's Fund (Delhi office) has entered into a research collaboration with National Institute of Urban Affairs (NIUA). Under this collaboration, this research study titled 'Scale and Nature of Deprivation among Children and Adolescents in Urban India: An Empirical Analysis' has been undertaken. The broad objective of this study is to assess the situation of children and adolescents across various thematic areas like survival and health, nutrition, water, sanitation and hygiene (WASH), education, employment, violence and crime, exposure to mass media/social media/internet for children and adolescents living in urban India.

This report is the outcome of a year-long research project undertaken by a team of researchers at NIUA. I firmly believe that the findings from this report will ignite a fresh public discourse and pave the path for achieving the SDGs. The success of this endeavour will entirely depend on how the findings from this report are used in making policies more inclusive and evidence based to improve the status of disadvantaged children and adolescents.

Hitesh Vaidya
Director, NIUA

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Debolina Kundu
Professor, NIUA

Team Leader
Debolina Kundu

Research
Rakesh Mishra
Biswajit Kar
Tania Debnath
Arvind Pandey
Varsha Pandey
Ankita Shukla
Rayhan SK

Management
Pragya Sharma

Data Support
Sangeeta Vijh
T. C. Sharma

Copy Editing
Razia Grover

Design Team
Deep Pahwa
Devender S Rawat
Bhavnesh Bhanot
Preeti Shukla

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Acronyms

AGEGC	:	Agriculture-related Activities Excluding Growing Crop
AMRUT	:	Atal Mission for Rejuvenation of Urban Transformation
ARI	:	Acute Respiratory Infection
ASAR	:	Age Specific Attendance Ratio
ASSAR	:	Age Specific School Attendance Rate
ASER	:	Annual Status on Education Report
BMGF	:	Bill and Melinda Gates Foundation
BNP	:	Balwadi Nutrition Programme
BPL	:	Below Poverty Level
CRY	:	Child Rights and You
DLHS	:	District Level Household and Facility Survey
DRC	:	District Report Card
Gen	:	General (Others)
GER	:	Gross Enrolment Ratio
Govt.	:	Government
HHs	:	Households
HIV	:	Human Immunodeficiency Virus
IAMAI	:	Internet and Mobile Association of India
ICDS	:	Integrated Child Development Services
IFA	:	Iron and folic acid
IIPS	:	International Institute for Population Sciences
IMR	:	Infant Mortality Rate
ILO	:	International Labour Organisation
IPC	:	Indian Penal Code
IPEC	:	International Programme for Elimination of Child Labour
JMP	:	Joint Monitoring Programme
JNNURM	:	Jawaharlal Nehru Urban Renewal Mission
MAD	:	Minimum Acceptable Diet
MCTS	:	Mother and Child Tracking System
MDD	:	Minimum Dietary Diversity
MMF	:	Minimum Meal Frequency
MIS	:	Management Information System
MPCE	:	Monthly Per Capita Expenditure
MoHA	:	Ministry of Home Affairs
MoHRD	:	Ministry of Human Resources Development
MoHUA	:	Ministry of Housing and Urban Affairs
MoSPI	:	Ministry of Statistics and Programme Implementation
MoYAS	:	Ministry of Youth Affairs and Sports
NAPP	:	National Anaemia Prophylaxis Programme
NAS	:	National Achievement Survey
NCERT	:	National Council of Educational Research and Training

NCLP	:	National Child Labour Policy
NCO	:	National Classification of Occupations
NCRB	:	National Crime Records Bureau
NER	:	Net Enrolment Ratio
NFHS	:	National Family and Health Survey
NIC	:	National Industrial Classification
NIEPA	:	National Institute of Educational Planning and Administration
NIUA	:	National Institute of Urban Affairs
NNACP	:	National Nutritional Anaemia Control Programme
NHP	:	National Health Policy
NNMR	:	Neonatal Mortality Rate
NPP	:	National Population Policy
NRHM	:	National Rural Health Mission
NSS	:	National Sample Survey
NSSO	:	National Sample Survey Office
OBCs	:	Other Backward Classes
PwC	:	PricewaterhouseCoopers
PoLR	:	Place of Last Residence
POSHAN	:	Prime Minister's Overarching Scheme for Holistic Nutrition
PLFS	:	Periodic Labour Force Survey
RAY	:	Rajiv Awas Yojana
RCH	:	Reproductive Child Health
RMNCH+A	:	Reproductive, Maternal, Newborn, Child and Adolescent Health
RtE	:	The Right of Children to Free and Compulsory Education (Shortly the Right to Education Act), 2009
SBM	:	Swachh Bharat Mission
SCs	:	Scheduled Castes
SDGs	:	Sustainable Development Goals
SNA	:	System of National Accounts
SRC	:	State Report Card
SSA	:	Sarva Shiksha Abhiyan
STs	:	Scheduled Tribes
SUN	:	Scaling Up Nutrition
U5MR	:	Under Five (5) Mortality Rate
U-DISE	:	Unified District Information System on Education
ULBs	:	Urban Local Bodies
UNICEF	:	United Nations International Children's Emergency Fund
UNIGME	:	United Nations Inter-Agency Group for Child Mortality Estimation
UMPCCE	:	Usual Monthly per Capita Consumption Expenditure
UPAS	:	Usual Principal Activity Status
USS	:	Usual Subsidiary Status
VAMBAY	:	Valmiki Ambedkar Awas Yojana
WASH	:	Water, Sanitation and Hygiene
WFP	:	World Food Programme
WHO	:	World Health Organisation
WNP	:	Wheat-based Supplementary Nutrition Programme
WPR	:	Work Participation Rate

Technical Notes

Ability to Operate a Computer: Ability to operate a computer refers to carrying out any of the tasks, like, copying or moving a file or folder; using copy and paste tools to duplicate or move information within a document; sending e-mails with attached files (e.g. document, picture, and video); using basic arithmetic formulae in a spreadsheet; connecting and installing new devices (e.g. modem, camera, printer); finding, downloading, installing and configuring software; creating electronic presentations with presentation software (including text, images, sound, video or charts); transferring files between a computer and other devices; Writing a computer program using a specialised programming language.

Basic Handwashing: To obtain basic handwashing information, interviewers were asked to see the place where members of the household most often wash their hands. Given that the place of handwashing is ascertained, the availability of both water and soap at the place of handwashing was considered for the estimation of basic handwashing facilities in India (IIPS and ICF, 2017; Croft et al., 2018).

Basic Sanitation: Basic sanitation for a household is computed if the sanitation facility belongs to either of these categories: Flush/pour flush to piped sewer system, Flush/pour flush to septic tank, Flush/pour flush to pit latrine, Ventilated improved pit (VIP) latrine/biogas latrine, pit latrine with slab, twin pit, composting toilet. These facilities would be considered basic sanitation if the houehold facility is not shared by any other household (IIPS and ICF, 2017; Croft et al., 2018).

Basic Water: Basic water, as per the JMP ladder includes access to improved sources of water, provided the collection time is not more than 30 minutes for a roundtrip, including queuing (WHO-UNICEF, 2008; Croft et al., 2018).)

Casual Wage Labourers: Persons employed in other person's enterprises on a casual basis and get paid a wage in return for a daily or a periodic contract.

Children Full Immunisation: Children Full Immunisation for children aged 12-23 months refers to coverage of eight vaccinations which includes one BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertusis, and tetanus (DPT); at least three doses of polio vaccine; one dose of measles vaccine (World Health Organization 2001).

Employment in Informal Sector: Informal sector workers are defined as those who are employed in proprietary or private-partnership based enterprises and household enterprises. This sector excludes all agricultural workers (crop production). Plantation, fishery and allied activities are included in this sector.

Hazardous Industries: The list of occupations and processes have been outlined in the Child Labour (Prohibition and Regulation) Amendment Act 2016. According to this amendment act, a list (Part A) of occupations and processes has been defined where the adolescents (15-17 yrs) are prohibited from working, and children (5-14 yrs) are prohibited from helping. Another list (Part B) has occupations/processes that have been listed where children are even prohibited from helping, even as unpaid labour. Therefore, the present study has defined all the occupations/processes (mentioned in Part A & B) provided in both the lists to define hazardous work

for children, while Part A defines hazardous work specifically for young adolescents. In the present context, hazardous occupations and processes have been identified based on the NIC spell out 2008 5-digit list. As the 3-digit NCO spell out 2004 has been used in the NSS 68th round and the PLFS, 2017-18, the occupations mentioned in the list (Part A of the list) cannot be identified using this broad categorisation. Also, this classification excludes some of the occupations and processes which could not be identified through NIC 2008 (see Annexure I). Furthermore, all agricultural crop production and related activities have been excluded from the exercise. Therefore, only the remaining categories (excluding agricultural crop-production) have been considered here.

A large number of working children are engaged in various hazardous occupations. According to ILO Convention No. 182, all hazardous work comes under the worst form of labour. However, other forms of labour/ wage earning such as begging, prostitution cannot be quantified using the list of industries and occupations. Therefore, they have also been excluded from the analysis, and have been discussed in section I2. For the purpose of this study, the above mentioned list of occupations will be termed as 'hazardous industries'.

Infant Mortality Rate: Defined as the number of deaths under one year of age occurring among the 1000 live births during a given year.

Informal Employment: Informal employment constitutes those non-agricultural workers who have either no job security or social security. NSSO surveys on 'Employment and Unemployment' cover information about the nature of job security (whether there is any written job contract) and social security (such as paid leave or other methods of ensuring social security). Therefore, workers who either have no written job contract or no social security benefits (paid leave is not included as a large section of working children get paid leave but are in a vulnerable condition by which they come under the category of informal employment) have been considered as an informal workers. All workers engaged as unpaid family workers are also considered informal workers.

Low Birth Weight: If the weight of a child at the time of birth is found to be less than 2500 g (5.5 lb) is considered as low birth weight (World Health Organization, 2012)

Migrant: Census of India defines a migrant based both on Place of Birth (PoB) and Place of Last Residence (PoLR). If a person's place of birth is different from his/her place of enumeration, the person is considered a migrant based on the Place of Birth definition. On the other hand, a person is considered as migrant based on the Place of Last Residence criteria, if his place of the last residence is different from his place of enumeration (Registrar General of India, 2011)

Minimum Dietary Diversity: Defined as the consumption of four or more food groups from the seven food groups for higher dietary quality and to meet daily energy and nutrient requirements of the seven recommended food groups namely: grains, roots and tubers; legumes and nuts; dairy products; flesh foods (meat, fish, poultry and organ meats); eggs; vitamin-A rich fruits and vegetables; other fruits and vegetables (World Health Organization, 2003).

Minimum Meal Frequency: A minimum meal frequency for breastfed children includes receiving solid, semi-solid, or soft foods at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months. While for non-breastfed children of ages 6-23 months, they are considered to be fed with a minimum meal frequency if they receive solid, semi-solid or soft foods at least four times a day (World Health Organization, 2003).

Minimum Acceptable Diet: MAD is a composite indicator of two groups computed on the children aged 6-23 months.This includes breastfed children aged 6-23 months who have at least the minimum dietary diversity and minimum meal frequency during the previous day. While for non-breastfed children aged 6-23 months, MAD includes at least two milk feedings and at least four minimum dietary diversity and minimum meal frequency (IIPS and ICF, 2017; World Health Organization, 2003).

Neonatal Mortality Rate: Defined as the probability of dying during the first 28 completed days of life per 1000 live births in a given year.

Nowhere Children and Adolescents: Children and adolescents who are neither attending educational institutes

nor engaged in any economically gainful activities by principal status and not engaged in any economically gainful activities by subsidiary status during the reference period of 365 days preceding the date of the survey are categorised as 'nowhere'. This category includes those who are engaged in domestic duties on an unpaid basis, beggars, rentiers, and those engaged in commercial prostitution.

Overweight: Number of children under five years of age are considered to be overweight whose weight-for height Z-score is above +2 standard deviations above the mean on the WHO's child growth standard.

Own Account Worker and Employer: NSO defines self-employed workers as those who work in their own enterprises. Self-employed workers are further divided into three types: 1) Own Account Workers, 2) Employers, and 3) Unpaid Family Labour. Own account workers are defined as those who operate their enterprises on their own and do not hire any paid worker during the reference period. However, they may take the help of a family member. On the other hand, employers are defined as those who operate their enterprises but hire paid workers during the reference period.

Poor and Non-poor: There are several ways to classify households as 'poor' and 'non-poor's, based on available information in the source of data. It is possible to classify households (HHs) as 'poor' and 'non-poor' by wealth quintile classes or consumption expenditure. In National Family Health Survey-4 (2015-16), the classification of 'poor' and 'non-poor' is based on the national wealth quintile classes for urban India. For the purpose of this study, the bottom two wealth quintile classes have been classified as 'poor' while the top three quintile classes are termed as 'non-poor.'

Wealth quintile classes are not available in the various round of the National Sample Survey (2017-18). Instead, the usual monthly per capita consumption expenditure (UMPCCE) is available, which has been used as a proxy variable to the economic status of households. The bottom two UMPCCE quintile classes of households have been categorised as 'poor' and the top three quintile classes as 'non-poor'.

Proficiency in Learning Outcomes: Students' results on NAS 2017 in terms of performance standards are expressed by the percentage of students attaining each performance level. Since the desired levels are 'proficient' and 'advanced', student performance is commonly expressed by a simple index—the percentage of students attaining the two top levels (proficient and advanced). When looking at the overall national performance across all subjects and classes, the aggregated percentages of students demonstrating achievement at different levels are the following: advanced 13.5 per cent, proficient 31.7 per cent, basic 38.2 per cent, and below basic 16.6 per cent. Thus, there is a total of 45.2 per cent of students achieving the targeted performance levels (proficient and advanced), which leaves an overall 54.8 per cent of students that need improvement (basic and below basic) as they are achieving below the desired levels (NAS National Report, 2017, 138).

In this study, the basic or desired level of proficiency includes both proficient and advanced categories. It is not possible to do a disaggregated analysis for the poor and non-poor. Instead, a comparative analysis of rural and urban has been attempted in this study.

Learners at basic (desired) proficiency level have at least acquired most of the learning outcomes and skills required by the curriculum. They can work independently with minimum supervision. They have a systematic methodology to solve problems. They can communicate their ideas clearly and also connect different ideas and create meaning with minimum guidance and supervision. They can analyse situations and interpret information for application to new situations.

Regular Salaried Worker: Those who work in other's enterprises and get a wage or salary on a regular basis (monthly, fortnightly, or weekly).

Safely Managed Water: Safely managed water as per the Joint Monitoring Programme by UNICEF and WHO includes improved sources located on-premises, available when needed, and free from microbiological and priority chemical contamination.

Our approximation to this definition of SMW includes improved sources located on-premises, available within 30 minutes, and treated before use. The treatment of water includes boiling, addition of bleach/ chlorine, use of filter, cloth for straining water, solar disinfectant, alum or electric purifier.

Enrolment and Attendance : In education terminology, 'enrolment' and 'attendance' are two different concepts. 'Enrolment' refers to the admission of children in a school while 'attendance' designates the turnout of children in school throughout the year. In this study, the attendance status of children has been used to explore access to schools.

Studying Only: Children and adolescents are categorised as 'studying only' if they reported that they are attending educational institutions as their principal activity status, that is, they have spent maximum time attending educational institutes within the reference period. Therefore, this category excludes those who are attending educational institutions as their principal status, while being economically active by subsidiary status.

Stunting: The number of children under five years of age are considered to be stunted if their height-for age Z-score is less than -2 standard deviations below the mean on the WHO's child growth standard. Stunting is a standard measure of chronic malnutrition which looks at height appropriated age.

Transition Rate: In order to trace the flow of students from one stage to another, 'transition rate' is used. Transition rate from primary to upper primary is defined as percentage share of new entrants into class VI in year 't +1' to enrolment at class V in year 't'. The transition rate, thus computed, is nothing but the promotion rate between the final grade of a stage and the first grade of the next stage.

Under Five Mortality Rate: Defined as the probability of a child born in a specific period dying before reaching the age of 5 years, expressed per 1000 live births.

Underweight: Number of children under five years of age are considered as underweight if their weight-for age Z-score is less than -2 standard deviations below the mean on the WHO's child growth standard. Underweight is an outcome of both chronic and acute malnutrition which looks at weight appropriated age

Unpaid Family Labour: Unpaid family labour is a part of the category of self-employed workers who work in an enterprise owned by one or more family members. They provide their services without getting any enumeration.

Wasting: Number of children under five years of age are considered to be wasted whose weight-for height Z-score is less than -2 standard deviations based on the WHO's child growth standard. Wasting is a standard measure of acute malnutrition which looks at weight appropriated height.

Working Children and Child Labour: The concept of 'child labour' is a legal rather than a statistical concept. It is only a subset of total working children. A working child is the one who has been economically active or engaged in paid or unpaid work during a reference period. On the other hand, "the term child labour refers to the subset of children's work that is injurious, negative or undesirable to children and that should be targeted for elimination" (Khan and Lyon, 2015). Internationally, the ILO Convention on the Minimum Age to Employment, 1973 (no. 138), Convention on the Worst Forms of Child Labour, 1999 (no. 182), and UN Convention on the Rights of the Children set the legal parameters for defining child labour. According to these conventions, the minimum legal age for any kind of work is 14 years for developing countries, and any kind of hazardous employment below the 18-year age is considered as child labour. Therefore, the age covered to deal with the issue of working children has been confined to 5-17 years. This ILO report on South Asia has defined 5-14 years as children, whereas 15-17 years have been defined as older children.

In Indian context**,** according to the legal framework of the Child Labour (Prohibition and Regulation) Amendment Act, 2016, all kinds of working which hampers the physical and mental growth of children (14 years has been set as a lower limit) and all hazardous work among adolescents below the 18-year age group have been prohibited.

Working Children and Adolescents: Working children and adolescents are those who were employed for more than 30 days during a reference period of 365 days before the date of the survey. NSSO defines the reference period as the usual status and further classifies it into two categories: 1) usual principal status, and 2) usual subsidiary status. The first is defined as a worker by usual principal status if he/she worked for a relatively longer period (using time criteria) within the reference period. On the other hand, the second is defined as a worker by subsidiary status if he/she was economically active for not less than 30 days in a reference period.

Executive Summary

India is home to the largest number of children in the world. In 2011, there were 135.5 million children and adolescents (0-19 years) in urban India comprising over one-third (35.9%) of the total urban population (Census, 2011). It is believed that children in urban areas are likely to benefit from 'urban advantage' as these areas have better infrastructure for education, health and sanitation as compared to those in rural areas. At the same time, inequality and exclusion are also prominent characteristics of urban areas termed as 'urban penalty'. In the context of India, the urban penalty outpaces the urban advantage in many aspects.

Focusing on children and adolescents in urban India, this study tries to identify the rural-urban differentials and the regional pattern of inequality and exclusion in six thematic areas, namely, 1) health and survival, 2) nutrition, 3) sanitation and hygiene (WASH), 4) education, 5) employment, and 6) crime and violence. It tries to understand the differential dynamics of children and adolescents across gender, economic categories (poor vs. non-poor) and different residential neighbourhoods (slum vs. non-slum). It also examines the determining factors of current demographic, social and economic status of children and adolescents. The study also reviews the policies and programmes of the government related to children and adolescents in urban India and develops an advocacy plan for rights based interventions.

The study is based on the analysis of secondary data. It uses data from Population Census of India, National Family Health Survey (NFHS), National Sample Survey (NSS), Unified District Information System for Education (U-DISE), and National Crime Records Bureau (NCRB). In the absence of data on crime against children at a disaggregated level, content analyses of crime related news from four regional editions of a leading national newspaper was used to complement the empirical database.

The key findings of the study under the six thematic areas are as follows:

Health and Survival

- High infant and child mortality, diarrhoea, anaemia and malnutrition still plague children living in poor urban settings.
- Inter-state inequality still persists in infant and child mortality rates in urban India. These disparities are the consequences of lack in universal, affordable, equitable and effective health coverage and healthcare facilities.
- Urban poor children of Uttar Pradesh, Madhya Pradesh and Chhattisgarh need more attention with regard to child survival. More than 63 per 1,000 urban poor children in these states die before reaching the age of five years.
- The unmet need for family planning is still high among both all-urban and urban poor adolescent girls in India— more than one in every five has this unmet need.

Nutrition

- More than one in every three urban poor children had a height and weight-inappropriate age in 2015 16. In addition, one in every five urban poor children were reported to be wasting. There is incidence of undernutrition both among children and adolescents in several Empowered Action Group (EAG) states and Gujarat, especially among the urban poor.
- About one in every two adolescents in urban India was found to be anaemic. The decline in the level of anaemia among adolescents living in slums was higher compared to overall urban and rural counterparts. Three in every five adolescent girls from poor urban households of Telangana, Jharkhand, Andhra Pradesh and West Bengal were found to be anaemic.

Water, Sanitation and Hygiene (WASH)

- A considerable share of the urban poor households is still deprived of piped water, especially in the states of West Bengal, Assam and Odisha.
- The coverage of basic handwashing practices is low in schools in urban areas.
- Urban poor households in Bihar, Uttar Pradesh, West Bengal and Delhi have the least access to safely managed water (SMW).
- The gap in utilisation of basic sanitation between the urban poor and overall urban is high in Maharashtra, Delhi, Gujarat and West Bengal.

Education

- Urban India has been able to increase the Gross Enrolment Ratio, although a considerable share of poor school-age children (6-17 years) are found to be not attending school.
- The share of children not attending schools increases with children's age.
- The most commonly reported reasons for a child not attending school has been 'failure and lack of interest in studies', followed by 'costly education', 'engagement in work', and 'to look after their families while their parents are away for work'.
- The instance of drop-out increases during transition from one stage of education to another when students need to change schools. The secondary level of education reported the lowest transition rate with a corresponding higher incidence of drop-outs.
- Over-age school attendance has been most prevalent in the states of Bihar, Uttar Pradesh, Jharkhand, Rajasthan and Assam.

Employment

- Work participation rate has decreased for children (5-14 years), and young adolescents (15-17 years) in urban areas, especially among the urban poor. Uttar Pradesh and Gujarat reported the highest share of children and young adolescents who are working.
- Although inactivity among children declined between 2011-12 and 2017-18, it increased among young and older adolescents.
- In 2017-18, 55 per cent of overall urban working children and 62 per cent urban poor working children were employed in hazardous industries. The share of working young adolescents was nearly 20 per cent.
- A large share of urban children and adolescents were employed in the informal sector.
- States like Maharashtra and Gujarat received a high share of migrant children and adolescents for work.

Crimes Involving Children and Adolescents

- The crime rate against children below 18 years of age has increased from 5.4 per lakh population in 2009 to 28.9 per lakh population in 2017.
- Delhi reported the highest share of crime in 2017, both for crimes committed against children as well as by children.

- Girls are more vulnerable to sexual assault and abduction, while boys are highly prone to kidnapping and murder.
- Crimes against children are mostly committed by acquaintances, which means partial or full awareness of interpersonal gaps and vulnerabilities attached to the victims.
- Another facet of vulnerability seen in poor households is occurrence of crimes when parents go out to work.

The policy recommendations that arise from the analysis are as follows:

Health and Survival

- **Provide universal, affordable, and effective health facilities:** The inter-state disparities in the survival rate of children are the consequences of lack of universal, effective and affordable health coverage coupled with financial constraints. A special focus is needed in states like Uttar Pradesh, Madhya Pradesh and Chhattisgarh, where mortality rates of urban poor children are high. The current pandemic has exposed the vulnerability of the poor to deal with a health crisis. Adequate investment is needed to improve the health infrastructure in the country.
- **Requirement of holistic analysis of adolescent health:** Evidence-based knowledge needs to be developed on nutritional challenges faced by children and adolescents aged 6-14 years, especially those among the urban poor.

Nutrition

- **Promotion of exclusive breastfeeding: T**he practice of exclusive breastfeeding should be promoted, especially among the poor to reduce micro- and macro-level undernourishment.
- **Focus on nutrition:** Early childhood nutritional deprivation acts as an impediment to the cognitive and learning growth of a large section of the urban poor children and adolescents. Therefore, provision of adequate nutrition through vulnerability mapping of urban poor children and adolescents is important in meeting the nutritional deficiencies.
- **Strengthening of Poshan Abhiyan in EAG states:** The EAG states need more intervention for the elimination of undernutrition under the National Nutrition Mission. Poshan Abhiyan, which aims to bring down anaemia among children and adolescents needs encouragement and support.

Water, Sanitation and Hygiene (WASH)

- **Improved sanitation and hygiene in urban areas:** Poor infrastructure and hygiene increase the exposure of the urban poor to multiple morbidities. Universal access to individual toilets and garbage collection facilities, especially in the slums and small towns is an important intervention in this regard.
- **Strengthening of 'Nal se Jal' programme:** Strengthening of the 'Nal se Jal' programme, especially in states where coverage of piped water is low.
- **Promotion of handwashing practices:** Awareness campaigns at the community level and schools must be organised on a routine basis for promoting a culture of safe and hygienic practices, use of clean water, knowledge of coping strategies against ailments borne out of the contaminated environment, and educating adolescents and young women in menstrual hygienic methods (MHM).
- **Focus on urban peripheries:** Adequate attention must be given to extension of facilities and services to urban peripheries, where several census towns have come up.
- **Provision of urban housing:** Provision of proper housing facilities need to be promoted. In slums, tenure security must be ensured as it encourages poor households to invest in basic amenities which improves their micro-environment and impacts positively in reduction of morbidities among children.

Education

- **Shifting policy focus from 'universal enrolment' to 'universal attendance':** Shifting the policy focus from 'enrolment' to 'attendance' should be of utmost importance as a large share of urban poor children do not attend schools despite being enrolled in school.
- **Providing quality free education up to secondary level**: The RtE Act, 2009 should cover secondary and higher secondary education.
- **Establishing a robust system to track students in the schooling system:** A robust system to track students upon their entry in the schooling system will help in identifying the specific areas of intervention.
- **Eradicating 'learning poverty':** The school system also needs to be revamped with a focus on eradicating 'learning poverty'. Only half of the students in government and government-aided schools in urban India have been able to acquire basic (desired) proficiency in learning in many states.
- **Strengthening of the teaching-learning process:** There is a need to focus on improving the quality in learning. It is most important to build teaching capacity, deploy teachers as per the strength of students, and establish a transparent and robust system for teacher recruitment.
- **Systematic upgradation of government and government aided schools:** Systematic upgradation of the government school system with more support to poor households is needed. It can be done through remedial classes and timely availability of study material.
- **Improvement of quality of learning in government aided schools**: As state-sponsored schools are affordable to every section of society irrespective of economic status, the improvement of learning quality should be focused.
- **Focus on Information and Communication Technology (ICT):** There is a need to increase the access to ICT among students.

Employment

- **Abolition of all kinds of working/labour among children :** Strengthening of the National Child Labour Programme (NCLP) is recommended to abolish employment in children . There should be a special focus on Uttar Pradesh, Madhya Pradesh and Gujarat, where the share of working children is very high.
- **Shifting policy focus to urban areas:** Nearly three-fourths of urban working children come from poor households, and this needs urgent policy intervention. A special focus should be on urban poor children in Delhi, considering the notably high work participation rate here among poor children.
- **Regulation of hazardous working among children (5-14 years) and young adolescents (15-17 years):** A special focus should be given to children in Delhi, Uttar Pradesh, Gujarat and West Bengal, where the share of children working in hazardous industries is high. The government should also frame a special policy framework for workers aged 15-17 years employed in various non-hazardous industries.
- **Mainstreaming of 'nowhere' children and young adolescents:** Special policy emphasis should be given to mainstream 'nowhere' children, especially in states such as Gujrat and Maharashtra which have considerable number of 'nowhere' children. A more inclusive approach in the education system should be introduced in Delhi, Rajasthan, Bihar, Jharkhand and Odisha, where poor children are deprived of their right to compulsory and free education need special attention. A special focus should be on children and adolescent girls (5-19 years), as most of them remain invisible and burdened with household work.
- **Strengthening of NULM:** Rising inactivity among older adolescents needs urgent policy attention. The problem has become more prominent among urban poor adolescents. States like Delhi, Tamil Nadu, Karnataka and West Bengal need focused intervention. Strengthening of NULM may help to address this issue.
- **Provision of decent employment and safety nets to older adolescents:** A special section comprising the needs of older adolescents should be added to the existing Social Security Bill, 2008 to protect adolescent workers.
- **Special focus on migrant children and adolescents:** A special focus should be given to migrant children and adolescents in urban Uttar Pradesh, Bihar and Delhi. The majority of them are working in hazardous industries. Besides, seasonal migrant children and adolescents needs special attention.

Crimes Involving Children and Adolescents

- **Integrated Approach:** Apart from the judicial system, many other sectors need to be involved to ensure a comprehensive intervention strategy for protection of children against crime. The Government, international organisations, NGOs, and other stakeholders need to adopt an integrated approach. There is a need to establish the link between missing person's bureau, anti-human trafficking units and law enforcement agencies. The coordinated approach of these agencies will help in strengthening the response mechanism in cases of child kidnapping and abduction.
- **Behaviour Change Communication (BCC) Programmes:** BCC programmes through information, education and communication (IEC) are needed not only to save children from violence against them but also to save them from becoming criminals. Proper sex education provided to young children may help in attending to their curiosity apart from equipping them to judge when these are being violated.
- **Adequate tracking of children's behaviour**: This is necessary to identify early signs of deviance, both as victims and perpetrators. Making them aware of their legal rights will empower them too in protecting themselves.
- **Creation of child friendly one-stop help centers:** The cities with higher incidence of crime against children or involvement of children in crime should create child friendly one-stop help centers to respond to cases of sexual abuse against children and other forms of crime and violence. These centers should provide guidance and referral services.

A few policy recommendations emerging from this study cuts across all the thematic areas. These are as follows:

- **Create a granular database:** There is a need to create a granular database with an adequate representative sample which needs to be updated on a regular basis. Programmatic interventions should be construed based on the evidence gathered from these datasets.
- **Creation of GIS based open data platforms:** GIS based and open data platforms should be created to guide children and adolescents centric policies and programmes. These should include but not be restricted to health, nutrition, water, sanitation, employment, education and crime. Creation of a real time database on morbidities, mortalities and causes of death for the concerned age groups will be an added advantage.
- **Coordination among various ministries**: Promote integration of intervention strategies among allied ministries, different levels of government (central, state and local) and parastatals to address the challenges of common goals.
- **COVID 19 prevention and response:** The government must ensure that COVID-19 prevention and response plans integrate age appropriate and gender sensitive measures to protect all children from malnutrition, dropping out from school, entering into labour market, and affected by violence and abuse. Adequate measures need to be taken to build resilience in the community to deal with similar health crises in future.

1

Introduction

1.1 Background

As recorded in the Census of India, the country was only one-third urban (31%) in 2011, with the pace of urbanisation slowing down over the decades. Rural to urban migration and consequently urban growth had been sluggish. However, in absolute terms, the number of people who resided in urban India was very high (377 million), which was comparable to the total population of many countries of Europe, Africa and Latin America. Of the total urban population in 2011, 36 per cent (135.5 million) were children (in the 0-9 years age group) and adolescents (10-19 years age group). A further disaggregation shows that there were 36.57 million (9.70%) children under five years age, 26.36 million (6.99%) in the 6-9 years age group and 72.52 million (19.23%) were adolescents living in the cities. Statistics show that urban India is the home of the largest number of children and adolescents in the world, and this plays a significant role in determining the status of development of urban India.

It is believed that children in urban areas are likely to have better health outcomes and improved infrastructure for education, health and sanitation than children in rural areas, and this has been termed as 'urban advantage' (Montgomery and Hewett, 2005). At the same time, inequality and exclusion are the most criticised characteristics of urban areas. 'Urban penalty' is a term used for such inequality, where sometimes the urban poor perform worse than the rural population (Harpham, 2009; Matthews et al., 2010). In the context of India, the urban penalty outpaces the urban advantage in many facets of life. Despite the fact of a sharp decline in the level of urban poverty from 31.8 per cent in 1993-94 to 13.7 per cent in 2011-12, more than 53 million people still live below the poverty line (BPL) in urban India (Planning Commission, 2013). Of the urban population, 65.5 million (17%) live in slums, which includes 8 million children under six years of age. This figure is more than the combined urban population of all north-eastern states of the country, excluding Assam.

It is well known that early childhood and adolescence are significant development phases in the lifespan of an individual, forming the basis of later life outcomes. The Sustainable Development Goals (SDGs) of the United Nations also recognise this. In fact, SDGs on poverty (goal 1), zero hunger (goal 2), good health and well-being (goal 3), quality education (goal 4), gender equality (goal 5), access to clean water and sanitation (goal 6), reduced inequality (goal 10), sustainable cities and communities (goal 11) are directly linked to the overall development of children and adolescents, and achievement of these goals would be a positive move towards implementation of the 'New Urban Agenda' leaving no one behind in the process of development. However, a review of urban development programmes in India reveals that most of the programmes do not include the specific needs of children, especially those who are deprived. In particular, children and adolescents in slums are forced to live in filthy environments without proper basic services such as drinking water, improved sanitation, well developed drainage systems, adequate street lighting, quality schools and health centres with adequate healthcare facilities. These areas also lack safety and security and are more prone to crime and violence against children.

Several studies (Save the Children and PwC, 2015; UNICEF-NIUA, 2016; CRY, 2018) have tried to analyse the situation of children, but have focused mainly on a one-time period, without delving into determining

factors. These studies dealt basically with issues concerning only children, taking up a few developmental dimensions like health, nutrition and education, mostly in silos. Given the severity of the problem and lack of a comprehensive analytical approach, it is important to undertake an in-depth study to assess the current situation of children and adolescents with focus on a rapidly changing urban India. This study makes a departure by trying to fill the gaps by looking into the present scenario in accordance with the Sustainable Development Goals (SDGs) with reference to health and nutrition, education, water, sanitation and hygiene (WASH), employment, crime and violence, focusing on both children and adolescents in urban India. The way of assessing urban spatial patterns and temporal trends, along with a comparison of rural counterparts and slums within cities, with recommendations for programmatic and policy interventions for the betterment of their conditions makes this study unique. There has also been an attempt to analyse the status of violence and crime against children and adolescents which has been neglected so far in research.

1.2 Rationale

The Indian economy has witnessed a high growth rate in the last decade. Subsequently, several programmes were launched to improve the physical infrastructure of cities to make them 'global' cities. However, the process of development in Indian cities is more exclusionary (Kundu and Saraswati, 2012; Dupont, 2008). Such exclusion (of the poor) and intra-urban inequality is an outcome of 'exclusionary urbanisation' (Kundu, 2011; Kundu and Saraswati, 2012). It makes the children and adolescents from disadvantaged sections of urban society more vulnerable (Mahadevia, 2010). They are often excluded from access to improved facilities, which include low immunisation care and nutrition (Srivastava et al., 2012) causing early deaths, poor sanitation (especially for menstruating adolescent girls) (Nallari, 2015; Barman et al., 2017), high drop-out rates in schools (Tsujita, 2009; 2013; Chugh, 2011), and there is also a high incidence of child labour (Dey, 2008; UNICEF, 2011). The situation of 'nowhere children', which applies to those who are neither studying nor working, has been unaccounted for so far (Choudhury, 1997).

According to the last National Family Health Survey (NFHS-4, 2015-16), only 64 per cent children in urban India were fully immunised. Studies (Nath et al., 2007; Agarwal, 2011) show that children with low maternal education and those from lower quintile classes have lower chances of having full immunisation. Although the infant and child mortality rates of urban India have declined over the period 2005-06 to 2015-16, the reduction rate is slow in urban areas as compared to rural (IIPS and Macro International, 2007; IIPS and ICF, 2017). Diarrhoea and acute respiratory infections (ARI) are the most common reasons of death among children under the age of 5 years (Vaid et al., 2007; Singh and Singh, 2014). According to NFHS-4 statistics, 2.3 per cent of urban children in this age group had symptoms of ARI in 2015-16, out of whom 86 per cent sought medical advice and treatment. Use of hazardous cooking fuel and poor ventilation in slum houses increase the prevalence of ARI and death among children living in slums (Dherani et al., 2008; Mathew et al., 2011). Likewise, proximity of slums to open drainage, lack of safe drinking water and poor sanitation facilities increase the incidence of diarrhoea among them (Shah et al., 2012; Lakshminarayanan and Jayalakshmy, 2015). NFHS-4 also shows that a total of 31 per cent urban children below 5 years were stunted, 20 per cent were wasted and 29 per cent were underweight in 2015-16. These indicators show a poor health and survival status of children in urban India, especially those who live in slums.

The health and survival challenges are quite different for adolescents (10-19 years). Census of India, 2011 shows that one-fourth of urban adolescent girls get married before 18 years, which often leads to early and repeated pregnancy, sexual abuse, sexually transmitted infections and domestic violence (Goli, 2016). Lack of proper sex education, contraceptive methods, unsafe abortions and lack of knowledge of sexually transmitted infections or HIV are the other critical issues affecting adolescents (Jejeebhoy, 1998). Although the knowledge and practice of menstruation hygiene is much better in urban India as compared to its rural counterpart, the girls from the poor sections of urban society are still at a higher risk of several health issues (Paria et al., 2014). Even though the antenatal care utilisation rate is considerably high in urban slums, the incidence of home delivery practices is still prevalent due to traditional beliefs or financial constraints (Khan et al., 2009). The nutrition status of girls in urban India is still poor as a total of 63 per cent aged 10-18 years are malnourished with Body Mass Index (BMI) below 18.5 kg/m^2 (UNICEF India, 2017). In addition to the already deprived situation, the lack of adequate public health infrastructure (one primary health centre is mandated for every 50,000 urban population) and human resources, especially in the case of reproductive health, make the urban poor more vulnerable.

Water, Sanitation and Hygiene (WASH) has a direct impact on the health and education of children and adolescents. Census of India, 2011 shows that nearly 16 per cent urban households did not have access to safe drinking water. Also, 12 per cent defecated in the open and another 6 per cent used public or shared toilets. The situation in slums is more critical where only 65.6 per cent of the households had access to a treated source of water. Only 66 per cent of slum households had toilets within premises while 15.1 per cent used community toilets. Also, open defecation in slum households was relatively high at 18.9 per cent (NIUA, 2016). Micro-level studies have shown that drinking water provided by the municipalities is often contaminated and the household's storage procedure and lack of knowledge of treatment (boiling water) increase the level of contamination (Brick et al., 2004). The lack of safe drinking water and proper sanitation leads to a higher incidence of diarrhoea among children and affects their schooling. Also, the lack of adequate sanitation and waste disposal facilities in slums affects the menstrual health of adolescents, causing urinary and reproductive tract infections (Mahon and Fernandes, 2010). Although the availability of toilets in schools has improved, especially for girls, proper cleaning and water availability in the toilets are still a significant challenge which increases the incidence of illness.

Besides the situation of health and survival and access to WASH facilities, education is also an important right of children for their normative development. The Right of Children to Free and Compulsory Education Act (hereafter referred as RtE Act), 2009, has made basic education at the elementary level a fundamental right of all children in India. This has entrusted the government to provide quality education to each and every child in the country. Over the years, the enrolment ratio at different levels of education in urban India has improved significantly, with many states performing beyond 90 per cent on gross enrolment ratio (Purohit, 2016). However, there is concern with regard to drop-outs, the quality of learning outcomes, methods of teaching and who attends what types of school. Privatisation has impacted accessibility, equity and the concepts of learning. Although the implementation of Sarva Shiksha Abhiyan (SSA) and the RtE ACT, 2009 led to an improvement in access to education, still a large section of children remains out of the ambit of schooling (Giri and Singh, 2016; Sikdar and Mukherjee, 2012). Based on data provided by Census of India, 2011, Child Rights and You (CRY, 2018) has reported that nearly 23 per cent of children between the ages of 15 and 18 years in urban Delhi-NCR region are drop-outs, while 5 per cent of the same age group has never been enrolled in any school. The rate of drop-out is higher among girls compared to boys due to household responsibilities such as caring for younger siblings, cooking, cleaning and fetching water, and poor school infrastructural provision like distance to the school from home, as well as non-availability of separate sanitation facilities for girls in schools (UNICEF India, 2017).

According to the National Achievement Survey (2014), the learning outcomes of children in most of the disciplines have declined during 2011-14, and there is no significant difference in the performance of rural and urban students, especially in language and mathematics (UNICEF India, 2017). Also, a level of segregation in school attendance by types has been observed. U-DISE data for 2016-17 shows that more than half (51.52%) of elementary schools are private unaided (PUA) schools in urban areas while only 14.19 per cent of such schools are in rural areas. This indicates that a significant share of students at the elementary level is paying fees in order to have access to school education.

Those children who are exposed to chances of employment at an early stage of their lives also have a higher incidence of being drop-outs (Lieten, 2000, 2003; Venkatanarayana, 2004). Often the children of poor and uneducated parents have higher drop-out rates as their parents are financially not capable of continuing their education and so the children are forced to do work (Biggeri et al., 2009). A significant number, more specifically girls, are engaged in different types of work (Lieten, 2000; Burra, 2001, 2005; Dev, 2004; Khan and Lyon, 2015). The drop-out rate increases for the elder girl child as she is expected to take care of her younger siblings (Burra, 2005; Reddy and Sinha, 2010). This is rampant among children and adolescents who belong to seasonal migrant families and households engaged in home-based industries (UNESCO-MHRD, 2001; Biggeri et al., 2009; Srivastava, 2012). Often older children are dual-burdened with study and work simultaneously which affects their performance in school. Although there are initiatives to abolish child labour (Aggarwal, 2004), it is still prevalent (Giri and Singh, 2016), especially in rural areas (Khan and Lyon, 2015). There is a sharp differentiation in the usual principal activity status (UPAS) of children, which is based on the sector as well as whether rural or urban. Engagement in household agricultural work is the major reason for a greater share of child workers in unpaid family work in rural areas. In contrast, the availability of informal jobs in shops/restaurants, or engagement as domestic help offers a major scope of employment in urban areas (Kar, 2018). More girls are working as domestic help in urban than in rural areas (NSS, 2011-12). Also, a large number of children and adolescents remain 'nowhere', neither studying nor

working, which is a grave concern. Many adolescents, especially girls, become burdened with unpaid family labour, which excludes them from many opportunities (Burra, 2005). Both these working and 'nowhere' children and adolescents are extremely vulnerable in terms of physical, sexual and emotional exploitation, which has become a major policy concern.

Recent statistics (NCRB, 2016) also support the incidence of increased rate of crime against children in various metropolitan cities of India, with the maximum cases reported in the national capital Delhi (7,392 cases), followed by Mumbai (3,400 cases) and Bengaluru (1,333 cases). The national capital accounts for 39.6 per cent of the total of such cases. The children of poor families, in poorer neighbourhoods and slums, go through a 'cycle of violence'. Gang violence is a major concern in urban areas, in which the boys of poor neighbourhoods become involved. Human trafficking is another major issue in South Asia. Those children left alone at slums are at a higher risk of trafficking and physical and sexual abuse (NIUA, 2016; UNICEF India, 2017). On the other hand, adolescent girls often face domestic violence at their native places as well as their husbands' homes. Also, urban poor adolescents are susceptible to drug abuse. The incidence of tobacco use among adolescents is very high in India (UNICEF India, 2017). This leads to the poor psychological health of these children. Furthermore, they often become members of drug peddling gangs, and engaged in petty theft and crime.

The new threat in urban India is cybercrime, which includes cyber stalking, cyber bullying and defaming, cyber intimidating and threat, online sexual harassment, child pornography and online fraud etc. especially in the context of children and adolescents. According to a survey undertaken by the Internet and Mobile Association of India (IAMAI) in 35 cities, out of 400 million internet users in 2015, 28 million were school-going children. Although the adoption of digital technologies by children and adolescents has the potential to provide benefits in terms of learning, access to information, socialisation and active participation, they are simultaneously susceptible to a high risk because of lack of knowledge of safeguarding themselves against different cyber threats (UNICEF, 2016). Due to limited data and public discourse on online abuse and exploitation of children and adolescents, this issue often remains neglected. Also, due to lack of confidence and knowledge, these crimes are not reported. According to a study commissioned by Microsoft in 2012, among 25 countries, India ranked third for high online bullying rates among children aged 8-17 years (UNICEF, 2016). There is however, no comprehensive study which can differentiate the intensity of cybercrime among the poor and non-poor in cities of India, but given the fact of vulnerability among slum children, the likelihood of risks and threat of cybercrimes is highest among slum children who have access to such facilities.

A review of vast literature on children and adolescents reflects the existing intra-urban inequality and the vulnerability of poor children in terms of access to health, nutrition, education, basic amenities and protection against crime and violence, including cybercrime. Most of these studies have dealt with the issues and challenges related to children and adolescents in silos. There is lack of a comprehensive study examining the criticality of the status of children and adolescents in urban India across different economic classes. The present study tries to fill this gap through analysing the trends and patterns of the socio-economic conditions of children and adolescents and attempts to identify the determining factors. The thrust of this study is to determine the status of children and adolescents in urban India in terms of access to health, nutrition, WASH, education, and protection of those in the 0-9 years age group and 10-19 years age group. It takes cognisance of slum/non-slum and poor/non-poor disparities at disaggregated levels and determines the reasons for the same using econometric tools. As indicated in the previous section, it is pertinent to take up this study at this juncture since evidence-based research acts as a significant input to the achievement of Agenda 2030 and the New Urban Agenda of the United Nations.

1.3 Profile of Children and Adolescents in Urban India

India is home to the largest child population in the world and a large number of children live in its cities/towns. In 2011, there were 135.5 million children and adolescents (0-19 years) in urban India comprising one-third (35.9%) of the total urban population of the country (Census of India, 2011). The state-wise percentage distribution of children and adolescents in urban India shows that more than half (55.4%) of them lived in only five states: Uttar Pradesh (13.9%), Maharashtra (12.7%), Tamil Nadu (8%), Andhra Pradesh (7.2%) and West Bengal (6.8%).

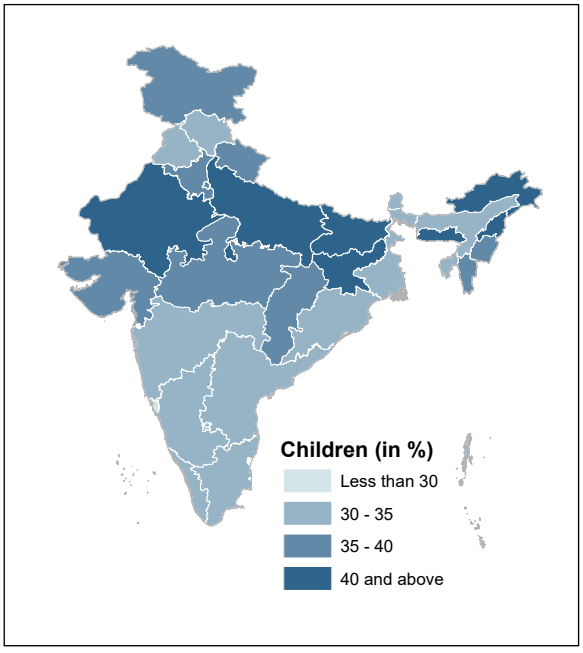
1.3.1 Demography of children and adolescents

It is evident from Figure 1.1 that in a majority of the states, more than one-third of the urban population comprised children and adolescents in the 0-19 years age group. The percentage share of this age group in the total urban population is highest in Bihar, followed by Arunachal Pradesh, Nagaland, Uttar Pradesh, Meghalaya, Rajasthan and Jharkhand (Figure 1.1). In 2011, each of these seven states had more than 40 per cent urban population in this age group. There were 11 states (including UTs) with 35 to 40 per cent urban children and adolescents: Madhya Pradesh, Chhattisgarh, Gujarat, Haryana, Delhi, Uttarakhand, Jammu and Kashmir, Chandigarh, Dadra and Nagar Haveli, Mizoram and Manipur. Therefore, it is evident that most of the states in north and north-eastern India have a high share of children and adolescents in urban areas, mostly due to prevailing higher fertility rates. A total of 15 states of India carried 30 to 35 per cent urban population in the age group of 0-19 years. All states of south India, as well as Maharashtra, Odisha, West Bengal, Sikkim, Assam, Tripura, Himachal Pradesh and Punjab were in this category. This is mostly due to the fact that these states have moved to the more advanced stages of demographic transition, with a decline in fertility rates.

The early years of childhood (0-5 years) are very important for the physical and mental development of a child. In this phase, physical, cognitive, social-emotional and language development happens at a tremendous rate. Therefore, ensuring healthy growth and development of children in the phase of early childhood is one of the main goals of countries across the globe. In urban India, there were 36.58 million children in the age group of 0-5 years, comprising one-tenth (9.7%) of the total urban population in 2011. The state-wise distribution of urban children in India in this age group shows that only six states—Maharashtra, Uttar Pradesh, Tamil Nadu, Andhra Pradesh and Gujarat—had more than half (54.7%) of the total urban child population. On the other hand, a total of 16 states of India had less than one per cent share in the total count of urban children (0-5 years). These states are mainly from the north-eastern states and Union Territories, excluding Delhi.

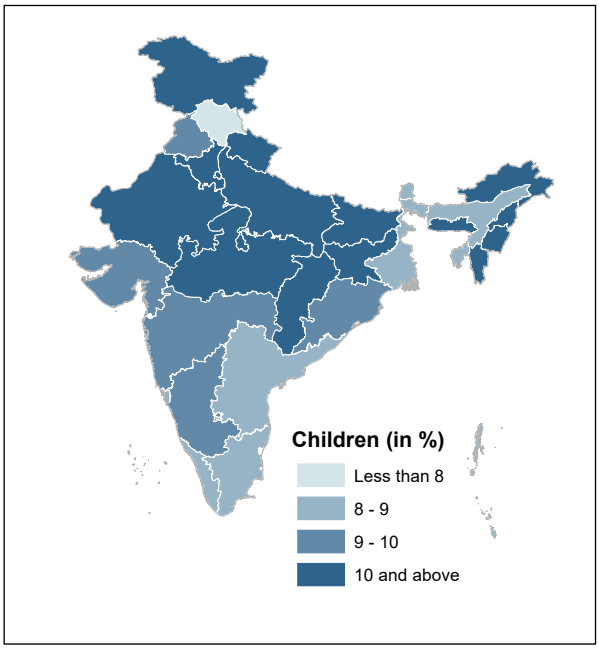
The share of child population (0-5 years) in the total urban population of respective states shows that Bihar had the highest share (12.4%) followed by Mizoram (11.3%), Meghalaya (11.1%) and Rajasthan (11.1%) (Figure 1.2). Among the Union Territories, Dadra and Nagar Haveli had the highest share (12.0%) followed by Delhi (10.1%). A total of 24 states of India had in between 9 to 12 per cent of child population in this age group in the total urban population of the respective states. Himachal Pradesh, followed by Sikkim and West Bengal, had the lowest share.

Figure 1.1: State-wise Percentage Share of Children and Adolescents (0-19 years) in Total Urban Population, 2011



Source: Population Census of India, 2011

Figure 1.2: State-wise Percentage Share of Children (0-5 years) in Total Urban Population, 2011



Source: Population Census of India, 2011

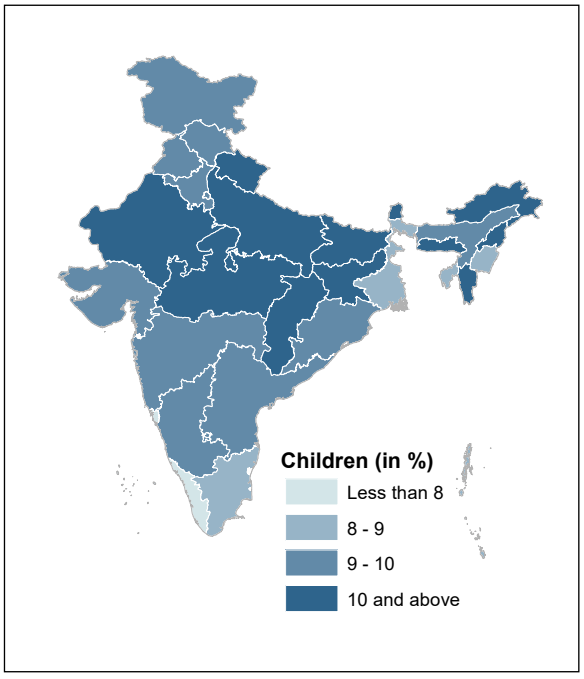
Adolescents in the age group of 15-19 years are also part of the present study. It is a transition period between childhood and adulthood. In this duration, children experience several changes, including physical, sexual, cognitive, social and psychological, which bring anticipation and anxiety both in themselves and their families. Therefore, a healthy environment for their development during this transition period is essential for their future growth. In 2011, there were 36.6 million adolescents in urban India in the age group of 15-19 years comprising 9.7 per cent of the total urban population of India. The state-wise distribution of these urban adolescents shows that half of them live in only five states: Uttar Pradesh, Maharashtra, Tamil Nadu, Andhra Pradesh and West Bengal. North-eastern states and Union Territories of India have the least share of this age group in urban India.

The percentage share of adolescents (15-19 years) in the total urban population of the state shows that Arunachal Pradesh had the highest share, followed by Meghalaya, Nagaland, Uttar Pradesh and Uttarakhand (Figure 1.3). In 2011, there were 18 states where the share of adolescents in the total urban population of each state was higher than the national average. Most of these states are located in the north and north-eastern parts of the country. On the other hand, the state with the lowest share of adolescents in the urban population was Kerala (7.8%) followed by Goa (7.9%) and Tami Nadu (8.5%).

1.3.2 Sex ratio of children and adolescents

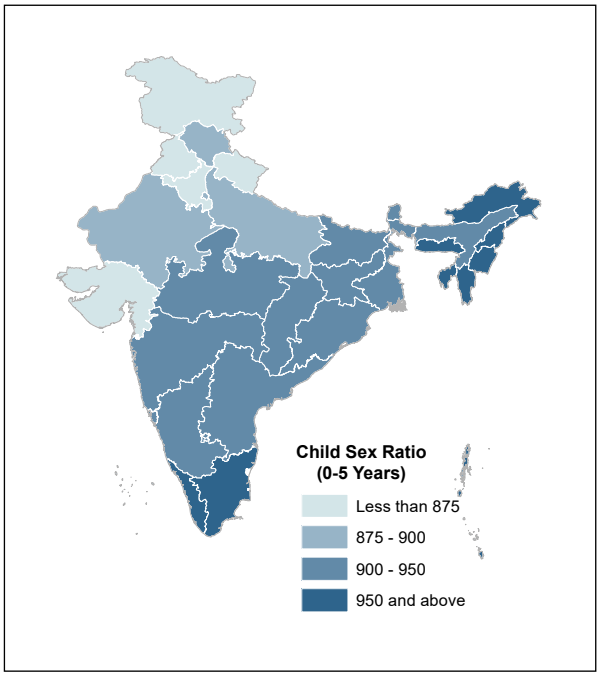
Sex ratio (SR) is an important demographic indicator to examine gender balance in a society. Studies have suggested a skewed SR in India, especially after the 1990s. The high elimination of girls at birth, post birth bias in nutritional intake, and less access to school education are the most prominent forms of discrimination against females in society. In 2011, the sex ratio among children and adolescents (0-19 years) was 897 females per 1,000 males. However, desegregation between early childhood (0-5 years) and adolescents (15-19 years) shows a stark difference. The sex ratio among urban children and adolescents in these age groups was 907 and 887 respectively. Therefore, the sex ratio in urban India has declined with increasing age, which indicates that with increasing age girls face discrimination impacting their survival and well-being.

Figure 1.3: State-wise Percentage Share of Adolescents (15-19 years) in Total Urban Population, 2011



Source: Population Census of India, 2011

Figure 1.4: Child (0-5 years) Sex Ratio (Females per 1,000 Males) in Urban India, 2011



Source: Population Census of India, 2011

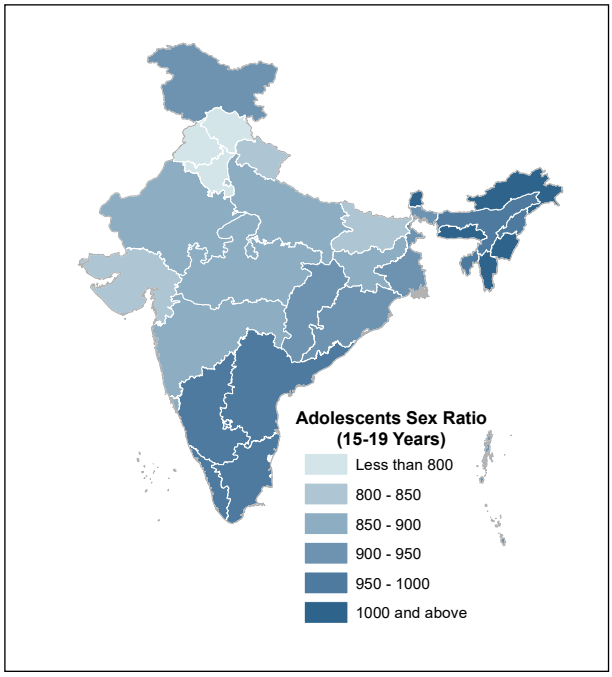
Figure 1.4 shows that in 2011, the urban child (0-5 years) sex ratio (females per 1,000 males) in India was highest in Mizoram (974), followed by Nagaland (973), Kerala (964), Arunachal Pradesh (954), Meghalaya (953) and Tamil Nadu (952). Among Union Territories, Puducherry had the highest (979) urban child sex ratio followed by Andaman and Nicobar Islands (958). The lowest urban child sex ratio was in Haryana (834), followed by Jammu and Kashmir (847), Punjab (856), Gujarat (858), Uttarakhand (871) and Rajasthan (875). Among Union Territories, Delhi (875), followed by Dadra and Nagar Haveli (879) and Chandigarh (884), had the lowest urban child sex ratio. It is evident from Figure 1.4 that states with a better urban child sex ratio are concentrated in the southern most and north-eastern parts of India. However, states with a lower urban child sex ratio are located in the north-western and northern parts of India.

The states with the highest sex ratio among urban adolescents are located in the north-eastern part of the country. Meghalaya had the highest sex ratio (1,025) among urban adolescents followed by Arunachal Pradesh (1,024), Manipur (1,022), Mizoram (1,009), Sikkim (1,008) and Tripura (986). Andhra Pradesh (976), Kerala (969) and Tamil Nadu (967) were the other states where the sex ratio among urban adolescents was comparatively high.

The northern states, on the other hand, had a lower sex ratio among this age group. Punjab had the lowest (771) among urban adolescents followed by Haryana (779), Himachal Pradesh (782), Gujarat (802) and Uttarakhand (826). Among Union Territories, Daman and Diu had only 358 females per 1,000 male adolescents, which was lowest among all states/UTs. Dadra and Nagar Haveli (531), Chandigarh (731) and Delhi (803) were other UTs where the sex ratio among urban adolescents was relatively lower.

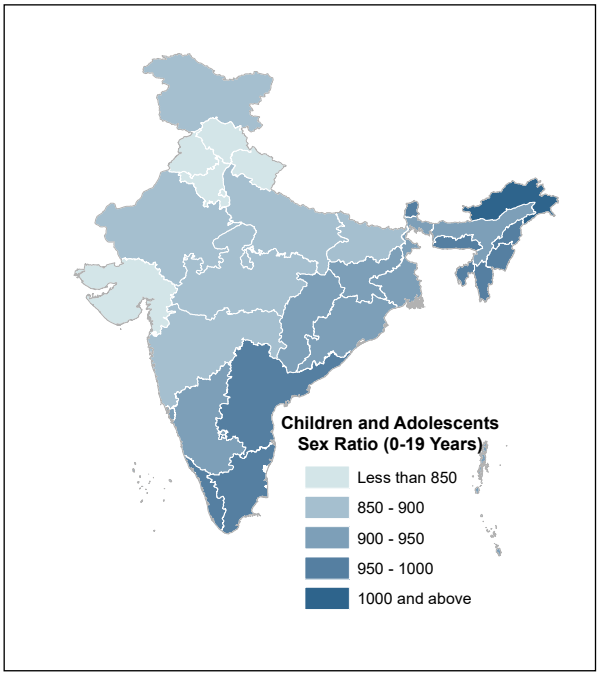
In 2011, the sex ratio among urban children and adolescents in India was 897 females per 1,000 males. The highest sex ratio among urban children and adolescents (combined) was in Arunachal Pradesh (1002), followed by Meghalaya (987), Mizoram (986), Sikkim (982) and Manipur (977). Among the UTs, Lakshadweep had the highest (974) sex ratio among urban children and adolescents followed by Puducherry (963).

Figure 1.5: Adolescent (15-19 years) Sex Ratio (Females per 1,000 Males) in Urban India, 2011



Source: Population Census of India, 2011

Figure 1.6: Child and Adolescent (0-19 years) Sex Ratio (Females per 1,000 Males) in Urban India, 2011



Source: Population Census of India, 2011

The states with the lowest sex ratio among urban children and adolescents were Punjab (804) and Haryana (804), followed by Himachal Pradesh (824), Gujarat (826) and Uttarakhand (844). Among UTs, Daman and Diu had the lowest (656) sex ratio among urban children, followed by Dadra and Nagar Haveli (767), Chandigarh (809) and Delhi (843). The lower sex ratio in the north-western states of India in all selected age groups can be explained by the patriarchal nature of society and prevailing bias against female children and adolescents in these states. On the other hand, the better sex ratio in north-eastern and southern states of India is a result of the matrilineal society, a better level of education and awareness. From the demographic distribution pattern of urban children and adolescents, it is seen that the northern and western states need special policy focus rather than the north-eastern and southern states. Although, the north-eastern states have a higher share of children and adolescents in urban areas, their higher sex ratio indicates the balanced gender dimension in this area.

1.4 Conceptual Framework

This study has analysed six thematic areas, namely, 1) health and survival, 2) nutrition, 3) sanitation and hygiene (WASH), 4) education, 5) employment, and 6) crime and violence (Figure 1.7). The selection of parameters has been conceptualised based on available secondary source databases for urban India.

1.5 Research Questions

This study has tried to answer the following major questions with reference to urban children and adolescents:

1. What has been the trend of various indicators of development concerning children and adolescents in urban India at the macro level and compared with rural India? To elucidate, how are the children of different age groups and adolescents in urban settings different from those in rural settings in terms of health, nutritional intake, WASH, education, employment status, violence and crime?
2. What are the regional variations in the status of children and adolescents in terms of health, nutritional intake, WASH, education, employment status, violence and crime?
3. What are the differential dynamics of health, nutrition, education, employment among poor and non-poor children, slum and non-slum, migrant and non-migrant children?
4. What are the determining factors for the current status of children and adolescents in urban India?
5. How do policies and programmes influence the current status of children and adolescents in urban India?

1.6 Research Objectives

1. To undertake a desk review of the existing research on the qualitative and quantitative aspects of the situation of children and adolescents.
2. To identify the rural-urban differentials of children and adolescents in terms of health, nutrition, education, WASH, employment, violence and crime.
3. To show the regional pattern of differential dynamics of children and adolescents in urban India.
4. To understand the differential dynamics of children and adolescents across gender and between poor and non-poor and slum and non-slum households.
5. To examine the determining factors of current demographic, social (including education, health and nutrition) and economic status of children and adolescents.
6. To review the policies and programmes of the government related to children and adolescents in urban India and develop an advocacy plan for improved rights based intervention.

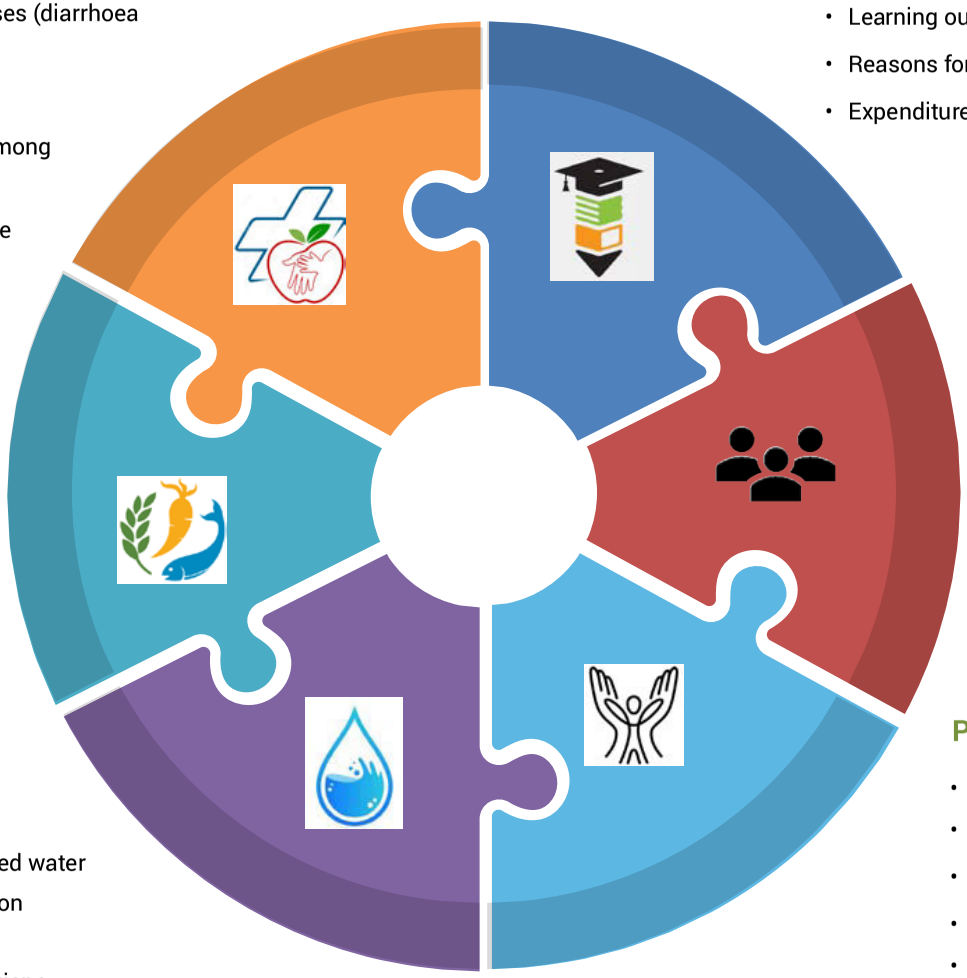
Figure 1.7: Conceptual Framework

HEALTH AND SURVIVAL

- Mortality
- Immunisation
- Life threatening diseases (diarrhoea and ARI)
- Low birth weight
- Reproductive health among adolescent girls
- Skilled birth attendance

EDUCATION

- Attendance
- Completion
- Learning outcomes
- Reasons for not attending school
- Expenditure for education



NUTRITION

- Breastfeeding
- Height for age
- Weight for age
- Height for weight
- Weight for age
- Anaemia
- Complementary feeding practices

EMPLOYMENT

- Labour
- Work
- 'Neither working nor studying'
- Types of work
- Hazardous and informal work

WASH

- Safely managed water
- Basic sanitation
- Basic hygiene
- Menstrual hygiene

PROTECTION

- Sexual harassment
- Murder
- Human trafficking
- Cyber crimes
- Gang violence and petty crimes

1.7 Database

Though the target group of this study is children and adolescents between the ages of 0 to19 years, children are further categorised into two broader age groups as 0-5 years and 6-9 years. Nationally representative large-scale surveys like National Family Health Survey (NFHS), National Sample Survey (NSS) at different rounds, Unified District Information System for Education (U-DISE), and crime statistics from National Crime Records Bureau (NCRB), along with the Population Census of India are the major sources of secondary data to analyse the trends and situations in survival and health, nutrition, water and sanitation, education, employment and crime and violence. Content analyses from leading national newspapers have been done for some of the variables for which secondary data is not available.

Table 1.1: Details of Data Sources

Thematic areas	Dataset	Data source	Type of dataset	Nature of survey	Latest year of data availability
Health, Nutrition, WASH and Education	National Family Health Survey (NFHS), 4th round	Ministry of Health and Family Welfare (MHFW)/International Institutes of Population Sciences (IIPS)	Household survey	Sample	2015-16
	National Family Health Survey (NFHS), 3rd round	Ministry of Health and Family Welfare (MHFW)/International Institutes of Population Sciences (IIPS)	Household survey	Sample	2005-06
Education	Unified District Information System for Education (U-DISE)	Ministry of Human Development (MHRD)/National Institute of Educational Planning and Administration (NIEPA)	School survey	Total count	2015-16
	National Achievement Survey (NAS)	National Council of Educational Research and Training (NCERT)	Student survey at school	Sample	2012
Employment and Education	National Sample Survey (NSS) on Participation and Expedition on Education and Periodic Labour Force Survey (PLFS)	Ministry of Statistics and Programme Implementation (MoSPI)/ National Statistical Office (NSO)	Household survey	Sample	2017-18, 2014, 2011-12, 2007-08
Employment, Crime and Violence	Population Census of India—Socio-economic tables	Registrar General of India, Ministry of Home Affairs	Household survey	Complete enumera-tion	2011
	Crime Statistics of National Crime Records Bureau (NCRB)	Ministry of Home Affairs	MIS	Estimates from NCRB	2010-16
Crime and Violence	Content of leading English dailies	The Times of India	News reports	-	365 days (1 June, 2018 to 31 May, 2019)

1.7.1 Data sources for health and survival

NFHS-4 (2015-16) provides information on vaccination, presence of vaccination cards for children (0-5 years) and outlines details on immunisation care. It also includes information on the number of living children and those who died in a particular age group from which the infant mortality rate and child mortality rate can be calculated. It further provides details on prevalence and treatment of children in the age group of 0-5 years regarding Diarrhoea and Acute Respiratory Infection (ARI) as reported by the mothers of the children. Details on antenatal care, skilled birth attendance and low birth weight from the NFHS-4 survey are also available.

Table 1.2: Data Sources for Analysis of Health and Survival

Sl. No.	Study themes	Data sources	Years	Levels	Indicators
1a. Survival and health: Children (0-5 years)					
1	NNMR, IMR and U5MR	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Child died before one month, age 1 year and 5 years
2	Immunisation (12-23 months)	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	DPT, BCG, Measles, Polio
3	Diarrhoea	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Has (NAME) had diarrhoea in the last 2 weeks?
4	ARI: fever, cough and breathing problem	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Has (NAME) been ill with a fever at any time in the last 2 weeks? Has (NAME) had an illness with a cough at any time in the last 2 weeks? When (NAME) had an illness with a cough, did (he/she) breathe faster than usual with short, rapid breaths or have difficulty breathing? Was the fast or difficult breathing due to a problem in the chest or to a blocked or running nose?
5	Low birth weight	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Size of child at birth, Birth weight in kilograms
1b. Survival and health: Adolescents (15-19 years)					
6	Adolescents: family planning use	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Using and types of contraception
7	Adolescents: unmet need	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Women who do not want to become pregnant but are not using contraception
8	Adolescents: pregnancies	NFHS-4, NFHS-3	2015-16, 2005-06	National, urban and urban poor	Women who do not want to become pregnant but are not using contraception
9	Adolescents: fertility	NFHS-4, NFHS-3	2015-16, 2005-06	National, urban and urban poor	Number of children born
10	Adolescents: maternal health	NFHS-4, NFHS-3	2015-16, 2005-06	National, urban and urban poor	At least four antenatal check-ups and skilled birth attendance

1.7.2 Data sources for nutrition

NFHS-4 also provides detailed information on breastfeeding practices such as initiation and duration of breastfeeding and complementary feeding practices obtained from mothers of the children born in the preceding three years of the survey (2015-16). Information on height, weight and age of children (0-5 years), women (15-49 years) and men (15-54 years) are proxy indicators for nutritional health of children and adolescents, including aspects such as whether they are stunted, wasted or underweight/overweight. Data on prevalence of anaemia is provided in NFHS-4 as well as a detailed dietary consumption pattern of men (15-54 years) and women (15-49 years).

Table 1.3: Data Sources for Analysis of Nutrition

Sl. No.	Study themes	Data sources	Years	Levels	Indicators
1	Malnutrition: stunting	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Height-for age Z-score is less than -2 standard deviations
2	Malnutrition: wasting	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Weight-for height Z-score is less than -2 standard deviations
3	Malnutrition: underweight	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Weight-for age Z-score is less than -2 standard deviations
4	Malnutrition: overweight	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Weight-for height Z-score is above +2 standard deviations
5	Malnutrition: child anaemia	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Anaemia status for children 6-59 months
6.	Exclusive breastfeeding	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, rural, urban and urban poor	Duration of breastfeeding
7.	Complementary feeding practices	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, rural, urban and urban poor	Minimum Dietary Diversity (MDD), Minimum Meal Frequency (MMF), and Minimum Acceptable Diet (MAD)
8.	Adolescents: anaemia	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, rural, urban and urban poor	Anaemia status among adolescents aged 15-19 years
9.	Adolescents: overweight	NFHS-4, NFHS-3	2015-16, 2005-06	National, urban and urban poor, male and female	Adolescents with BMI higher than 25.0 kg/m2

1.7.3 Data sources for WASH and basic services

NFHS-4 provides information on sources of drinking water, treatment of drinking water and distance to water. It also provides information on the type of toilets in houses, whether they are shared or not and whether the houses have a place to wash hands. Information on type of protection used during menstruation has been provided in NFHS-4 for women (15-49 years). Additionally, NFHS-4 provides data regarding basic amenities of the households, but slum specific data is available for eight cities (million-plus population) only.

1.7.4 Data sources for education

For a situational analysis on the status of education among children and adolescents, the following databases have been used frequently: NFHS (IIPS), Unified District Information System on Education (U-DISE, 2016-17) by National Institute of Educational Planning and Administration (NIEPA), National Sample Survey (NSS) on Education Participation and Expenditure (2014 and 2007-08) from the National Statistical Office (NSO) and National Achievement Survey (NAS-2018) by the National Council of Educational Training and Administration (NCERT).

Table 1.4: Data Sources for Analysis of Water, Sanitation and Hygiene (WASH)

Sl. No.	Study themes	Data sources	Years	Levels	Indicators
1	Drinking water	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Safely managed water[1] (SMW)
2	Sanitation	NFHS-4, NFHS-3	2015-16, 2005-06	National. UNICEF intervention states, urban and urban poor	Basic sanitation[2]
3	Handwash	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Basic handwashing practices[3]
4	Menstrual hygiene (15-19 years)	NFHS-4, NFHS-3	2015-16, 2005-06	National, UNICEF intervention states, urban and urban poor	Hygienic methods of protection during the menstrual period

Table 1.5: Data Sources for Analysis of Education

Sl. No.	Study themes	Data sources	Years	Levels	Indicators
1	Attendance	NFHS-4	2015-16	UNICEF intervention states, urban and urban poor, district	Age-specific Attendance Ratio (ASAR)
2	Completion	NFHS-4	2015-16	National, UNICEF intervention states, urban and urban poor	Share of children who completed respective level of education within reference age group
3	Learning outcome	NAS	2017	National, UNICEF intervention states	Share of students who attained basic proficiency level in mathematics and reading (language)
4	Reasons for not attending school	NFHS-4	2015-16	National	Composition of different reasons against not attending school
5	Expenditure in education	75th and 71st round, NSS	2017-18 and 2014	National, UNICEF intervention states, urban and urban poor	Per student expenditure on education
6	Transition rate	U-DISE	2016-17	National, UNICEF intervention states	Share of children transiting broad level

1 Our approximation to this definition of SMW includes improved sources located onpremises, available within 30 minutes and treated before use. The treatment of water includes boiling of water, addition of bleach/chlorine, use of filter, clothes for straining water, solar disinfectant, alum or electric purifier.

2 Basic sanitation is computed if the facilities belong to any of these categories: Flush/pour flush to piped sewer system, Flush/pour flush to septic tank, Flush/pour flush to pit latrine, Ventilated improved pit (VIP) latrine/biogas latrine, pit latrine with slab, twin pit, composting toilet. These facilities would be considered improved if they were not shared by any other household.

3 To obtain basic handwashing information, interviewers were asked to see the place where members of the household most often wash their hands. Given that the place of handwashing is ascertained, the availability of water and soap was observed for the estimation of handwashing facilities in India (IIPS and ICF, 2017).

1.7.5 Data sources for employment

For a situation analysis of working among children and adolescents, the 68th NSS round on Employment and Unemployment Survey (2011-12) and Periodic Labour Force Survey (2017-18) have been used, which provide information on respondents' activity status, nature of work and formal-informal sector affiliation, along with their socio-economic correlates. On the other hand, the Population Census of India (2011) provides the latest figures for migration, which have been used to understand migration among children and adolescents. Also, the NSS 64th round on Employment, Unemployment and Migration (2007-08) has been used to estimate seasonal migration among children and adolescents.

Table1.6: Data Sources for Analysis of Employment

Sl. No.	Study themes	Data sources	Years	Levels	Indicators
1	Activity Status	NSS 68th round, PLFS	2011-12, 2017-18	National, UNICEF intervention states, urban, urban poor and non-poor	Activity status categorised into 3 classes: 1) working, 2) studying, 3) neither working nor studying
2	Type of Employment	NSS 68th round, PLFS	2011-12, 2017-18	National, urban, urban poor and non-poor	Distribution of types of employment categorised into four classes: 1) own account worker, 2) unpaid family labourer, 3) regular salaried worker, 4) casual wage labourer
3	Hazardous Work	NSS 68th round, PLFS	2011-12, 2017-18	National, urban, urban poor and non-poor	Share of workers in hazardous work
4	Informal Sector Employment	NSS 68th round, PLFS	2011-12, 2017-18	National, urban, urban poor and non-poor	Share of workers in informal sector enterprises
5	Informal Employment	NSS 68th round, PLFS	2011-12, 2017-18	National, urban, urban poor and non-poor	Share of workers who lack social security measures (job contract and social security benefits)
6	Rate of Migration	Population Census of India	2011	National	Share of migrants to total population (age group-wise)
7	Employment Related Migration	Population Census of India	2011	National and UNICEF intervention states	Share of migrants who have reported employment as principal reason for migration
8	Seasonal Migration	NSS 64th round	2007-08	National	Share of persons who reported staying away from usual place of residence for less than 6 months to total

1.7.6 Data sources for violence and crime

The National Crime Records Bureau (NCRB) provides information on a series of crimes— suicide, homicide, rape, infanticide and foeticide, procurement of minor girls, buying and selling of girls for prostitution—against children and adolescents (0-18 years) up to state level. It also contains information on crimes committed by children up to the state level and in major cities in India. This database will be used to understand the situation of violence against and committed by children. Unfortunately, the specifics of violence against children and adolescents and committed by them are not available in any secondary data sources. In this regard, content analysis of various crimes against children and committed by them has been done for 365 (1 June, 2018-31 May, 2019) days to fill this gap to the extent possible using India's leading English daily *The Times of India*.

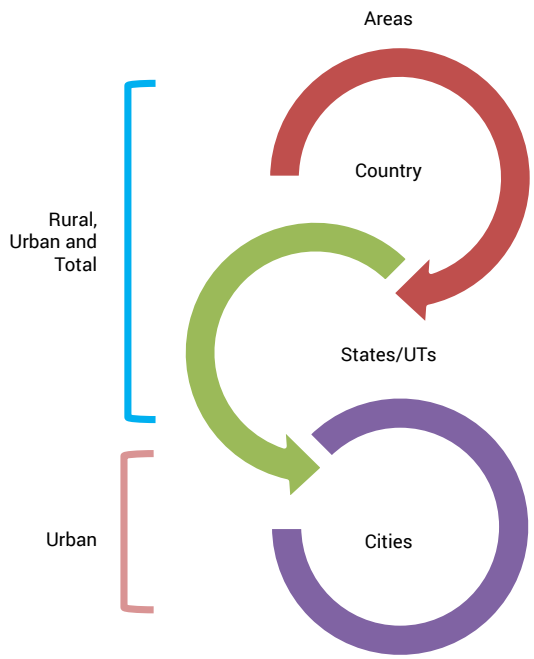
Table 1.7: Data Sources for Analysis of Crime and Violence

Sl. No.	Study themes	Data sources	Years	Levels	Indicators
1	Violence against children and adolescents	Crime in India by National Crime Records Bureau (NCRB)	2009-2017	UNICEF intervention states	Aggregate level of crime and violence among children (0-9 years) and adolescents (10-19 years)
				19 metropolitan cities[4]	Violence among children (0-9 years) and adolescents (10-19 years)
					IPC crimes: 1) murder, 2) abetment to suicide of child, 3) attempt to commit murder, 4) infanticide and foeticide, 5) exposure and abandonment, 6) kidnapping and abduction, 7) human trafficking, 8) selling and buying of minors for prostitution, 9) unnatural offences SLL crimes: 1) protection of children from sexual offences, 2) juvenile justice, 3) immoral traffic, 4) prohibition of child marriage, 5) other crimes against children (for situation analysis)
2	Content analysis	News reports from Times of India	1 June, 2018 to 31 May, 2019	National and states	Articles were searched using search strings such as 'child', 'minor','adolescent', 'youth', 'rape', 'sexual abuse', 'murder', 'kidnapping', 'honour killing', 'crime', and 'others'

1.8 Methodology

The report is broadly focused on three levels of analysis (Figure 1.8). The macro analyses have been attempted at national level and state level. The analyses at these two levels were for both rural and urban areas. The third level of analysis was at city level based on availability of data. In addition, a review of policies and programmes has been attempted.

Figure 1.8: Levels of Analysis



4 19 metropolitan cities which have a population more than 2 million: Ahmedabad, Bengaluru, Chennai, Coimbatore, Delhi, Ghaziabad, Hyderabad, Indore, Jaipur, Kanpur, Kochi, Kolkata, Kozhikode, Lucknow, Mumbai, Nagpur, Patna, Pune, Surat.

The demarcation of age group is problematic given the type of data sources. But the most conventionally suitable age groups for children and adolescents have been adopted here. The broader age group (0-19 years) is sub-classified as 0-5 years and 15-19 years for health and survival data analysis. The age groups for different levels of education are quite different from age groups incorporated to analyse health and survival. For elementary, secondary and higher secondary levels, respective age groups are 6-13 years, 14-15 years, 16-17 years. A set of selected indicators (as mentioned in respective tables in the data source section) would be used under the already defined comprehensive framework.

Box 1.1: Debate on Defining Age of Child and Adolescent

- Biologically, childhood is the stage between infancy and adulthood. Demarcation of age for children varies from one country to another.
- According to United Nations Convention on the Right of Children (UNCRC), 1989, "A child means every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier."
- In India, Census of India identifies 'children' as any person below the age of 14 years, as do most government programmes. The RtE Act (2009) recognises basic formal education as a fundamental right of all children between the ages of 6 to 14 years while the Juvenile Justice (Care and Protection of Children) Act, 2000 identifies a child as any person who has not completed 18 years of age.
- The Prohibition of Child Marriage Act, 2006 states that a male has not reached adulthood until he is 21 years of age and a female has not reached adulthood until she is 18 years of age.
- Considering all these variations, the broad age groups of 0 to 14 years and 15 to 19 years have been selected with reference to 'child' and 'adolescent' respectively in this study.

Table 1.8: Selected Age Groups

Section	Children	Adolescents
Education	6-17 years[5]	15-19 years
Health	0-5 years	15-19 years
Employment	5-14 years	15-17 years (young adolescents) 18-19 years (older adolescents)
Migration (latest figures as per Census of India, 2011)	5-14 years	15-19 years
Seasonal Migration (as per NSS)	5-14 years	15-17 years (young adolescents) 18-19 years (older adolescents)
Child Protection	0-18 years	

Box 1.2: Urbanisation Component in the Study

The situation of children and adolescents in India will be analysed with reference to the three basic components of changes:

Slum and Non-slum Population: This information is available for eight metro cities in India (Chennai, Delhi, Hyderabad, Indore, Kolkata, Meerut, Mumbai, and Nagpur).

Urban poor and Non-poor: The urban poor categories of households are from the lowest two urban wealth quintiles and the non-poor are from the upper three wealth quintiles based on the NFHS Wealth Index. This wealth index is based on information on 33 household assets and housing characteristics, such as ownership of consumer items, type of dwelling, source of water and availability of electricity etc. and then combined by assigning appropriate weights to individual components.

Wealth quintile classes are not available in various rounds of the National Sample Survey. Instead, the usual monthly per capita consumption expenditure (UMPCCE) is available, which has been used as a proxy variable to the economic status of households (HHs). The lowest two UMPCCE quintile classes have been categorised as 'poor' and the top three quintile classes as 'non-poor'.

5 'Corresponding age for school education' from Education Statistics at a Glance (p.3), Statistics Division, Ministry of Human Resource Development (MHRD), Government of India

Table 1.9: Research/Evaluation Questions and Detailed Methods

Research/Evaluation questions	Methods
1. What has been the trend of various indicators of development with regard to children and adolescents in urban India at the macro level and compared with rural India? To elucidate, how are the children of different age groups (0-5 years and 6-9 years) and adolescents (10-19 years) in urban settings different from those in rural settings in terms of health, nutritional intake, WASH, education, employment status, violence and crime, exposure to mass media/social media/internet?	Cross tabulation of percentages and frequencies of the selected variables mentioned in the rationale section, and cartographical representation such as using bar diagram, pie charts etc. Content analysis for crime, violence, exposure to mass media/social media/internet based on analysis of relevant news in regional editions of five leading national newspapers.
2. What are the regional variations in the status of children and adolescents in terms of health, nutritional intake, WASH, education, employment status, violence and crime, exposure to mass media/social media/internet?	Cross tabulation of percentage and frequencies of the selected variables mentioned in rationale section, and representation of regional variations through choropleth maps. Content analysis for crime, violence, exposure to mass media/social media/internet.
3. What are the differential dynamics of health, nutrition, education, employment violence and crime, exposure to mass media/social media/internet among poor and non-poor children, slum and non-slum migrant and non-migrant children?	Cross tabulation of percentage and frequencies of the selected variables mentioned in rationale section and cartographical representation such as bar diagram, pie charts etc. Content analysis for crime, violence, exposure to mass media/social media/internet.
4. How do policies and programmes affect the current status of children and adolescents in urban India?	Review of literature on policies and programmes and its synchronisation with results of the study, identifying the areas of intervention required in various sectors.

The above analysis has been done using SPSS (Ver. 20), Stata (Ver. 13) and R Programming with ggplot2 package. The mapping exercise will be done in Geographical Information System (GIS) interface using Arc-GIS (10.2). In addition, various cartographic techniques will be used to represent the data spatially and graphically.

In the absence of quantitative data, a qualitative analysis would be very helpful for indicators such as crime and street violence against and among children and adolescents. In this study, the major tool has been qualitative assessment of content analysis of a highly circulated national-level newspaper *The Times of India*. This has been done by identifying crime and violence, specific themes and keywords such as trafficking, gang violence, homicide, kidnapping, rape etc. appearing in the newspaper for the last one year (1 June, 2018-31 May, 2019). The analysis of nature and the frequency of crime and violence happening day to day in India has been analysed.

1.9 Limitations

Absence of uniform data sets is a serious limitation of the study. Each secondary data source is based on a different time period with varying levels of disaggregation. The definition also has changed over time and is diverse across different datasets. This would stand in the way of comparability of indicators over time. For many indicators, especially those related to violence and crime among children and against children, quantitative datasets do not exist. Due to unavailability of standardised data from one designated official source, the impact of the interventions of urban local bodies (ULBs) on the situation of children and adolescents could not be examined in this study.

2

Health and Survival

2.1 Introduction

Ensuring good health and survival of children and adolescents are among the important global agendas listed in the Sustainable Development Goals (SDG-3) of the United Nations. Globally, 193 countries, apart from India, have shown their commitment to addressing the challenges concerning health and well-being with particular focus on vulnerable sections of society. These challenges include several issues and diverse causes of mortality and morbidity. India, like the other 193 countries, has committed to ensuring universal, affordable, equitable and effective health coverage and healthcare facilities to its citizens. It also aims for protection against financial risks, assuring monitoring of quality of the affordable services, and abridging heterogeneities at different levels of disaggregation. The other promising remedial actions include improvement in macro- and micro-level determinants of mortality and morbidity.

Thus, with regard to SGD-3, United Nations in its recommendations has advocated holistic development across several allied goals, which are directly and indirectly related to the health and well-being of the people. Safeguarding mortality among children and women can alone bring enormous demographic, economic and social returns for any country. Studies suggest that 30 to 50 per cent of the economic growth in the east Asian countries during 1965-1990 was contributed by the decline in child mortality and fertility rates (Bloom and Williamson, 1997). It is also acknowledged that every investment in public health leads to an average five-fold return to this investment (Masters et al., 2017). However, the magnitude of return is highly variable across the developed and developing countries. Notably, in developing countries such as India, the situational analysis of health and well-being in the country shows a striking predominance of double and triple burden of diseases. Poor and marginalised sections of society are more prone to the adverse risks of communicable and non-communicable diseases (Williams et al., 2018).

Demographic, health and socio-economic transition has been rapid in urban India in the past few decades (Kundu, 2011; Dyson, 2011). The growing number of people living in urban areas has compounded several complex challenges. Despite concerted efforts of various stakeholders, urban areas are grappling with a multitude of challenges in addressing the well-being of people, especially children and adolescents. One such issue is to ensure a healthy and safe life to all, especially to the deprived sections of society. Literature suggests that an increase in the urban population coupled with uncongenial environments has sharpened urban health issues. Inadequate investments at various levels of intervention have further led to notable inter- and intra-state health inequalities. It is also evident that the impact has been more acute on the urban poor and slum dwellers. However, no studies at disaggregated levels are available on the subject. Thus, understanding the intricacies of the causes and effects of poor health among different urban communities is one the pressing issues in the present time.

Children and adolescents are the two most vulnerable groups who are affected by adverse health outcomes due to poverty, poor living conditions causing susceptibility to diseases, and unaffordability of healthcare services (Singh et al., 2011) . This situation is worsened due to lack of facilities in existing urban health centres—due to infrastructure, human resources, heavy caseload and referrals (PwC and Save the Children, 2015). Urban poor children and adolescents living in adverse housing, water and sanitation conditions are exposed to greater risk

of morbidities. Further, housing congestion and lack of ventilation coupled with other urban penalties, create a higher risk for waterborne and vectorborne diseases, including infections among children and adolescents. The lack of knowledge of safe practices also adds to the layers of deprivation and susceptibility to the poverty trap. Adolescents in the developing world are known to have poor knowledge of contraception and higher unmet needs (Chandra-Mouli et al., 2014; Pachauri and Santhya, 2002). The reproductive well-being of adolescents living in poor conditions with less access to knowledge leads them to compromise their fundamental health rights. Studies suggest that those households living in urban poor localities are more prone to falling into the poverty trap (Grant, 2010; Cotter, 2009). Furthermore, households which are just above the poverty line are highly vulnerable and at risk of reverting to extreme poverty with increasing health challenges.

In light of the above facts, this chapter aims to understand and identify the issues related to the health and well-being of children (0-5 years) and adolescents (15-19 years) in urban India. The chapter is divided into two sub-sections. The first is related to child survival and health outcomes. It includes estimation and analysis of indicators such as neonatal mortality rates (NNMR), infant mortality rate (IMR) and under-5 mortality rate (U5MR) across the larger states by gender, place of residence and wealth of the households. The analysis also includes the assessment of health and survival among slum and non-slum areas of selected eight million-plus cities. Besides survival, childhood morbidities such as diarrhoea, ARI, and low birth weight (LBW) have also been analysed. This study also attempts to understand the challenges faced in the complete coverage of immunisation in urban India, especially by poor families. The second section attempts to explore the adolescent reproductive and health status of urban India. The analysis on morbidities for adolescents could not be carried out at the granular level due to paucity of data.

2.2 Data and Methods

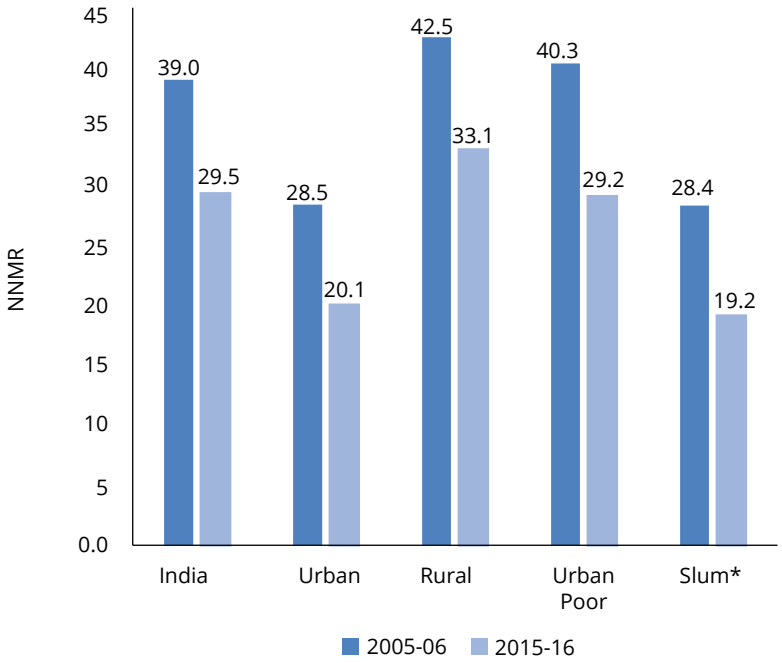
The analysis of neonatal mortality rate (NNMR), infant mortality rate (IMR) and under-5 mortality rate (U5MR) has been estimated based on 3,85,905 urban children for the most recent five-year period. However, for the urban poor, this sample size was 1,74,159. The analysis for child and infant mortality was done on the information of deaths in the past five years preceding the survey. Also, due to the small sample size of urban poor at the state level, estimation of NNMR was not possible. The mortality estimation for the urban poor in select 16 states and Delhi has been attempted on a ten-year exposure period from the survey date. The analysis of selected indicators of childhood morbidities such as diarrhoea, ARI, and low birth weight (LBW) was carried out from the Kids file available in the NFHS. The analysis of both ARI and diarrhoea was based on 238,945 samples, while for LBW, it was based on 194,818 alive children. Empirical estimation of diarrhoea and ARI in urban areas was based on 67,958, and LBW on 62,079 live births in five years preceding the survey date. It may be noted that due to sample size constraints, the examination of full immunisation was carried out only on 47,839 children aged 12-23 months at an all India level. Also, the analysis of child immunisation in the urban areas was done on a smaller sample of 13,602 children aged 12-23 months. A significant proportion of the study deals with the health challenges of adolescents in urban India, especially in urban poor settings. To draw inference on the health status of adolescents in India, both Women and Kids files were used. Reliable and disaggregated data for the age group 10-14 years is often missing in any survey, including NFHS. Therefore, the empirical analysis on reproductive health issues was carried out for adolescents aged 15-19 years only. At the national level, 121,552 females have been interviewed out of which 36,932 belong to urban areas. The analysis for adolescent health is based on the urban poor sample of 16,439 out of which 2,246 are currently married.

2.3 Situational Analysis of Health and Well-being of Children

Each year, many children under age 5 years die, mostly from preventable causes such as pneumonia, diarrhoea and malaria (WHO, 2019). For this reason, child mortality is a key indicator not only for child health and well-being, but for overall progress towards the Sustainable Development Goals (SDGs). The SDG target for child mortality represents a renewed commitment to the world's children by 2030, and an end to preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births, and under-5 years mortality to at least as low as 25 deaths per 1,000 live births (United Nations Inter-agency Group for Child Mortality Estimation (UN IGME), 2017). India is one of the biggest contributors to the annual global tally of deaths of children under 5 years old. Every year 11.7 lakh children die due to preventable causes (WHO, 2019). The estimation from the latest

round of the National Family and Health Survey (NFHS-4, 2015-16) shows that the neonatal mortality (NNMR) rate was 29.5 per 1,000 live births in 2015-16, which came down from 39 deaths per 1,000 live births in 2005-06 (Figure 2.1). This is still much higher than the SDG target of 12 deaths per 1,000 live births, to be achieved by 2030. Further, there is a considerable variation in neonatal mortality between urban and rural areas. Estimates from the latest survey reveal that 20 and 33 deaths per 1,000 live births were in urban and rural areas respectively. However, the neonatal mortality rate among urban poor was lower than in rural areas, i.e. 29.2 deaths per 1,000 live births.

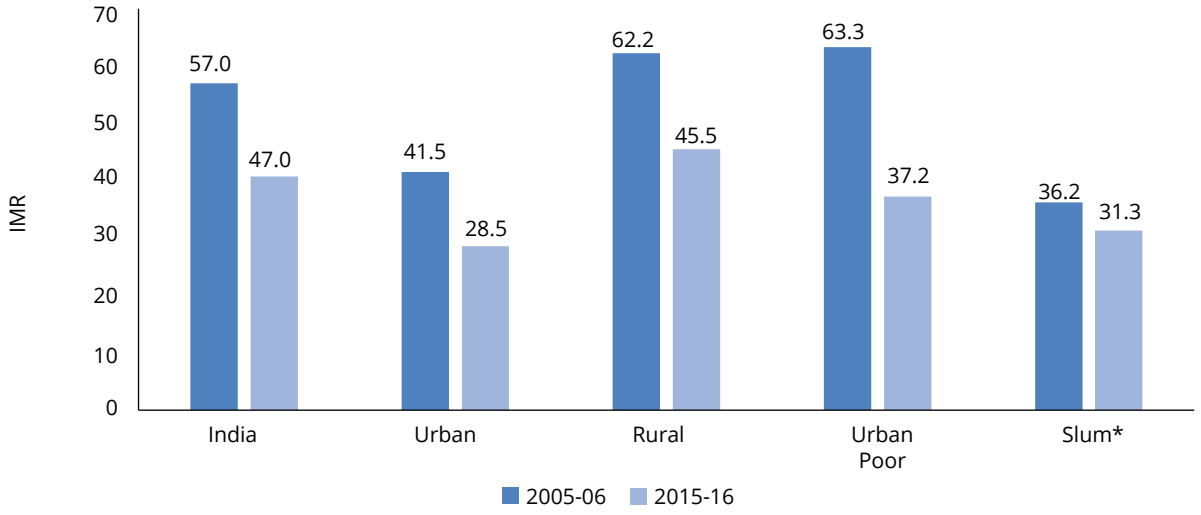
Figure 2.1: Change in Neonatal Mortality Rates (NNMR) in India, 2005-06 and 2015-16



Note: *= The estimates of NNMR for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Similar to the neo-natal mortality rate, the infant mortality rate (41 per 1,000 live births) has sharply declined in India during the past decade (Figure 2.2). The rate of decline was much faster in all urban and urban poor areas compared to rural areas. In 2005-06, IMR in urban areas was reported to be 41.5 per 1,000 live births, which has declined by 31.3 per cent in the past ten years reaching up to 28.5 infant deaths per 1,000 live births in 2015-16. At the same time, the percentage decline in IMR in rural areas was around 26.8 per cent, while in urban poor areas the decline was 41.2 per cent. It is worth mentioning that the percentage decline in both the NNMR and IMR was faster in the all urban areas as well as in urban poor areas compared to rural areas. Further, the analysis carried out in slums of eight million-plus cities showed a sharp decline (32.4%) in the NNMR between 2005-06 and 2015-16. However, the pace of decline in IMR was relatively low with reference to the reduction in NNMR in the slums of eight million-plus cities in the last ten years.

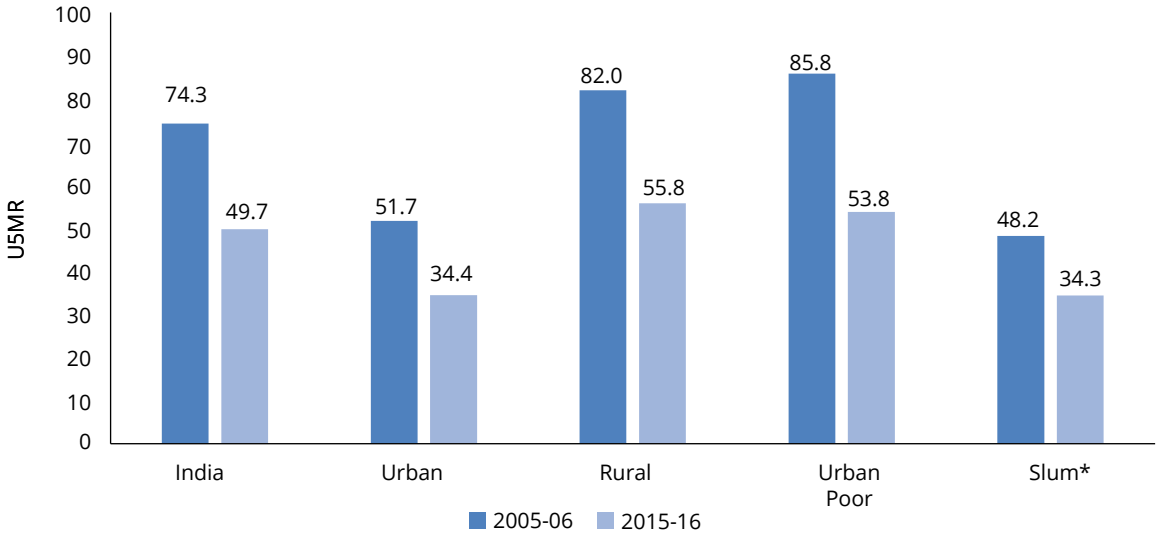
Figure 2.2: Change in Infant Mortality Rates (IMR) in India, 2005-06 and 2015-16



Note: *= The estimates of IMR for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

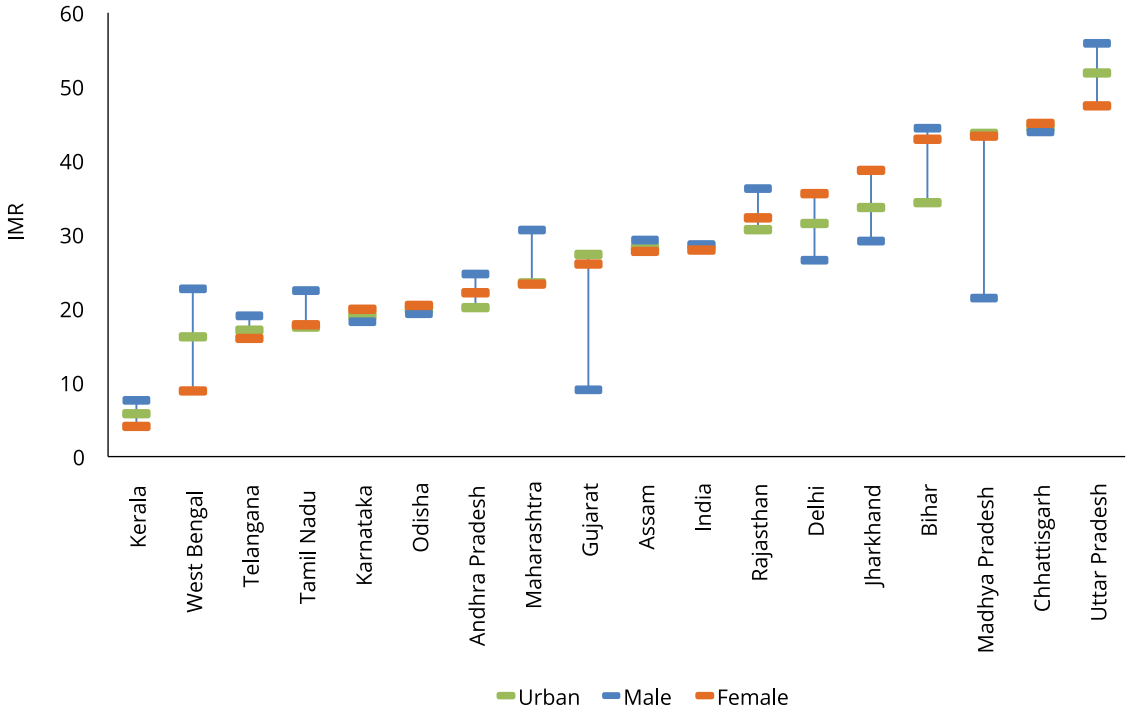
The situational analysis indicates that the under-5 mortality rate (U5MR) was about 49.7 deaths per 1,000 live births in India in 2015-16 against 74.3 U5MR in 2005-06 (Figure 2.3). The current level of U5MR is nearly twice as high as the SDG target of 25 per 1,000 live births. It is important to note that the decline in U5MR in the past 10 years is mainly because of the considerable decline in rural and urban poor settings. Still, the majority of child mortalities in urban areas is due to higher deaths among urban poor children. It is however interesting to note that levels of NNMR and U5MR are relatively lower among the households living in slums of eight million-plus cities.

Figure 2.3: Change in Under-5 Mortality Rates (U5MR) in India, 2005-06 and 2015-16



Note: *= The estimates of U5MR for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 2.4: State-wise Infant Mortality Rates in Urban India, 2015-16



Note: IMR for urban male and female has been estimated for the reference period of five years preceding the survey date.
Source: Computed from NFHS-4, 2015-16

The gender differentials in IMR are pronounced in India. In 2005-06, the estimated IMR was 57.7 infant deaths among 1,000 live births among girls, which declined to 37.9 in 2015-16, thereby reporting a decline of 37.9 per cent between the two time points. The decline among boys was less steep, the figures going down from 56.3 to 43.3 during the same period (IIPS and Macro International, 2007; IIPS and ICF, 2017). It is interesting to note that the pace of decline in female infant deaths was reportedly higher than that of the male infant deaths in the ten years between 2005 and 2016 in India. However, a contradictory finding was noted in urban India, where the decline in male IMR was sharper than that of the female IMR. The male IMR has decreased from 43.7 in 2005-06 to 29.3 in 2015-16, while female IMR has declined from 39.1 to 27.7.

It is important to mention here that the performance of the states is very heterogeneous and improvement in IMR is not uniform. Besides, evidence of gender differentials in urban IMR is also noticeable in these states. Urban areas in a few states have successfully achieved the target of fewer than 28 deaths before 2019 (National Health Policy, 2017). The states like Kerala, West Bengal, Telangana, Tamil Nadu, Karnataka, Odisha and Andhra Pradesh fall under this category where the National Health Policy (2017) goal of less than 28 infant deaths was attained three years prior to the timeline. At the same time, states like Rajasthan, Jharkhand, Bihar, Chhattisgarh and Uttar Pradesh registered a higher IMR in urban areas compared to the NHP-2017 goal. Conspicuously, more female deaths during infancy were happening in urban areas of Madhya Pradesh, Jharkhand, Chhattisgarh, Delhi and Gujarat. A significant gender gap in IMR in these states may be attributed to persisting socio-economic inequalities especially in healthcare. This is compounded by the gender based discriminatory practices in postnatal check-ups, care services, breastfeeding and complementary feeding practices. The sample size for estimation of IMR for the vulnerable population living in urban areas is grossly inadequate at the state levels, especially for poor and non-poor disaggregation. To fill this gap, the analysis was focused on the U5MR.

Figure 2.5 presents the U5MR by the average urban and urban poor in 17 larger states of India (2015-16). It has been found that the U5MR is higher among the urban poor than the states' urban averages. It is interesting to mention here that even the urban poor in Kerala, West Bengal and Tamil Nadu have already achieved the SDG-3 target of 25 U5MR, 15 years before the goalpost of 2030. Also, there was a huge rural-urban difference in U5MR. Nearly 56 under-5 deaths per 1,000 live births occurred in rural India compared to 34 deaths per 1,000 live births in urban India. Interestingly, urban areas in states like Telangana, Karnataka and Odisha have reached below 25 in the under-5 deaths per 1,000 live births in 2015-16. However, there is still a high prevalence of U5MR among a few states in India such as Bihar, Madhya Pradesh, Chhattisgarh, Telangana and Delhi. The estimated U5MR among urban poor across various states presents notable challenges in congregating present rates with SGD-3 targets within the stipulated timeframe.

The major challenges in securing the SDG target rely majorly upon the performances of urban poor living in those states. Besides a higher U5MR among urban poor noted in Figure 2.5, the findings from Figure 2.6 exhibit a notable gender gap in U5MR among urban poor in Uttar Pradesh and Delhi. In these two states, the U5MR among urban poor was remarkably higher for female children compared to their male counterparts. Contrary to this finding, urban poor in many states have reported increased risk of death in male children as compared to the female children. Interestingly, no evidence of gender gap in U5MR was observed in the urban poor households living in Kerala, Jharkhand, Telangana and Rajasthan.

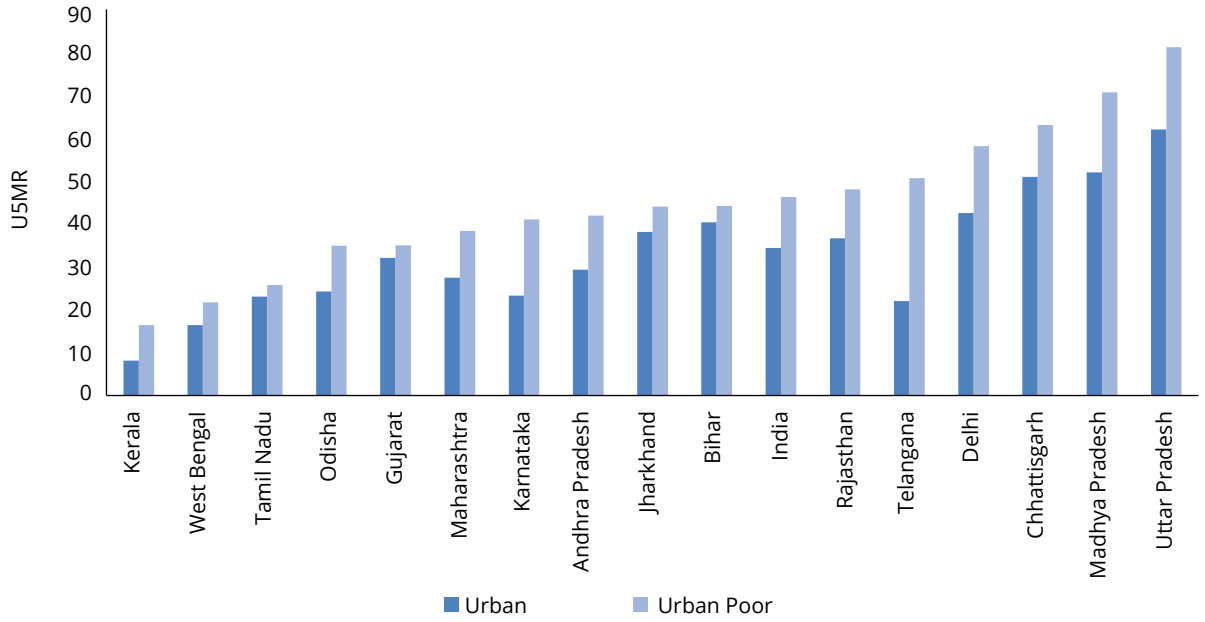
2.4 Major Health Challenges Among Children

It is heartening to note that mortality has declined over the last two NFHS rounds. However, the mortality assessment showed an increased disparity in deaths across states and the urban poor. The urban poor still suffer from a high share of neonatal, infant and child deaths in cities. In light of these findings, the following section analyses various health risks observed by urban children, especially the poor.

2.4.1 Diarrhoea in urban India

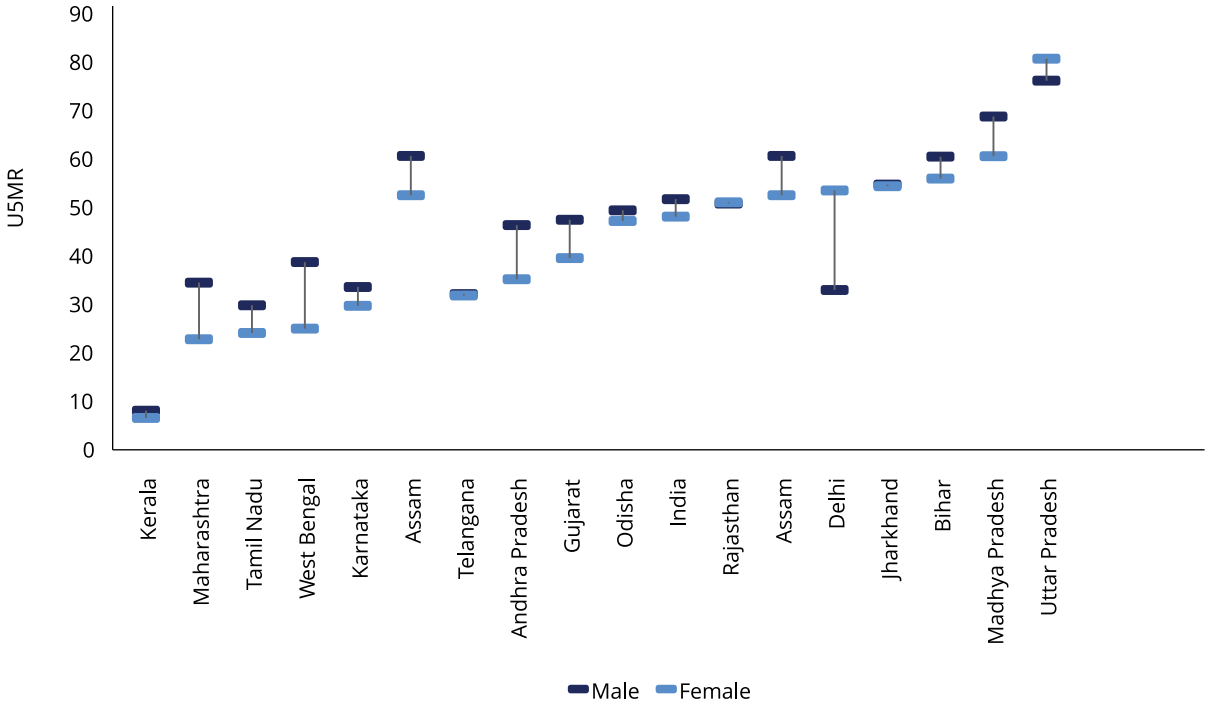
Diarrhoea is the third leading cause of death among under-5 children, responsible for 13 per cent deaths in this age-group, killing an estimated 300,000 children in India each year (*The Million Death Study Collaborators*, 2010). A recent review study by Lakshminarayanan and Jayalakshmy (2015) concluded that a comprehensive diarrhoea disease control strategy, through improved case management, addressing social determinants of

Figure 2.5: State-wise Under-5 Mortality Rates (U5MR) in Urban India, 2015-16



Note: U5MR for urban poor has been estimated for the reference period of ten years preceding the survey date.
Source: Computed from NFHS-4, 2015-16

Figure 2.6: State-wise Gender Gap in Under-5 Mortality Rates (U5MR) Among Urban Poor in Selected Larger States in India, 2015-16



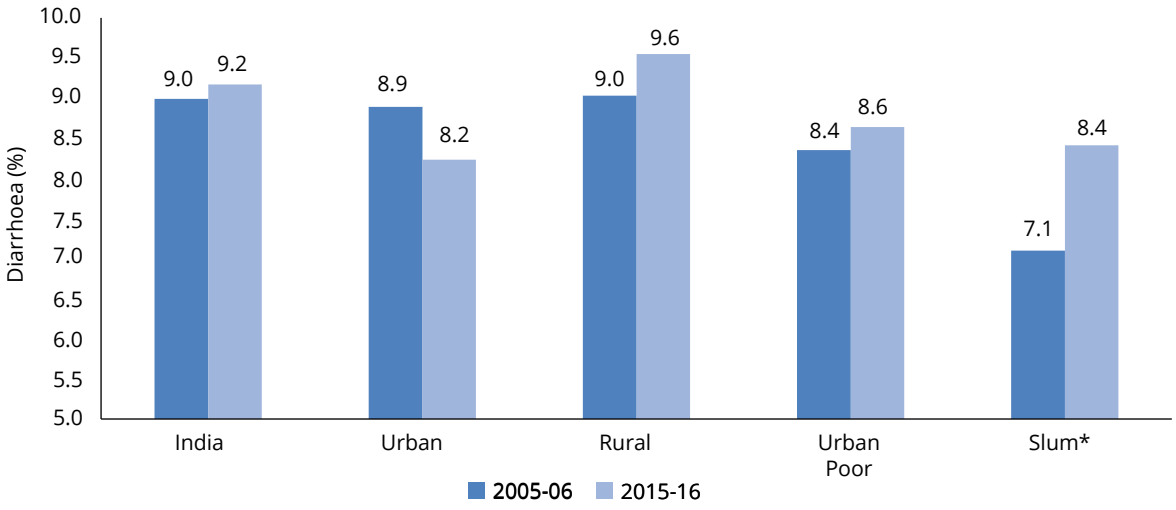
Note: U5MRs for male and female in urban areas of the selected states/UTs have been estimated for the reference period of ten years preceding the survey date.
Source: Computed from NFHS-4, 2015-16

health and research in the field of cost-effective interventions can reduce the burden of diarrhoea among children in India. This endorses the necessity to analyse the level of diarrhoea prevalence at various disaggregated levels. Notably, 9.2 per cent children aged under-5 years at an all-India level suffered from diarrhoea in 2015-16 as presented in Figure 2.7. The prevalence of diarrhoea was almost the same (9%) in 2005-06. At the same time, it can be observed that the prevalence of diarrhoea has increased among both the rural and urban poor during both 2005-06 and 2015-2016, while it has declined in urban India. Further, the findings suggest that the prevalence of diarrhoea was lower among the urban poor children in 2005-06 compared to all-urban areas. However, it has increased notably among urban poor children during the last decade reaching the prevalence level of 8.6 per cent in 2015-16 against 8.2 per cent of urban areas. Its prevalence has also increased sharply among children from slums of eight million-plus cities. This may be attributed to heterogeneity of access to standardised services of water and sanitation across sectors and all communities in urban areas.

Variations in the prevalence of diarrhoea are observed at the state level. Figures 2.8 and 2.9 present the regional pattern of diarrhoea prevalence and its treatment-seeking behaviour in urban India (2015-16). It was found that the prevalence of diarrhoea was higher among the urban poor children in a majority of the states except for Karnataka, Maharashtra, Rajasthan and Delhi, where its incidence was higher among the urban non-poor. Across the identified states, the prevalence of diarrhoea in urban areas was observed to be higher in Uttar Pradesh, followed by Chhattisgarh and Madhya Pradesh. On the other hand, its prevalence was lower in Sikkim, Assam and Kerala. Noticeably, the prevalence of diarrhoea among the urban poor was also higher in Uttar Pradesh, Chhattisgarh and Madhya Pradesh. Besides heterogeneity in the prevalence of diarrhoea, there is an irregularity in treatment-seeking behaviour between urban and urban poor children (Figure 2.9).

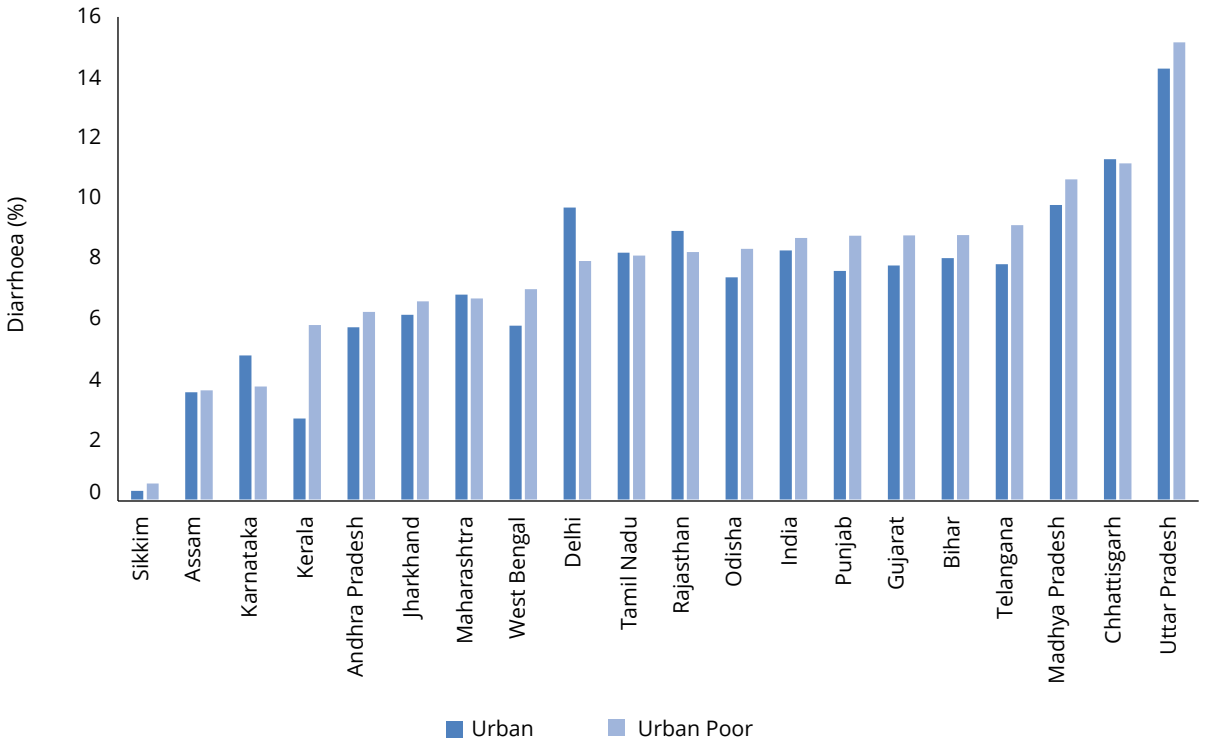
Given that the highest prevalence of diarrhoea was in urban Uttar Pradesh, only half of the children received ORS or gruel for treatment. Kerala and Maharashtra are two better performing states in India, where nearly four in every five children received ORS or gruel for treatment of diarrhoea. In the urban areas of Gujarat, Jharkhand, Rajasthan and Andhra Pradesh, there was a difference in treatment-seeking behaviour between the poor children who received less ORS or gruel in comparison to all urban children. Thus, the economic status of the household severely affects the treatment pattern of its children against diarrhoea in urban India. This pattern is evident at the state level as well. However, in states like Bihar, Tamil Nadu, Chhattisgarh and Madhya Pradesh no difference in access to ORS or gruel is found between urban and urban poor children. Thus, one can infer that urban poor children are doubly deprived in terms of health and well-being due to inconducive living environments that firstly lead to a high incidence of diarrhoea, and secondly, where there is less adoption of recommended methods of treatment.

Figure 2.7: Change (%) in the Prevalence of Diarrhoea Among Children Under 5 Years in India, 2005-06 and 2015-16



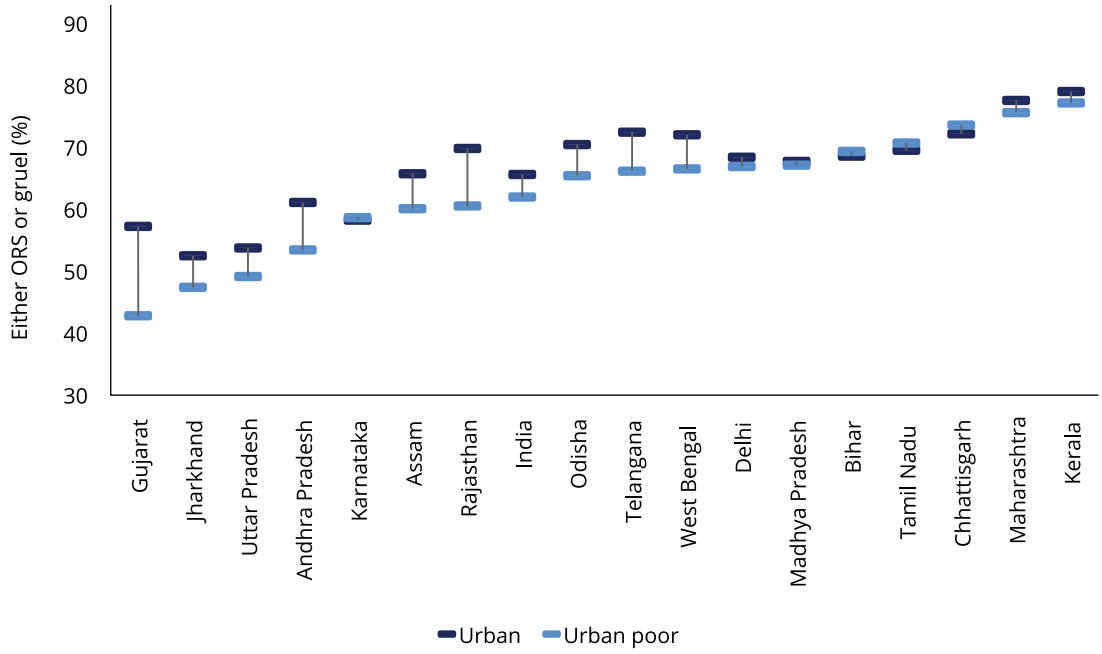
Note: * = Estimates of Diarrhoea for slum are based on the eight million-plus cities given in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4 2015-16

Figure 2.8: State-wise Prevalence of Diarrhoea (in%) Among Children Under 5 Years in India 2015-2016



Source: Computed from NFHS-4, 2015-2016

Figure 2.9: State-wise ORS and Gruel Received by Children Suffering from Diarrhoea in Urban, and Urban Poor Households (in%), 2015-2016



Source: Computed from NFHS-4, 2015-16

2.4.2 Acute respiratory infection[1] in urban India

Pneumonia is a form of acute respiratory infection (ARI) that affects the lungs. The lungs are made up of small sacs called alveoli, which fill with air when a healthy person breathes. When an individual has pneumonia, the alveoli are filled with pus and fluid, which makes breathing painful and limits oxygen intake. Pneumonia is the single largest infectious cause of death in children worldwide (WHO, 2019). It is the leading cause of death in under-5 children, responsible for 16 per cent deaths in this age-group, killing an estimated 370,000 children in India each year (*The Million Death Study Collaborators*, 2010). Thus, it is important to understand the level of prevalence of ARI at various disaggregate levels.

The analysis suggests that the prevalence of ARI has declined over the past one decade in India at all disaggregated levels. Figure 2.10 shows that about three per cent of children suffered from the symptoms of acute respiratory infection in India in 2015-16, declining from six per cent in 2005-06. ARI has declined by more than 50 per cent at various levels of disaggregation. It has declined in rural areas from 6.0 per cent in 2005-06 to 2.9 per cent in 2015-16. Similarly, the decline in ARI was even sharper in the slums of eight million-plus cities, where it was reported as low as 1.6 per cent in 2015-16, as compared to 4.0 per cent in 2005-06. It is surprising to note that the pace of decline was relatively lower among the urban poor compared to rural children.

State level analysis carried out for urban and urban poor children in 2015-16 depicts a notable variation in the prevalence of ARI across the broad geographical regions in India as well as among the urban poor living in these states. The lower level of ARI prevalence is observed in the urban areas of Assam, Kerala and Andhra Pradesh, while the relatively higher level of ARI prevalence is observed in Uttar Pradesh, Jharkhand and Tamil Nadu. Evidently, in the majority of the states, the prevalence of ARI was higher among the urban poor children except for Delhi, Telangana and Rajasthan, where it was higher among the urban non-poor children. This may be due to very high levels of pollution in the cities/states, especially Delhi, and the higher use of solid fuel within the poor households in Rajasthan and Telangana. Uttar Pradesh and Jharkhand have shown the highest prevalence of ARI in the urban areas as well as among urban poor children. It may further be noted that the gap in the prevalence of ARI between the urban average and urban poor children is highest in Uttar Pradesh, Jharkhand, Gujarat, Madhya Pradesh and Karnataka. Studies suggest that the children living in poor and uncongenial environments have a higher likelihood of being affected by ARI (Goel et al., 2012; Pore, Ghattargi and Rayate, 2010). Besides living conditions the prevalence of ARI remained higher in households using solid cooking fuel (Goel et al., 2012). It has been observed that the households lacking proper ventilation show significant cases of ARI (Prajapati, Talsania and Sonaliya, 2011). Importantly, the children who are malnourished have a higher risk of getting ARI (Tupasi et al., 1990; Pore, Ghattargi, and Rayate, 2010). These three are the identified characteristics of urban poor households in India, especially those living in slums.

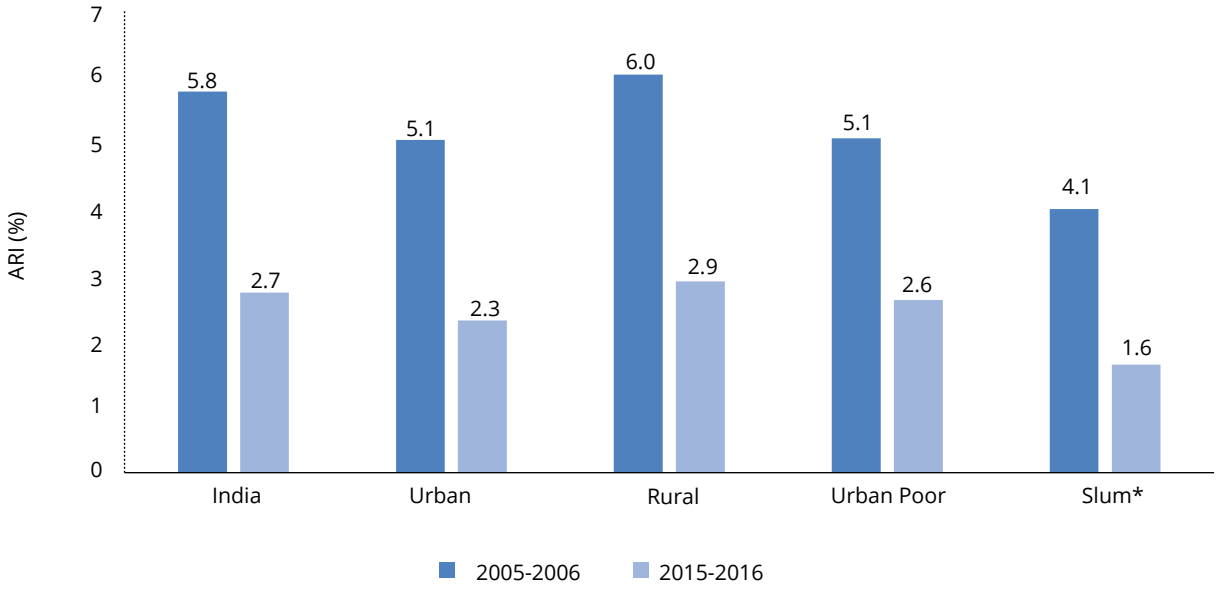
2.4.3 Full immunisation in urban India

Immunisation is one of the most cost-effective interventions to prevent sufferings that are related to avoidable sickness, disability and death among children. The benefits of immunisation are not only restricted to improvements in health and life expectancy but also have social and economic impacts at both micro and national levels. Over the years, a significant increase in the coverage of full immunisation has been observed in both developed and developing countries. Still, nearly 1.5 million children die of diseases that can be easily preventable through vaccinations (World Health Organization, 2005). Sodha and Dietz (2015) argued that poor socio-economic and education status are serious impediments to full immunisation.

In India, the percentage of children who received full immunisation has increased from 43.5 per cent in 2005-06 to 62 per cent in 2015-16. Coverage of full immunisation has also increased marginally in urban areas in the past decade. The coverage of full immunisation was again highest among urban children but lower among the urban poor children. It is important to note that coverage of immunisation has increased sharply among the urban poor and rural children in the past ten years where a percentage increase in the former was highest. Among the urban poor, child immunisation has increased from 31.1 per cent in 2005-06 to 59.6 per cent in 2015-16.

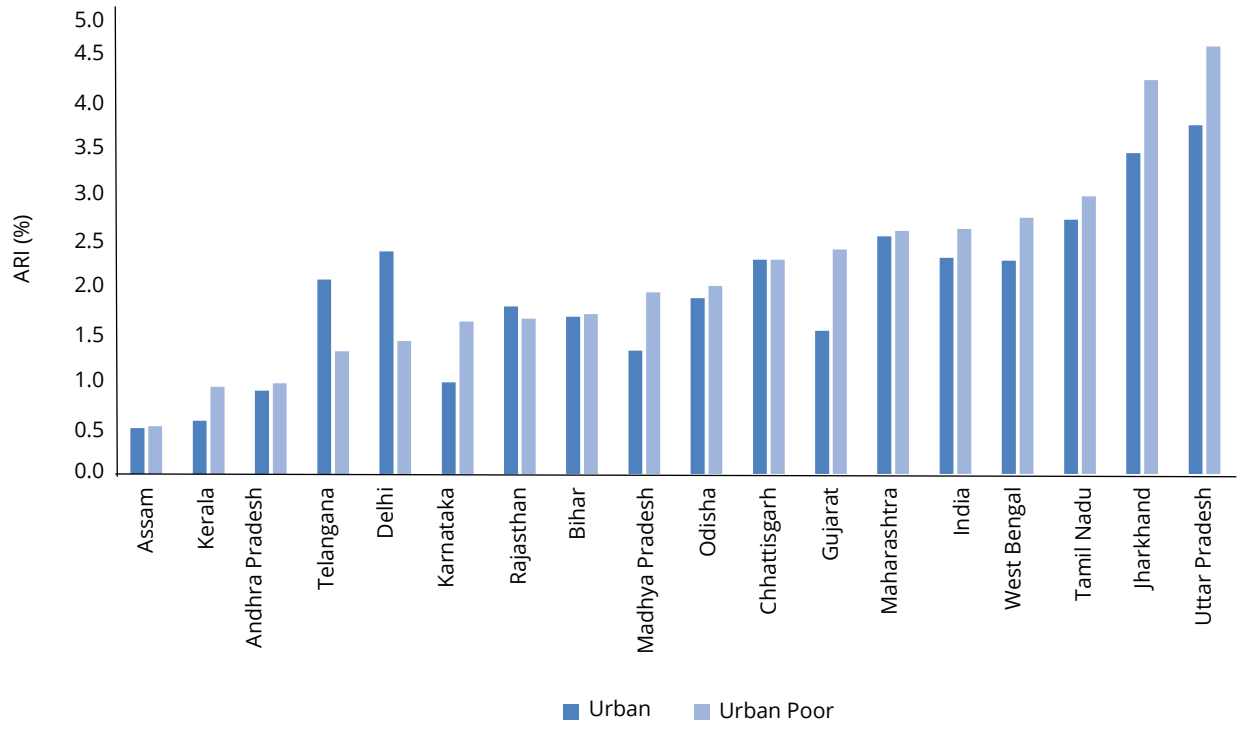
1 ARI symptoms consist of cough accompanied by short, rapid and /or difficult breathing that is chest related.

Figure 2.10: Changes in Acute Respiratory Infection in India, 2005-06 to 2015-16



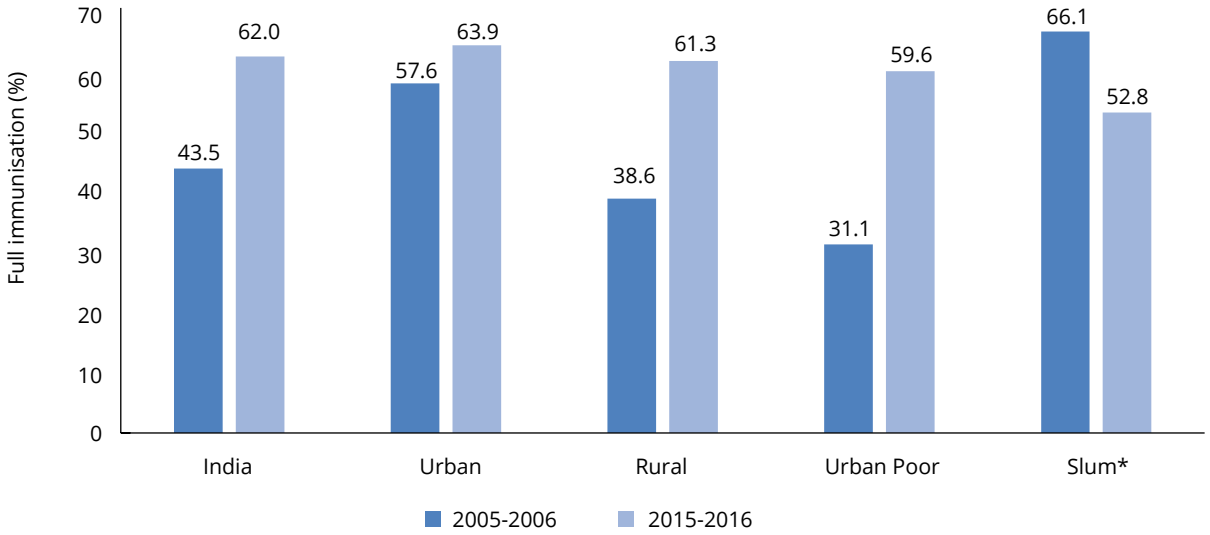
Note: *= The estimates of ARI for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-4, 2015-16

Figure 2.11: Regional Pattern of Prevalence (in %) of Acute Respiratory Infection in Urban India, 2015-2016



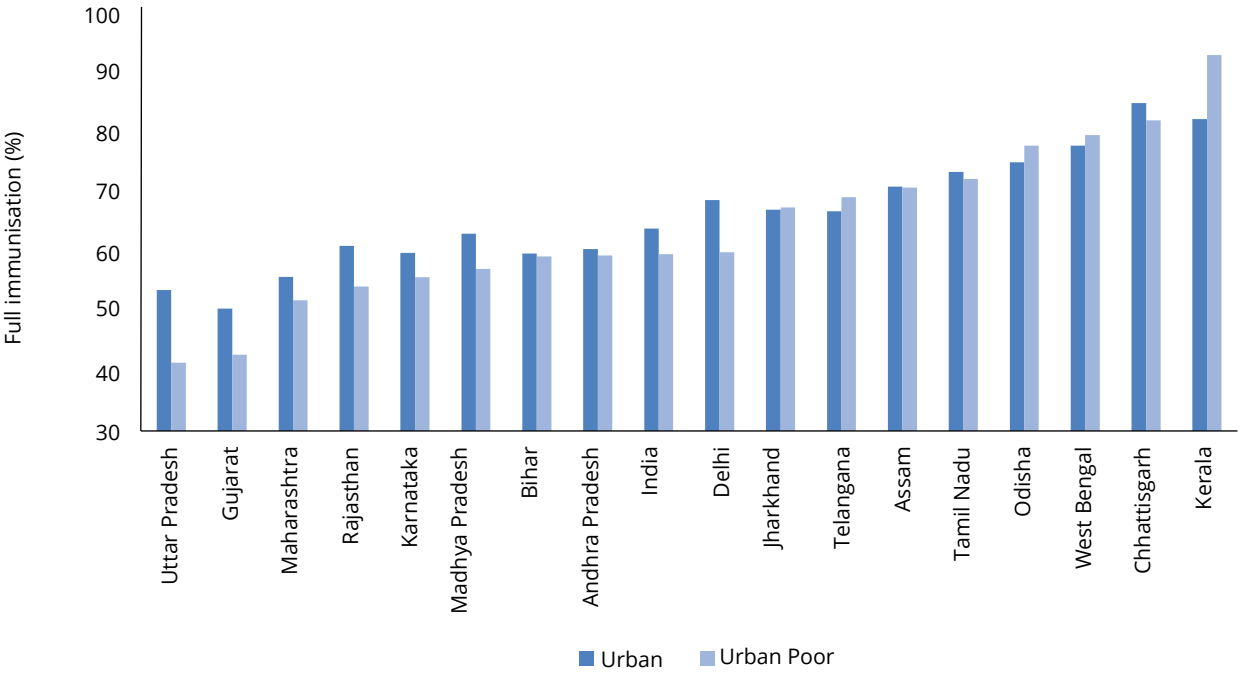
Source: Computed from NFHS-4, 2015-16

Figure 2.12: Change in the Percentage of Children (12-23 months) who received Full Immunisation in India, 2005-06 and 2015-16



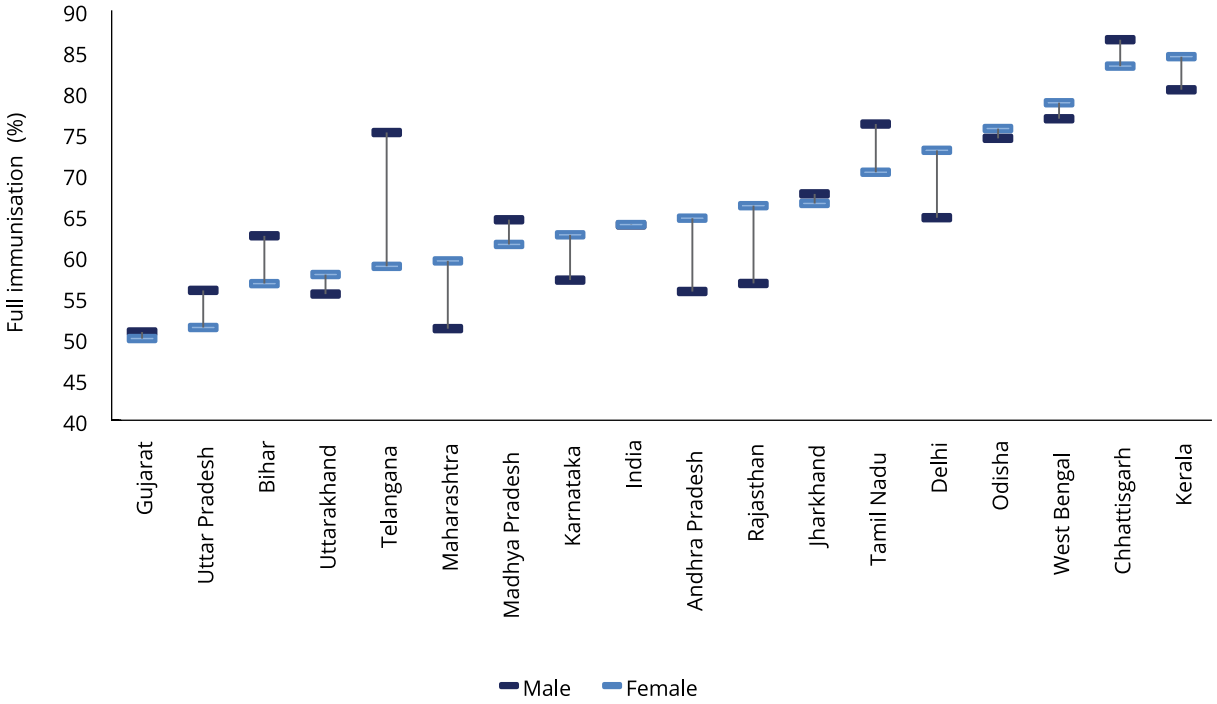
Note: *= The estimates of full immunisation for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-4, 2015-16

Figure 2.13: State-wise Percentage of Children (12-23 months), Who Received Full Immunisation in Larger States in India, 2015-16



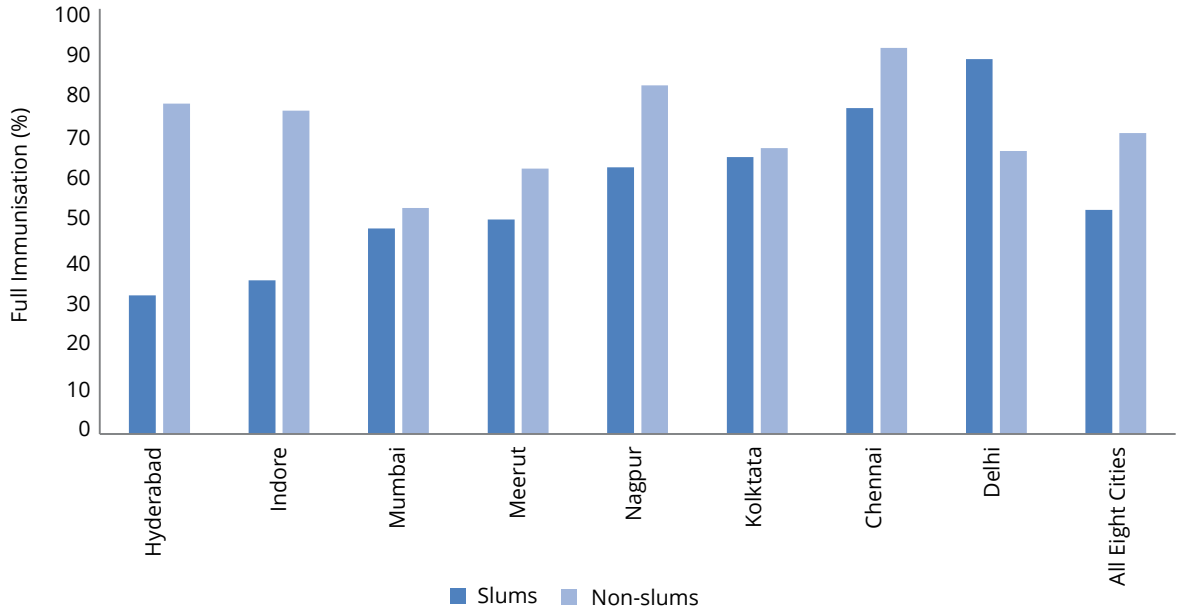
Source: Computed from NFHS-4, 2015-16

Figure 2.14: State-wise Gender Gap in Full Immunisation Among Children (12-23 months) in Urban Areas (in %), 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 2.15: Full Immunisation Among Slum and Non-slum Children (12-23 months) in 8 million-plus Cities (in %), 2015-16



Source: Computed from NFHS-4, 2015-16

The analysis carried out on slums of eight million cities reports substantial decline in immunisation in the past decade. Evidently, it has declined from 66.1 per cent in 2005-06 to 52.8 per cent in 2015-16, thereby reporting a decline of 13.3 percentage points. This may be attributed to the drop in vaccinations. Poverty and illiteracy leads to low immunisation coverage of infants and children. This is a common phenomenon in poor and uneducated families where the level of awareness is usually low (Nath et al., 2007). Breaks in follow-up, loss of immunisation card, side effects and misconceptions are other reasons which lead to drop-outs in immunisation (Saxena et al., 2008).

The state-wise analysis revealed a significant disparity in the coverage of immunisation in urban India. Across states, immunisation coverage was highest in urban areas of Kerala, Chhattisgarh and West Bengal, where three in every four children received full immunisation. However, states like Gujarat, Uttar Pradesh and Maharashtra reported the lowest coverage. Every two in four urban children did not receive full immunisation in these three states. It is interesting to note that nearly four in every five urban poor children in Kerala and Chhattisgarh received full immunisation. On the other hand, merely 41.4 per cent urban poor children in Uttar Pradesh and 42.8 per cent in Gujarat received all eight dosages of vaccinations in 2015-16. Importantly, full immunisation coverage was higher among urban poor children in Kerala, West Bengal, Odisha, Telangana and Jharkhand in comparison with their respective all-urban averages.

Several studies have shown that lack of coverage or drop-out in immunisation may be attributed to lack of awareness, fear of side effects, inaccessibility to health centre, and lack of follow-up (Nath et al., 2007; Saxena et al., 2008). Besides these factors, gender plays a crucial role in a patriarchal society, which leads to substantial cases of discontinuation and drop-outs in immunisation (Ghei et al., 2010). This is seen across Indian states. The gender gap in access to full immunisation was highest in urban Telangana, Tamil Nadu, Bihar and Uttar Pradesh, where it was higher for male children. On the other hand, urban female children in Rajasthan, Andhra Pradesh, Maharashtra and Delhi have reported a higher recourse to immunisation compared to male children. Interestingly, a negligibly small gender difference in immunisation was found in Gujarat, Odisha and Jharkhand.

Seeing the drop-out rate in immunisation in the slums of eight million-plus cities in the past decade this section attempts to understand the reasons for this disparity. As seen in Figure 2.15, the highest gap in full immunisation coverage between slum and non-slum children was detected in Hyderabad and Indore, where more than three in every five children living in slums are deprived of full immunisation. Similarly, a notable gap in the level of immunisation among slum and non-slum children was observed in Meerut, Nagpur and Chennai. But in the case of Delhi, the scenario is reversed, where about 88 per cent of slum children are fully immunised against about 67 per cent of non-slum children.

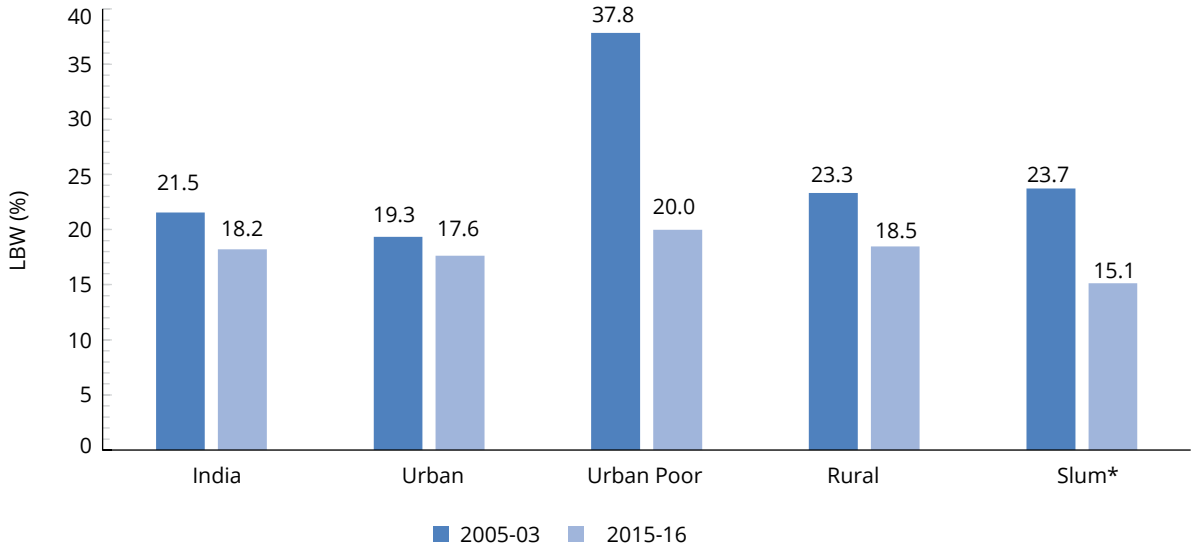
The findings from the study showed that a sizeable proportion of children aged 12–23 months did not receive full immunisation in India. This low coverage results in severe challenges for children living in urban poor localities, especially slums. Vohra et al. (2013) and Sodha and Dietz (2015) suggested increasing the outreach of knowledge on the necessity of all eight vaccines to bring attitudinal changes in the people living in slums. Strict monitoring is also suggested to avoid drop-outs in immunisation, especially with regard to those vaccines which seem to have side effects on children (Saxena et al., 2008).

2.4.4 Low birth weight (LBW) in urban India

Low birth weight continues to be a significant public health problem globally. It is associated with a range of consequences, both short- and long-term (WHO, 2012). Prematurity and LBW are the second leading causes of death in under-5 children, which is responsible for about 14 per cent deaths in this age group each year in India (*The Million Death Study Collaborators*, 2010).

The recent report by UNICEF illustrates that globally 14.6 per cent of newborns suffered from LBW. Out of the total cases of LBW, nearly 95 per cent are reported in the low- and middle-income countries, including 14.3 per cent from the Asian region (Wardlaw, 2004). LBW is associated with both long-term as well as short-term medical issues. A child with LBW is more prone to several childhood morbidities such as diarrhoea, ARI, malnourishment and birth asphyxia. Studies also demonstrated that a LBW child has a higher likelihood of suffering through neurological impairment, cognitive disorder and delayed development of the brain (Zerbeto, Cortelo and Élio Filho, 2015; Badshah et al., 2008). LBW remained an important factor affecting not only the

Figure 2.16: Change in Percentage of Low Birth Weight in India, 2005-06 and 2015-16



Note: *= The estimates of LBW for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-4, 2015-16

well-being of a child but throughout the life course of an individual. It is therefore imperative to understand and differentiate its dynamics in urban India.

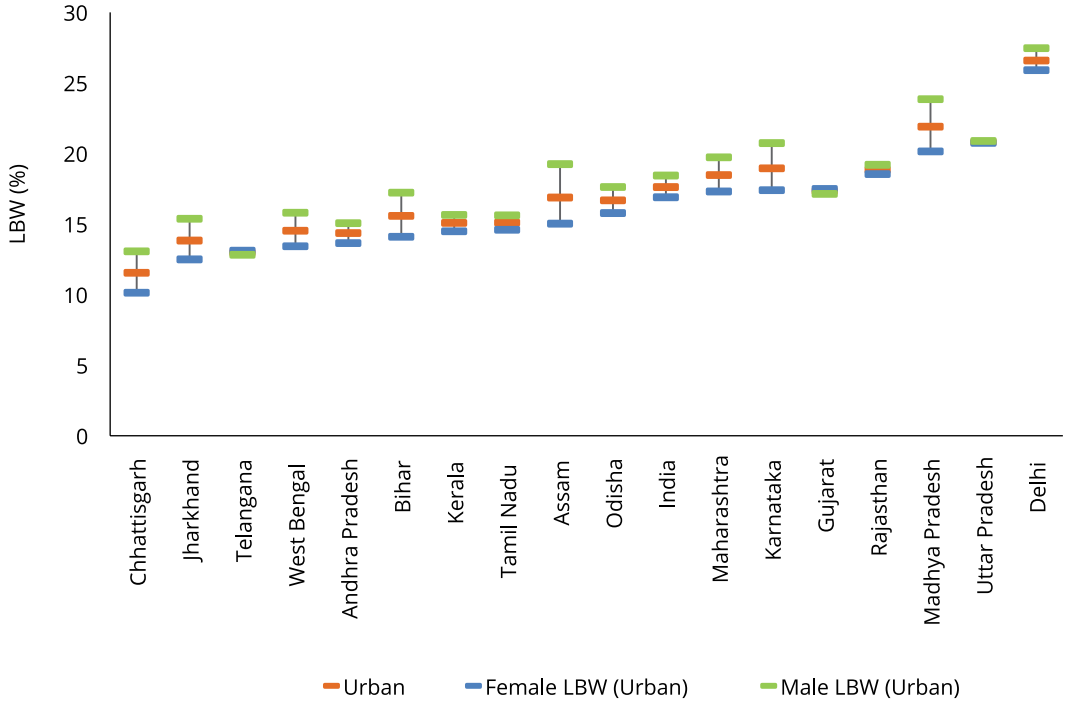
Estimation from the latest round of the survey (2015-16) shows that about 18.2 per cent of children were born with LBW in India in 2015-16 (Figure 2.16), much lower compared to 21.5 per cent of children in 2005-06. There was a significant variation in the incidence of LBW across the various disaggregated levels in 2005-06, which has decreased in 2015-16. However, a significant gap still exists between the urban poor and the all-urban average. It was 20 per cent in the former as compared to 17.6 per cent in the latter. It is important to mention that LBW has declined by about 47.1 per cent in the last ten years. Notably, the incidence of LBW in slum areas was 15.1 per cent, lowest among all sectors, which is due to the inclusive health policy measures in urban areas.

Figure 2.17 presents the state-wise incidence of LBW by sex in urban areas of 17 UNICEF intervention states of India in 2015-16. Across urban areas in the states, one can notice that the incidence of LBW was apparently higher in Delhi followed by Madhya Pradesh, Uttar Pradesh, Karnataka, Rajasthan and Maharashtra. Furthermore, the analysis showed that the incidence of LBW was relatively higher among male children compared to female in almost all the states, except Gujarat and Telangana

Figure 2.18 presents the incidence of LBW among slum and non-slum children in eight million-plus cities in 2015-16. Almost 15 per cent of slum children were born with LBW in the eight million-plus cities, whereas its incidence among non-slum children was about 17 per cent. The highest gap between slum and non-slum children was found in Nagpur, followed by Kolkata, Mumbai and Hyderabad. In Nagpur, about 17 per cent of slum children were born with LBW against about 23 per cent of non-slum children. In Mumbai, about 15 per cent of slum children were born with LBW as compared to 21 per cent of non-slum children. But in the case of Kolkata and Hyderabad, the scenario is reversed. In Kolkata, about 12 per cent of slum children were born with LBW as compared to 6 per cent of non-slum children. In Hyderabad the difference was even lower, with about 7 per cent of slum children born with LBW as compared to about 6 per cent of non-slum children.

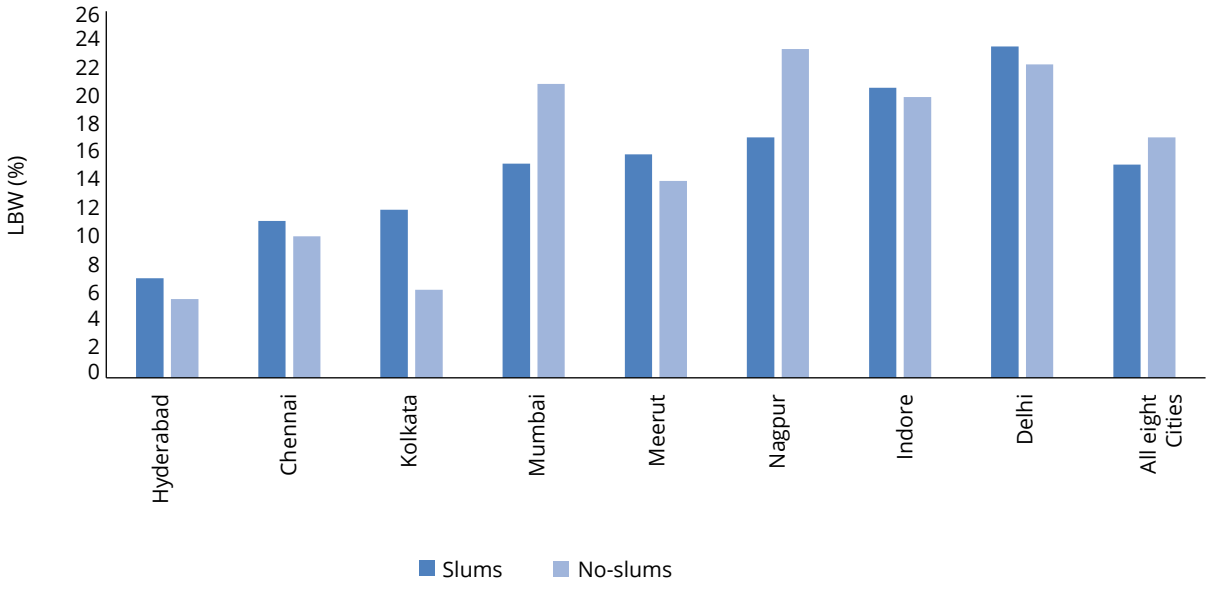
The finding suggests that nearly one in every five children is born with LBW in urban areas of Delhi, Uttar Pradesh, and Madhya Pradesh. Also, the analysis showed that the prevalence of LBW is higher in urban poor households. However, research conducted earlier showed that improvement in the maternal nutrition status, reduction in child marriages, a higher birth interval between births and low fertility could have a positive impact on the birth weight of a child (Chellan, Lopamudra and Kulkarni, 2007; Dharmalingam, Navaneetham and Krishnakumar, 2010). WHO (1994) suggested that at least four or more antenatal check-ups during

Figure 2.17: State-wise Percentage of Live Births with Reported Low Birth Weight , 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 2.18: Percentage of Live Births with Reported Low Birth Weight in Slum and Non-slum Population in 8 Million-plus Cities, 2015-16



Source: Computed from NFHS-4, 2015-16

pregnancy could help overcome the possibility of LBW. Extra precautions during pregnancy is recommended to women who are malnourished.

2.5 Situational Analysis of Adolescent Health

2.5.1 Adoption of modern family planning methods

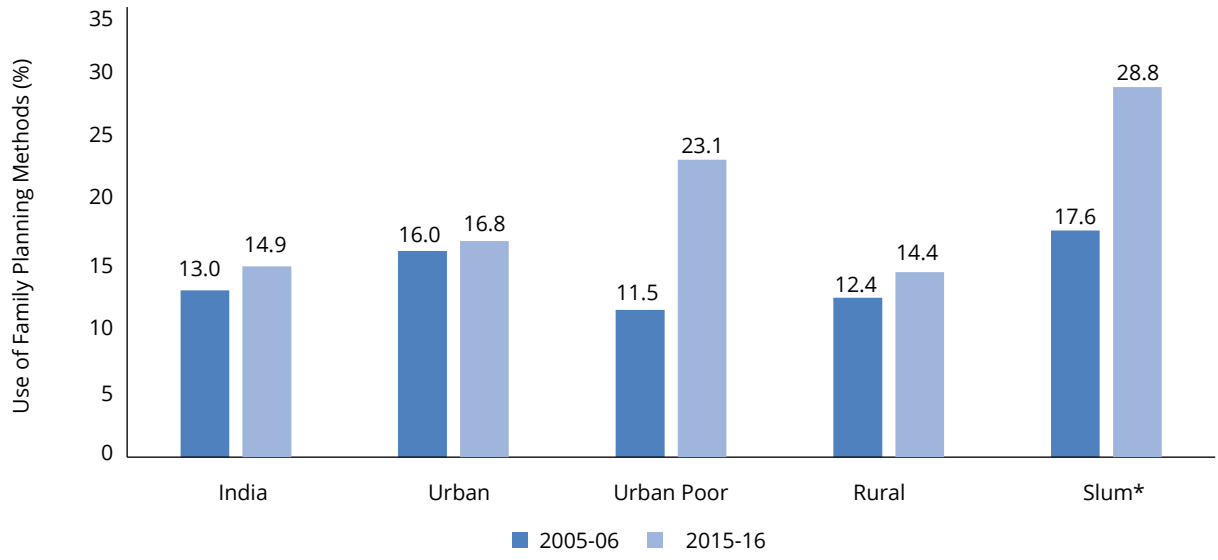
A global priority for SDG is universal coverage to sexual and reproductive health services and rights by 2030, including family planning, as set out in SDG-3 (to ensure good health and promote well-being at all ages) and SDG-5 (achieve gender equality and empower all women and girls). Among the key indicators to track progress towards SDG-3 are the proportion of women in reproductive age whose need for family planning is satisfied with modern methods, and prevalence of adolescent fertility (United Nations, 2015).

Early age pregnancy and childbirth are the leading causes of death among girls aged 15–19 in low- and middle-income countries (*Global Accelerated Action for the Health of Adolescents*, 2017). In this context, family planning is vital for reducing pregnancy-related morbidity and mortality, improving the health outcomes of young mothers and their children, and reducing the related social and economic costs of early pregnancy (Coll et al., 2019). Since the International Conference on Population and Development 1994, the focus of the family planning programme has shifted to sexual and reproductive health rights, which was immediately adopted in the National Population Policy (NPP 2000) of India. As a fall-out, a series of concerted efforts have been made to increase the outreach of family planning in India through its integration with various ongoing programmes like Reproductive Child Health (1997), National Population Policy (2000), National Rural Health Mission (2005), National Health Mission (2013), Vision FP-2020 (2014). In spite of these affirmative actions, there still persists a visible gap in women's desire for family planning methods and their access to it, especially among adolescents.

In a study conducted by the Guttmacher Institute suggests that nearly 38 million sexually active adolescents in developing countries do not want to become pregnant in the next two years, of which 28 million have shown an unmet need for modern contraception (Darroch et al., 2016). In urban India, the estimation based on NFHS-4 (Figure 2.19) reveals that about 17 per cent of adolescents aged 15-19 years have used some family planning methods in 2015-16 in all India.

It is interesting to note that this share was higher among the urban poor (23.1%) as compared to the all-urban

Figure 2.19: Change in Use of Any Family Planning Methods Among Adolescent Women (15-19 years) (in %), 2005-06 and 2015-16



Note: *= The estimates of FP use for slums are based on the information available only for eight million-plus cities in NFHS-3 and NFHS-4.
Sources: Computed from NFHS-4, 2015-16

average (16.8%) in 2015-16. Also, the urban poor's usage of modern methods of contraception more than doubled from 11.5 per cent in 2005-06 to 23.1 per cent in 2015-16. A similar increase is also observed in the slums, where use of modern methods has gone up from 17.6 per cent in 2005-06 to 28.8 per cent in 2015-16. This is primarily because of the locational advantage to adolescents where outreach of knowledge of various methods in family planning is relatively higher compared to rural counterparts. Also, the enhancement in level of awareness due to door to door counselling by frontline workers and exposure to mass media enable urban adolescents to easily adopt the methods of their choices.

The analysis carried out in UNICEF intervention states and Delhi clearly indicates significant variations in the adoption of family planning methods among adolescents aged 15-19 years. The highest use of contraception among adolescent women is found in West Bengal (42.8%) followed by Assam (31.8%), Odisha (23.4%) and Kerala (19.2%). On the other hand, the lowest use of contraception among adolescents is found in Bihar (1.8%), Karnataka (4%), Andhra Pradesh (4.9%) and Telangana (5%). Further, it has been found that the use of modern methods among adolescent women is higher in urban areas compared to the state average in almost all the states except West Bengal, Kerala and Delhi. In West Bengal, 41.1 per cent of women in this age group are using some modern contraception method in urban areas against the state average of 42.8 per cent. To further understand the methods of use and reliance of adolescents on modern methods of contraception, analysis of a contraceptive method mix have been carried out. The contraceptive methods mix refers to the share of individual contraceptive users in the total users.

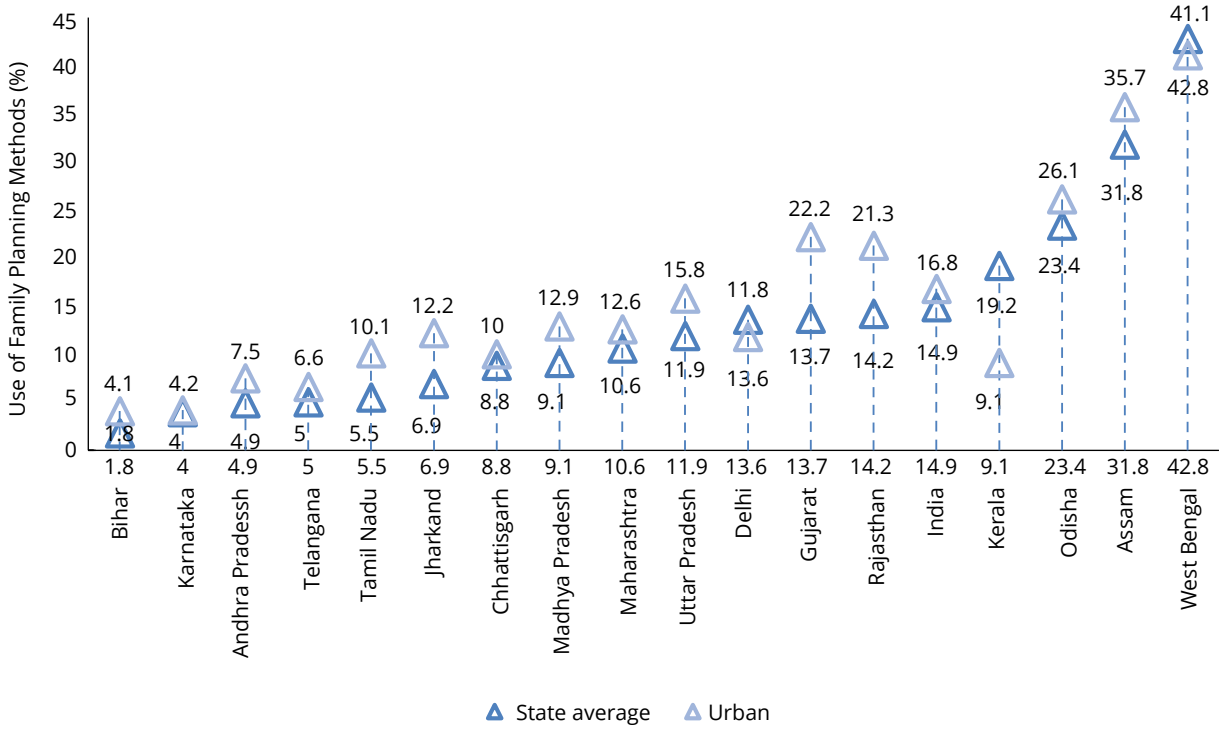
An analysis of the contraceptive method-mix demonstrates that the prevalence of sterilisation was relatively higher in urban areas and especially among urban poor adolescents compared to rural adolescents. Similarly, in comparison to rural users, the share utilisation of long-acting reversible methods was also higher among urban compared to rural adolescents. However, the utilisation of oral pills was higher among adolescents from both rural and urban poor settings. It can be noted from the analysis that the use of traditional methods was higher among married adolescents in rural areas followed by the urban poor. One in every three adolescents from rural and urban poor settings relied upon the traditional methods of family planning to avoid pregnancies. Studies have shown that higher reliance on traditional methods leads to higher cases of failure leading to unintended preganacies (Creanga et al., 2007). Besides adoption of limiting methods, contraceptive method-mix among urban poor users showed significant reliance on two spacing methods, pills and condoms. In fact, this finding was true for all urban and rual adolescents as well. However, these two methods are also reported to have higher cases of failure and were hence discontinued (Polis et al., 2016).

2.5.2 Unmet needs for family planning among adolescent women (15-19 years)

The unmet needs for family planning are defined as the percentage of women who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child. Unmet needs are mainly high among adolescents, migrants and slum dwellers (WHO, 2015). Figure 2.22 shows that there was about 22.2 per cent unmet needs for family planning among adolescent women (15-19 years) in India in 2015-16, which was almost five percentage points lower than its share in 2005-06. It was relatively higher among the urban poor (24%) as compared to the urban average (21.8%) in 2015-16. Noteworthy, the share of unmet needs for family planning among adolescents in slums (20%) of eight million-plus cities has substantially increased in the past decade, which indicates an urgent need for slum-focused policy measure.

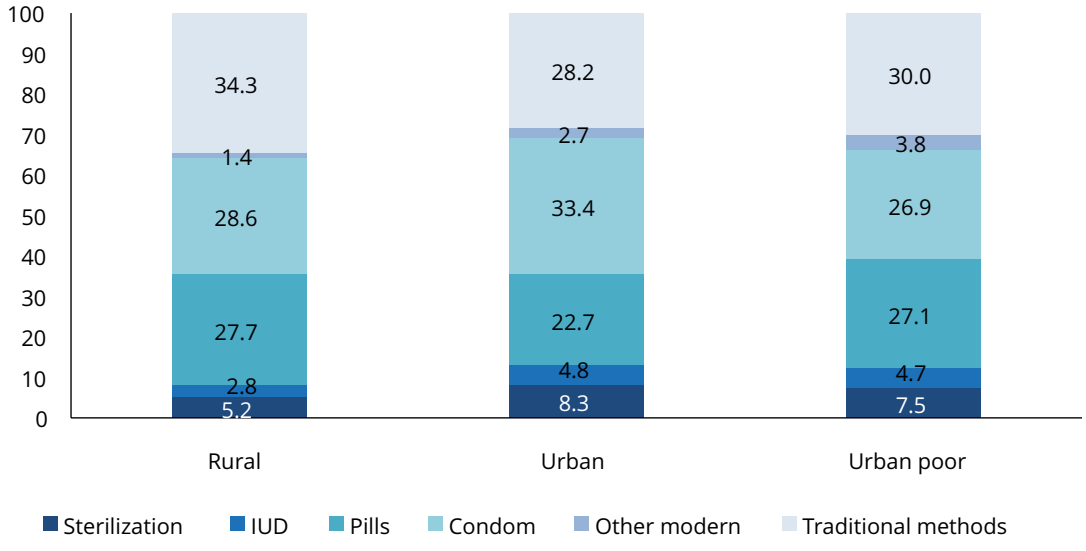
Figure 2.23 presents the unmet need for family planning among adolescent women aged 15-19 years in 17 UNICEF intervention states. The highest percentage of unmet needs for family planning among adolescent women was observed in Gujarat (32.5%) followed by Bihar (29.7%), Jharkhand (28.6%) and Kerala (26.5%). Corresponding to urban areas across selected states the share of unmet needs for family planning among adolescents was highest in urban Kerala (39.6%). In Kerala, the urban unmet need for family planning was nearly 10 percentage point higher than the state average. It was also high among urban adolescents in Gujarat and Jharkhand where one in every three adolescents aged 15-19 years expressed an unmet need for contraception. Also, states like Telangana, Odisha, Uttar Pradesh, Bihar, Rajasthan and Gujarat had a lower percentage of unmet needs for family planning among adolescent women in urban areas corresponding to their state average.

Figure 2.20: State-wise Uses of Any Family Planning Methods by Adolescent Women (15-19 years) (in %), 2015-16



Note: Based on adolescent married women who stayed in the household the night before the survey.
Source: Computed from NFHS-4, 2015-16

Figure 2.21: Mixed Contraceptive Method Used Among Adolescent Married Women



Source: Computed from NFHS-4, 2015-16

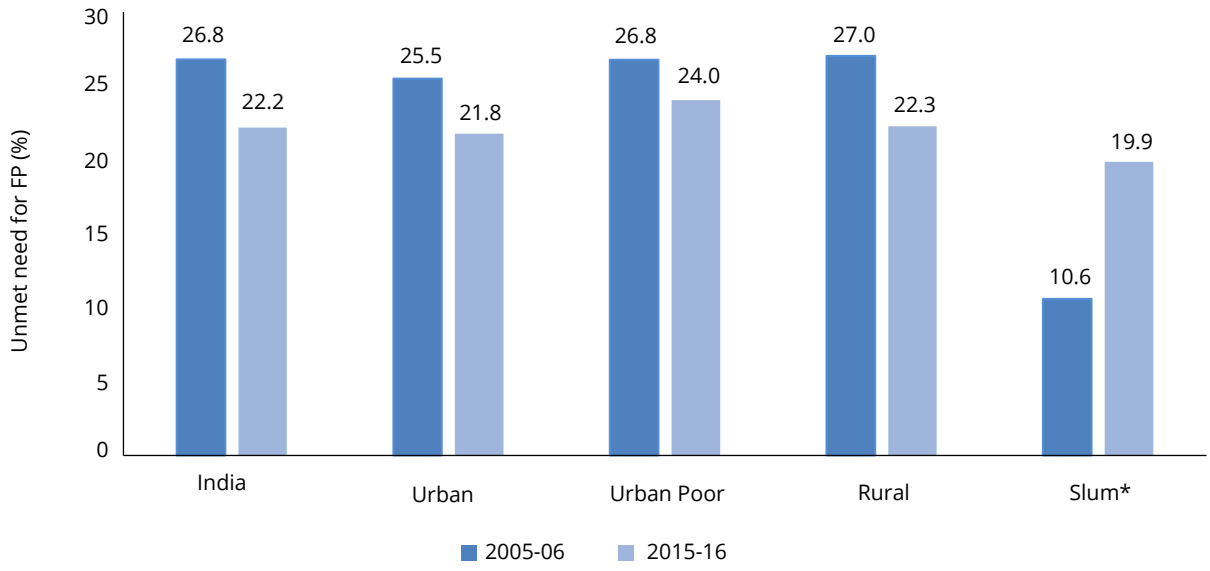
The unmet need for contraception affects the quantum of unwanted births. Kulkarni (2020) showed that India's TFR could decline from 2.18 to 1.83 children per women if the unmet need for family planning is brought down. Besides, reduction in the unmet need also affects the health and well-being of both mother and child. Access to contraception enables a user to time and space out births of children thereby preventing unintended pregnancies, unsafe abortions, low birth weights and nutrition related child deaths (Rana et al., 2019). Therefore, in an attempt to secure the reproductive health and well-being of adolescents in the urban areas, reduction in unmet needs is essential. Higher priorities need to be given to adolescents living in poor and most vulnerable sections of society, where unmet needs of the family planning are more pronounced.

2.5.3 Reproductive health among adolescent women (15-19 years)

Adolescence is a precarious and decisive period for a female. Pregnancies at this age can lead to several adverse complications to the mother as well as to the children born to this age group. Pregnancy before age 18 years is considered highly risky for a female's physiological, psychological and social development. Also, it is argued that adolescent mothers have less access to reproductive healthcare services than older women, including complete ANC, skilled birth attendance and delivery care (Greene, Joshi and Arbles, 2012). In a study, WHO clearly stated that adolescent pregnancy is adversely related to both mother and child. The rates of pre-term deliveries, prolonged labour and cephalic pelvic disproportions are higher among teenage girls compared with older women. Research also suggests that adolescent mothers are more likely to experience low birth weight and complications during pregnancies, including stillbirth. These findings suggest that reducing pregnancy among adolescents can help in reducing mother and child morbidity and mortality. There is also a need to increase the access to mainstream maternal health services to ensure safe and healthy teenage pregnancy besides creating family planning awareness among this age group. These maternal health care services include antenatal and postnatal care, as well as skilled birth delivery.

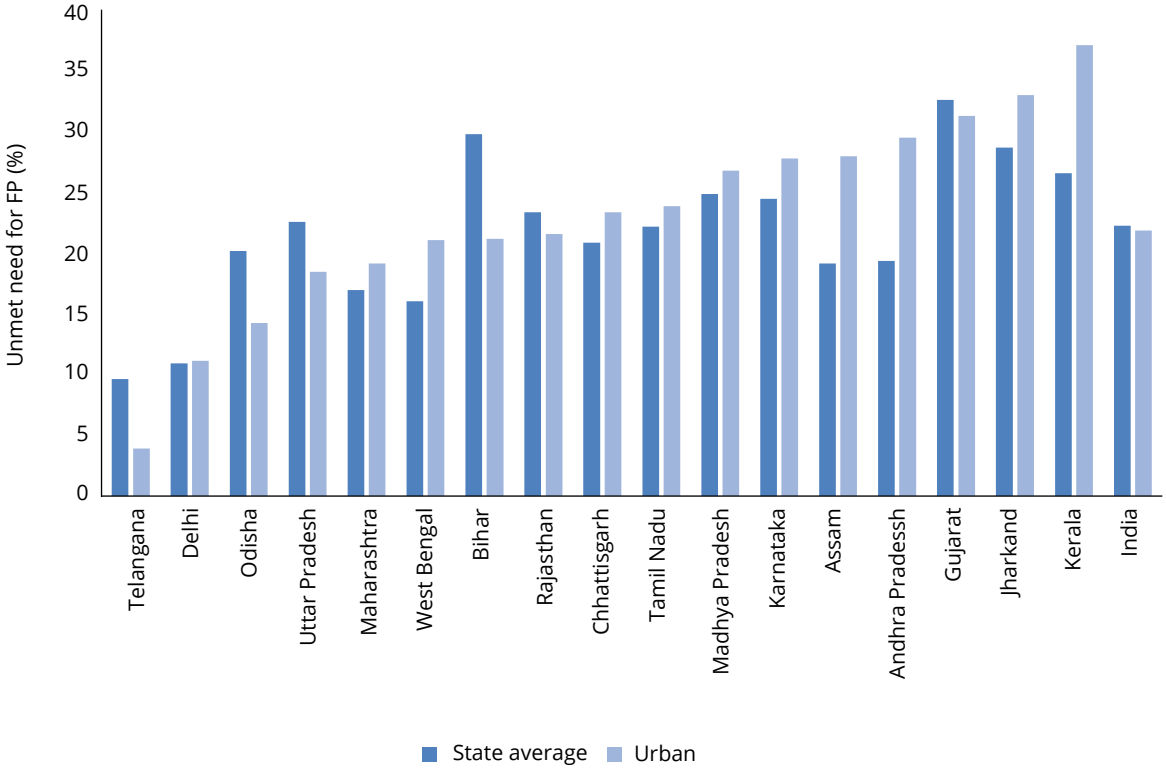
The analysis shows a declining pattern in adolescent preganancies in India over the past decade. The decline has occurred from 12.1 per cent in 2005-06 to 5.2 per cent in 2015-16. It has declined proportionately among urban women during the past 10 years. Notably, the decline in adolescent preganancies was highest among the urban poor where it was three times more from the share reported in 2005-06. In contrast to this, adolescent pregnancies are seen to have doubled in the slums from eight million-plus cities in the last decade. It has increasd from 3.4 per cent in 2005-06 to 5.4 per cent in 2015-16. Further, the estimation based on the latest round of the survey (Figure 2.25) shows that about 48 per cent of adolescent women

Figure 2.22: Change (%) in the Unmet Need for Family Planning Among Adolescent Women (15-19 years), 2005-06 and 2015-16



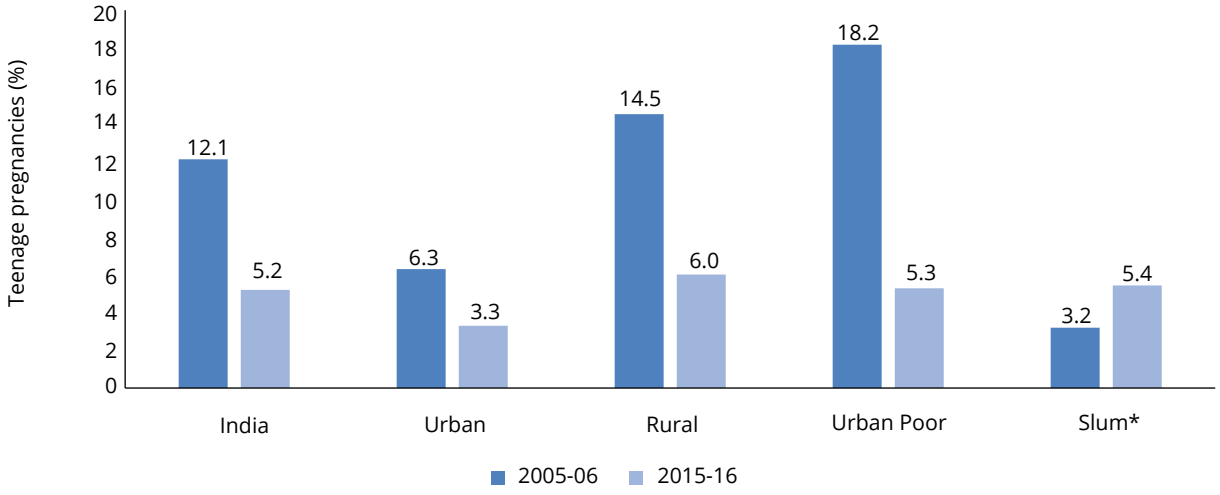
Note: *= The estimates of unmet need for slums are based on the information available only for eight million-plus cities in NFHS.
Source: Computed from NFHS-4, 2015-2016

Figure 2.23: State-wise Unmet Needs for Family Planning Among Adolescent Women (15-19 years), 2015-16



Source: Computed from NFHS-4, 2015-2016

Figure 2.24: Change (%) in Teenage Pregnancies in India, 2005-06 and 2015-16

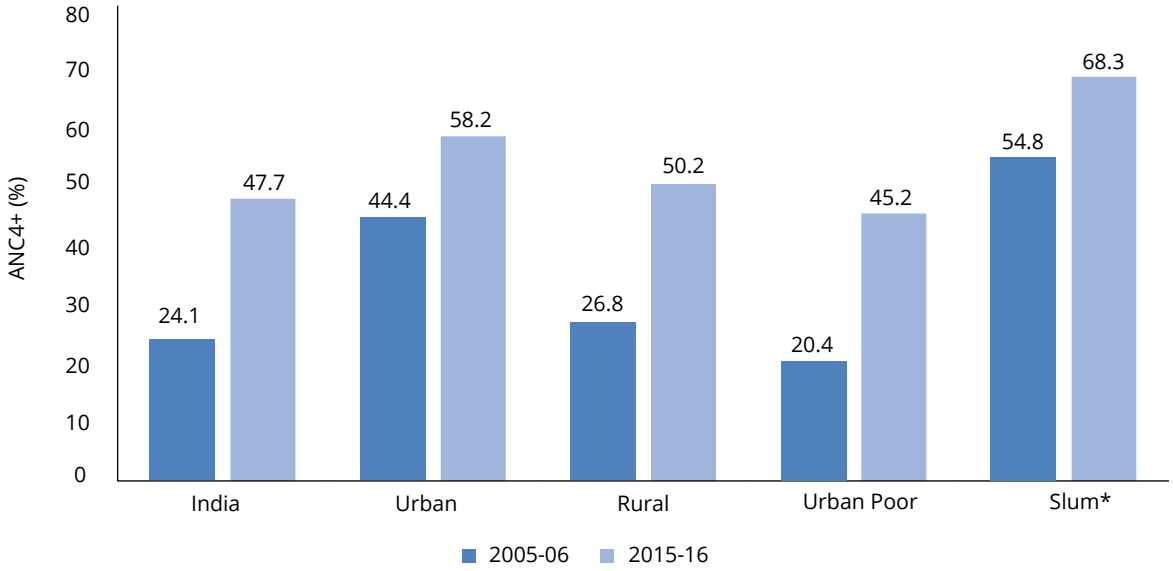


Note: *= The estimates of Teenage Pregnancies for slums are based on the information available only for eight million-plus cities in NFHS-3 and NFHS-4.
Sources: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

have received four or more antenatal services in India in 2015-16. This figure has doubled from 24 per cent in 2005-06. A similar increase is observed among the rural and urban poor as well. In 2015-16, about 58 per cent of adolescent women received four or more antenatal services in urban areas, while almost 50 per cent of adolescent women received the same among the urban poor, and about 45 per cent in rural areas.

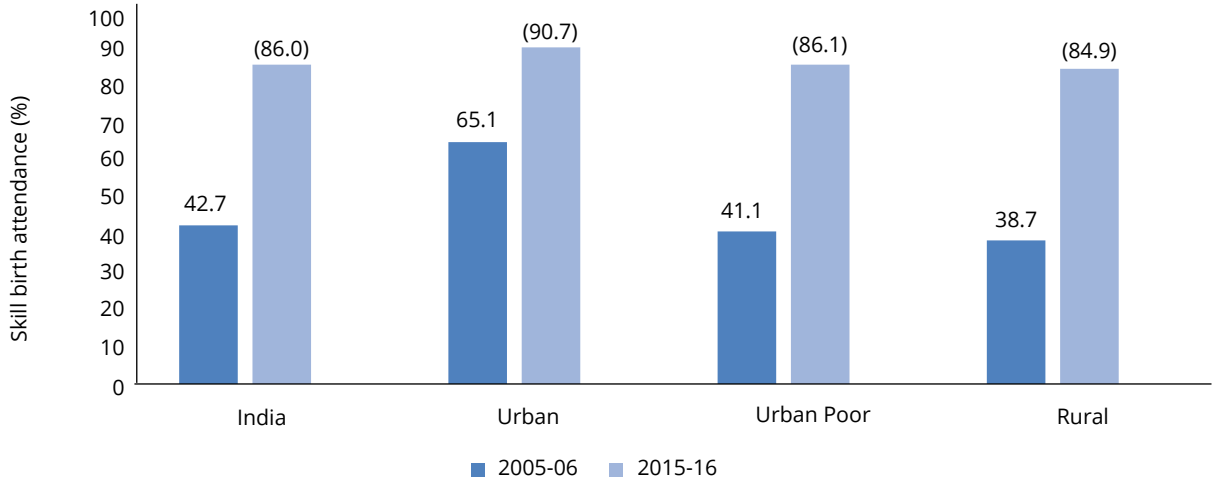
Figure 2.26 presents the percentage of skilled birth attendants during delivery among adolescent women aged 15-19 years in India. These have more than doubled between 2005-06 and 2015-16. About 86 per cent of adolescent women have received skilled birth attendants during delivery in 2015-16 in all India, as compared to 91 per cent in urban India, 86 per cent among urban poor, and 85 per cent in rural India. It is important to note that the difference among rural, urban and urban poor in regard to this indicator is low, indicating substantial improvement in healthcare among pregnant adolescent women.

Figure 2.25: Change (%) in Four or More Antenatal Care Visits Among Adolescents (15-19 years), 2005-06 and 2015-16



Note: *= The estimates of ANC4+ for slums are based on the information available only for eight million-plus cities in NFHS-3 and NFHS-4.
Sources: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 2.26: Change in the Percentage of Births to Adolescents Delivered by Skilled Birth Attendants (in %) , 2005-06 and 2015-16



Source: Computed from NFHS-4, 2015-16

Past studies suggest that the provision of maternal and child health services through trained healthcare professionals significantly decreases the risk of adverse pregnancy outcomes. Despite having such benefits, the utilisation of these facilities by adolescent women is not very encouraging. Mekonnen et al. (2019) reported that women's education and urban-rural disparities are significant factors for accessing healthcare services. Education plays a positive role as it develops confidence among them to decide on their health behaviour. On the other hand, rural women are highly influenced by social norms which discourage them from using health services. Similar behaviour may also be perceptible among the migrant women living in urban poor localities. Adding to this, organisational level factors also negatively influence adolescent mothers' utilisation of services. The insensitive attitude of healthcare providers sometimes creates a communication barrier for adolescents seeking medical advice. Also, fear of losing privacy and trust while interacting with health facilitators demotivates them from using these services.

2.6 Association Between Diarrhoea, Malnutrition and IMR

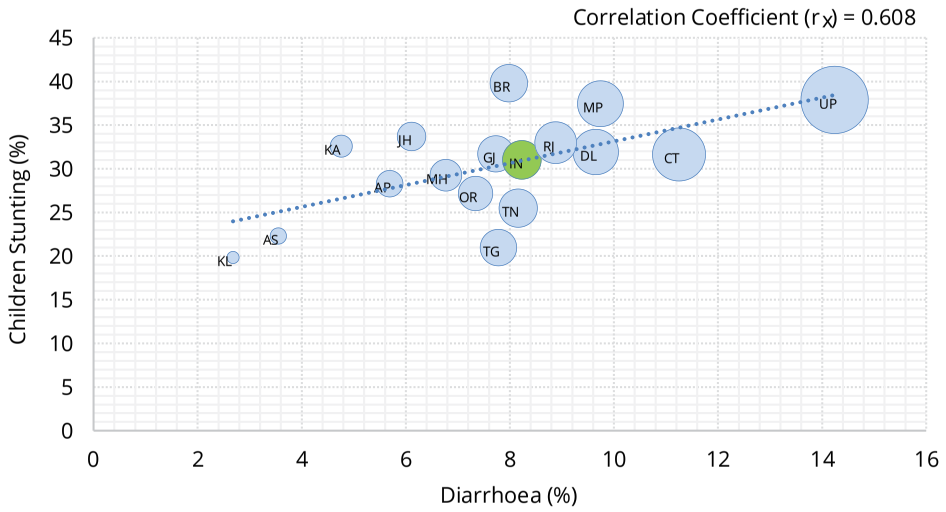
There are not many studies to understated the effect of early childhood disease on the nutritional status of children, and interlinkages between them, which with successive life courses leads to child mortality in many cases. In this section, an attempt has been made to understand the association between the prevalence of diarrhoea and IMR in urban India through correlation analysis. The result of this analysis is presented in Figure 2.27. Diarrhoea has a significantly positive correlation with the indicators of malnutrition, such as child stunting (r_x = 0.608) and underweight (r_x = 0.450). The weighted bubble plots (Figures 2.27 and 2.28) indicate that the states with higher prevalence of diarrhoea also report higher cases of stunting and underweight. States like Uttar Pradesh, Uttarakhand, Madhya Pradesh and Bihar report higher cases of diarrhoea and child stunting, while urban areas in Sikkim, Tripura, Goa and Kerala have low prevalence of diarrhoea as well as child stunting and underweight. This leads one to infer that the higher the diarrhoea rate among children the higher would be the chances of occurrences of both acute as well as chronic malnutrition in children. It is significant that child anaemia and diarrhoea in urban India are also highly positively correlated. The degrees of relationship between the two came out as 0.514. The weighted bubble plot showed that states like Uttar Pradesh have a significantly high level of diarrhoea and anaemia among children. However, states like Kerala and Assam have a significantly low level of diarrhoea as well as anaemia. Also, there are exceptions such as Madhya Pradesh, Delhi, Gujarat and Jharkhand where anaemia is higher with a low level of diarrhoea. Both, however, have a strong association with the quality of WASH services.

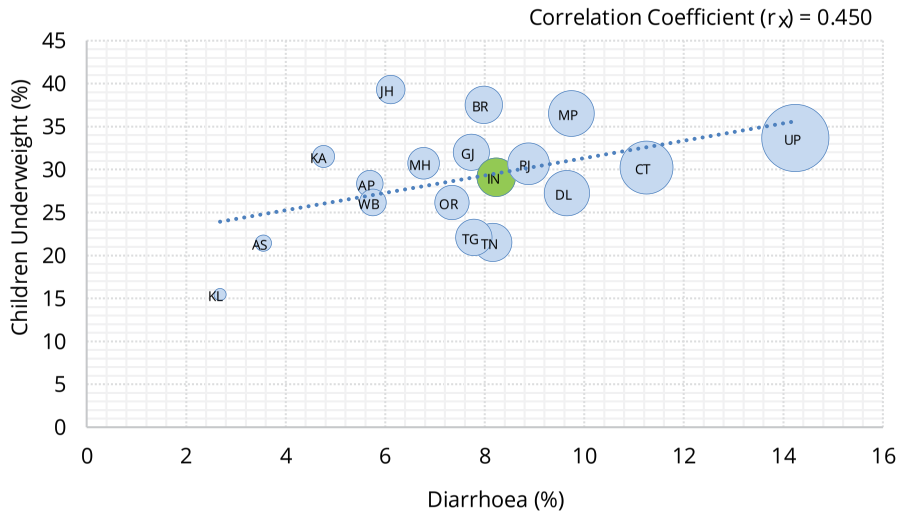
The findings also reveal that there is a positive association (Correlation Coefficient (r_x) = 0.791) between diarrhoea prevalence and infant mortality rate (IMR) in urban areas of UNICEF intervention states. In other words, as the prevalence of diarrhoea increases, the child mortality rate also increases. States like Uttar Pradesh, Uttarakhand and Chhattisgarh have a higher prevalence of diarrhoea as well as under-5 mortality. On the other hand, states like Kerala and Goa have less prevalence of diarrhoea as well as child mortality cases. Therefore, one may infer from this that reducing diarrhoea thorough various interventions can be a useful measure in simultaneously reducing a significant proportion of infant deaths in urban settings.

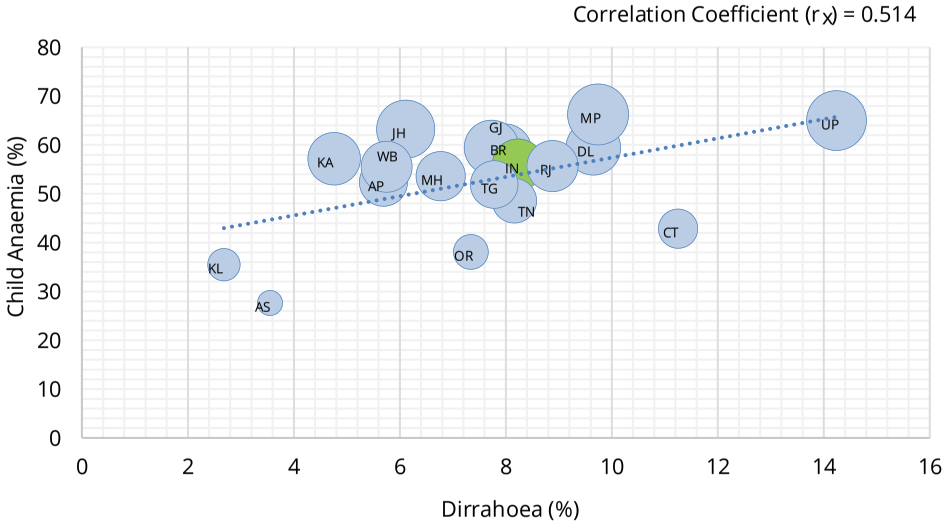
2.7 Macro Level Analysis

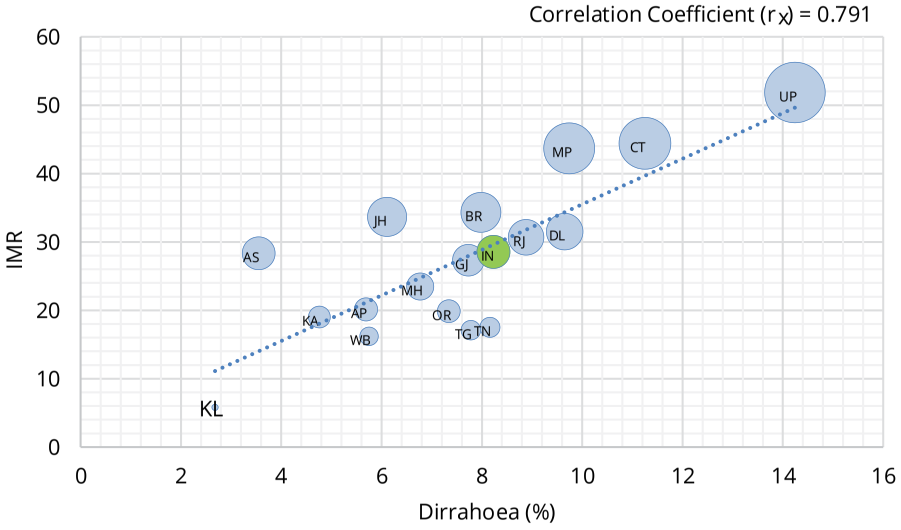
The state level analysis carried out in this chapter shows a notable heterogeneity in the level of childhood morbidities and mortalities. Also, the correlation and descriptive analysis performed in the previous section demonstrates a significant linkage among various childhood morbidities and deaths of children during infancy. These indicators, however, are not sufficient to capture the heterogeneity in IMR. Therefore, to understand and differentiate the nature of causality between various demographic and socio-economic determinants of IMR at macro level, seven pooled regressions have been carried out in this section. Importantly, these determinants were included based on several studies carried out in both developed and developing countries with regard to infant deaths in urban areas. For pooled regression analysis, state-wise demographic and socio-economic indicators have been computed based on urban data from the Population Census of India, NFHS and NSS. At the same level of disaggregation data on NSDP, poverty ratio, public health expenditure was compiled from official sources such as Reserve Bank of India and Ministry of Health and Family Welfare, Government of India. Besides IMR in urban India, estimates from different data sources were collected for 16 states and Delhi at four-time points (viz. 1992-1993, 1998-1999, 2005-2006 and 2015-2016).

Figure 2.27: Association Between Diarrhoea and Child Stunting, Underweight, Anaemia and Infant Deaths in Urban India









Note: Weight = Percentage of children suffering from diarrhoea.
Source: Computed from NFHS-4, 2015-16

This first model shows the macro-level relations between the demographic factors such as TFR, SRB and modern contraceptive use on the level of IMR. The analysis yields a significantly positive effect of TFR on the SRB. This indicates that infant mortality will increase in urban areas with a rise in the level of fertility. However, this could be due to the reverse causality between IMR and TFR, where a decline in fertility could have led to a reduction in IMR. Besides TFR, the sex ratio at birth (SRB) showed a negative effect on infant deaths. The analysis corroborates with the previous findings which illustrate that lower deaths in infancy are the result of improvement in SRB. The regression results also suggest that adoption of modern contraception leads to a notable decline in infant deaths. However, for the present analysis, it is statistically insignificant.

The second model incorporated a different set of indicators related to the social status of women**.** The analysis showed that women's use of modern methods of contraception and the mean level of schooling has a significantly positive impact on the level of IMR. The analysis showed that with one unit increase in the use of modern contraception, there would be a corresponding 0.39 unit decline in the IMR. The impact of female mean years of schooling is conspicuously high on the IMR. Evidently, for one unit increase in the level of female's mean years of schooling, there would be a 7.7 unit decline in the level of IMR. Therefore, one can conclude that social development of women has a positive impact on the level of infant mortality.

The third model investigates the relation between the IMR and a set of three development indicators (log NSDP, poverty ratio and level of urbanisation) and a programme factor in urban areas. The findings suggest that an increase in public health expenditure and child immunisation coverage have a significant negative relation with IMR. With one unit increase in the level of full immunisation one would observe a decline in infant mortality by 0.33 units. Thus, an increase in the level of immunisation and expenditure on health could be an identified pathway of decline in IMR. It is, however, surprising to note that an increase in urbanisation and poverty showed a positive impact on IMR. This may be due to the fact that urbanisation is associated with an increase in the share of poor migrants who are less educated and often settling in slums. This finding is substantiated by the statistical evidence obtained from the cross-sectional analysis of slums of eight million-plus cities where the rate of decline in IMR was marginal in the past ten years.

The fourth model attempts to see the impact of urbanisation, migration and development of the states on the level of infant mortality in UNICEF intervention states. Here, the level of urbanisation and log NSDP has been taken as the proxy of development of the states. The analysis showed that increase in level of urbanisation and state income leads to a significant decline in the level of IMR. However, like previous findings, net migration has a positive relation with urban IMR.

The fifth model is an extension of the fourth model where analysis has been controlled by the change in the social status of women in urban areas. It is interesting to note that net migration showed a negative relation with the urban IMR when it is controlled with the improving status of females in urban areas, though the regression coefficient is statistically insignificant. At the same time, one can easily note that improvement in the socio-economic status of the female by means of increase in education, workforce participation and a corresponding increase in age at marriage could lead to a substantial reduction in the level of IMR.

The sixth and seventh regression models explore the causal relation between urban IMR and all social, economic and programme indicators. Findings from the regression exercise demonstrate that increase in child immunisation, mean age at marriage and female mean years of schooling have a significant negative effect on the level of urban IMR. The other indicators also moved in the same direction of causality as described in the previous models. Importantly, poverty ratio showed a positive relation with urban IMR. This finding also corroborates with the previous studies which showed that poverty leads to higher childhood mortality, especially during infancy. It is worth mentioning that infant mortality declines with the increase in state income. Kerala is one such example.The seventh and final model includes the combined effect of demographic, socio-economic and programme factors on the level of urban IMR. The regression results show that poverty, higher fertility and bias in fertility behaviour lead to higher infant deaths. On the contrary, increase in the level of immunisation, modern contraceptive use and female years of schooling lead to stalling of infant deaths. A comprehensive assessment of the selected macro-level determinants of IMR reveals that a female's socio-economic status, such as age at marriage and mean years of schooling are two critical explanatory factors resulting in decline in IMR.

Table 2.1: Pooled Panel Regression Estimates: Effects of Demographic, Socio-economic and Programme Factors on Infant Mortality Rate and Selected Predictors

Predictor Variables	Model-I	Model-II	Model-III	Model-IV	Model-V	Model-VI	Model-VII
Demographic Indicators							
Sex ratio at birth	-0.035*						-0.010
Total fertility rate	22.735***						9.226*
Modern contraceptive use	-0.192	-0.387*					-0.267*
Socio-economic Status Indicators							
Female age at marriage					-2.049*	-1.606*	-0.934*
Female mean year of schooling		-7.689***			-3.255	-3.030***	-4.765**
Logarithm of NSDP			-5.762*	-8.941***	-5.484**	-3.451	0.639
Female workforce participation rate		-0.401			-1.036**	-0.678	0.056
Poverty ratio			0.242			0.148	0.035
Net migration rate				-0.003	-0.012	-0.001	0.041**
Urbanisation			0.100	0.034	0.039	0.047	-0.052
Full immunisation			-0.328**			-0.197***	-0.165*
Programme Factors Indicator							
Public health expenditure			-0.0003			-0.0004	-0.0006
Constant	-28.713	124.965***	106.338***	128.498	173.072	156.825	83.709
Observation (n)	61	61	58	60	60	57	57
Wald chi2	52.77	54.84	51.3	63.46	85.77	70.83	211.39
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

*Note: Level of Significance: *p<0.10; **p<0.05; ***p<0.01.*

: Sex ratio at birth (SRB) = (number of female births/number of male births)*1000.

2.8 Data Limitation

A comprehensive situational assessment of children and adolescents with regard to health and survival, nutrition and WASH suffers from inadequacy of sample size. The focus on urban poor children and adolescents has always been lacking in the research design of several large-scale studies though these two age groups are widely acknowledged as important. Data for two age groups 0-4 and 15-19 years is widely available in many health and nutrition surveys, while information for children aged 5--4 years is minimal. Therefore, out of 492 million children and adolescents, the situational assessment of nearly 259 million adolescents constituting 135 million males and 123 million females cannot be carried out.

The National Family Health Survey for the first time covered 640 districts with 699,000 households in India. However, the empirical investigation of indicators of health and survival posited significant challenges for children living in poor economic conditions in urban areas. For example, estimation of neonatal mortality rates for the urban poor at the state level is fairly impossible due to the mall sample size. Thus, it is impossible to make an assessment of SDG-3 concerning NNMR for urban low-income families in different states in India. Similarly, investigation of vector-borne diseases, disabilities, TB and AIDS is not possible for urban poor children and adolescents due to small sample size. Adding to these limitations, the sample size for adolescent reproductive health in urban areas is also too small to conduct any state-level evaluations. Findings from this study indicate that use of modern contraception has increased at the state and city

levels. However, the degree of adoption of modern contraception among urban poor adolescents and the corresponding gap between urban poor and non-poor cannot be determined due to limitation of sample size. It is worth mentioning that the analysis of the situation of children and adolescents in slum areas is possible for eight million-plus cities only. In India, there is an absolute absence of surveys which can capture three crucial aspects of health and survival, nutrition and WASH for all slums.

2.9 Conclusion

Health and well-being are the unfinished agendas of the Sustainable Development Goals. These are also acknowledged as ensuring notable returns of investment in a country when achieved. Investment in the health and well-being of children and adolescents in the first 19 years of life not only enriches individual potential but also contributes to the overall development of the country. However, there is a lack of material evidence on the quantum of returns, which has led to inadequate advocacies that address the several indicators of health and well-being in India, such as family planning. A situational assessment of the health and well-being of children and adolescents through empirical analysis has been attempted in this chapter to understand the need for advocacy. The empirical assessment elucidates the fact that the urban poor have notably higher health deprivations in India. This study elucidates that even if the country aligns with the same pace of decline in NNMR as that of the past decade, it will take more than 30 years to surpass the SDG commitment of fewer than 12 deaths in the neonatal period. The urban poor will expectedly attain this goal before 30 years but not within the targeted timeline of 2030.

A significant decline in the infant and child mortality rates in urban areas is chiefly attributed to the decline in urban poor families. However, there is a remarkable inequality in the level of infant and child mortality at the UNICEF intervention states. The identified disparities in childhood mortality and morbidities are the consequences of lack in universal, affordable, equitable and effective health coverage and healthcare facilities across states in urban India. Importantly, the urban poor children of Uttar Pradesh, Madhya Pradesh and Chhattisgarh need more attention with regard to child survival. It is surprising to note that the prevalence of diarrhoea among the urban poor was also higher in these three states. This study, through a comprehensive analysis of data on the urban and urban poor, indicates that Uttar Pradesh is the worst performing state in India, characterised by a higher prevalence of diarrhoea, acute respiratory infections, high LBW and lowest immunisation coverage.

Importantly, full immunisation coverage is still low among urban poor households in the majority of states in north India. Also, the prevalence of diarrhoea is still high and is the leading cause of deaths in India. Increase in diarrhoea among the rural and urban poor and slum children in the past decade indicates a worsening of children's health in India, especially among the vulnerable sections of society. Also, diarrhoea is significantly correlated with other child morbidities and even infant deaths to a large extent. Therefore securing the causes of diarrhoea could lead to rapid progress towards the achievement of SDG-3. Health-related challenges are primarily evident among the urban poor children in larger states, including the national capital of Delhi. Therefore, special attention should be given to urban poor children whose locational and health vulnerabilities are significant impediments towards attaining the SDG's commitments.

Besides child health and survival, several challenges for adolescents living in poor localities were also identified in the UNICEF intervention states. These challenges include the higher unmet need for contraception and more reliance on traditional methods of contraception resulting in reproductive health issues. The unmet need for family planning was notably higher among the urban adolescents in West Bengal, Maharashtra, Madhya Pradesh, Assam, Kerala, Andhra Pradesh and Tamil Nadu. Notably, less than half of the adolescent mothers accessed four or more antenatal care visits during pregnancies. Also, nearly 13 per cent of the urban poor did not have skilled birth attendance at the time of delivery. Urban poor adolescents faced greater challenges related to reproductive health compared to non-poor urban adolescents. Unfortunately, due to paucity of granular data in NFHS, no further inferences concerning the sexual and reproductive health of urban poor adolescents could be drawn in the UNICEF intervention states.

Given the slow progress in the various parameters of health indices, the states need to take immediate measures to improve the health scenario in their urban areas, especially in urban poor settings. This involves an increase in social expenditure, strengthening of institutional structure, capacity building of staff, and awareness creation among citizens and stakeholders. Such measures if taken on a war footing, may help

the country realise SDG-3 in the next decade. Achievement of SDG-3 will also impact related SDGs, especially SDG-1 (No Poverty), SDG-2 (Zero Hunger), SDG-5 (Achieve Gender Equality and Empower All Women and Girls), SDG-6 (Clean Water and Sanitation) and SDG-11 (Sustainable Cities and Communities).

2.10 Policy Implications

The situational analysis in this study exhibits a multitude of gradients of health and survival of urban children and adolescents, especially among children living in urban poor settings. Importantly, the well-being of children and adolescents depends on the circumstances in which they are born and brought up. Those surviving in poor living conditions in urban areas posit inadequacies in various parameters of health and well-being, which exacerbate their risk of death and other ailments. This study brings out the incidence of high infant and child mortality, diarrhoea, anaemia and malnutrition as distinguishing characteristics of urban poor children. Several studies have argued that urban areas have a survival advantage over rural areas, whereas the present analysis showed a decline in childhood mortality in urban areas. Also, the children of urban poor had a remarkable decline in morbidities such as ARI and low birthweight. However, there are notable disparities at various levels of disaggregation. Although few of the indicators in this regard show encouraging trends, the pace of decline is not sufficient to attain the SDG targets by 2030.

'The Good Health and Well-being' noted in SGD-3 is cyclically related to several SDGs such as 'No Poverty' (SDG-1), 'Zero Hunger' (SGD-2), 'Achieve Gender Equality and Empower All Women and Girls' (SDG-5), 'Clean Water and Sanitation' (SDG-6), 'Decent Work and Economic Growth' (SDG-8), 'Peace, Justice and Strong Institutions' (SDG 16), and 'Sustainable Cities and Communities' (SGD-11). It also intersects with the National Health Policy (2017) . The 74th Constitutional Amendment (1992) devolved health and sanitation functions to the urban local bodies (ULBs). However, even after about three decades of its enactment, the ULBs are not yet adequately geared to carry out this function because of lack of funds and capacity of the existing functionaries.

This study attempted to bring more clarity on the complex intricacies of health and well-being in urban areas, especially that of the urban poor. The findings demonstrate that the vulnerabilities in urban areas closely mesh together. Improvement in a sequential manner could lead to better results within the stipulated timeframe of the SDGs and the National Health Policy (2017). This study suggested some important policy interventions which, if systematically adopted could bring about a major positive impact on the health and well-being of urban poor children and adolescents.

Data gaps: To assess the quality of health care services and healthcare preparedness in urban India, data generation and monitoring should be considered as a foremost step, especially to address the sudden onslaught of health crises such as pandemics like the current Covid-19 one. Also, availability of granular data on the health status of the urban poor is an immediate requirement, as this section of the population is most vulnerable and also their access to healthcare is highly limited. In this regard, there is a complete dearth of data on both communicable and non-communicable diseases for urban poor children and adolescents. Also, with the available large-scale survey, it is reasonably impractical to draw any conclusive inference for them. The absence of comprehensive data and evidence-based studies in this area results in a policy vacuum. Importantly, hospital records contain reliable information on childhood and adolescent morbidities. However, these hospital records are rarely made available to researchers for framing policies for the urban population. Data on morbidities is not collected in any surveys for age groups 6-10 years and 10-14 years, which results in their exclusion from the policy framework. Also, the patient records compiled by private health facilities are not analysed in order to come up with any evidence-based policy framework. Therefore, there is a need to create a forum where data from various sources on childhood and adolescent morbidities can be compiled for further research. This will enable policy makers to frame policies with the coverage of a full spectrum of healthcare services and continuous monitoring of service deliveries in urban India.

Promote integrated approach: The major challenge related to health are services in this country is the lack of integration among the operations carried out by different ministries. This lack of coherence among various stakeholders working on overlapping areas has resulted in a multitude of challenges. Therefore, proper co-ordination between different stakeholders, viz, various ministries, state and central governments and other parastatals is needed to address the challenges.

The National Urban Policy Framework should integrate with national health programmes such as Indradhanush and Ayushman for an inclusive future.

Ensure behavioural change and neighbourhood capacity and awareness: Lack of awareness and knowledge regarding hazardous diseases and safe practices needs to be addressed. To enable behavioural communication change among individuals, communities and self-help groups must be monitored and evaluated thoroughly. Special efforts are needed towards capacity building of frontline workers working against the deep-rooted social norms that exist such as son preference, child marriages, family planning, and sexual and reproductive health. Also, to increase community participation, a performance-based incentivisation could be a better means to foster higher participation towards achievement of national goals.

Unfortunately, due to the lack of outreach of comprehensive knowledge on various aspects of the health and well-being of adolescents in their prime age development, the assessment of vulnerabilities and the needed interventions remain limited. In general, more focus should be given to child survival in poor neighbourhoods by close monitoring of vaccination and hygienic practices by poor households.

Enhancement of budgetary allocation: An enhanced budgetary allocation is needed to strengthen the capacity of the ULBs. This is very much needed to create resilient and self-sustainable models. Also, considering the range of health and family planning needs in the country, the government needs to ensure an increase in funding for the family planning component on one hand, and on the other, efficient utilisation of the funds allocated to various heads.

Social protection for migrant workers and urban poor: Urban policies should include social and health protection for poor migrant workers and their families in the city, especially the seasonal migrants and homeless population, to reduce the drop-outs in immunisation and morbidity among this population. This can be done through a complete mapping of the urban poor localities and their corresponding vulnerability assessment and portability of entitlements, especially for the circular migrants. One Nation One Card system should be launched to ensure this. The programmatic interventions for different types of migrants must be ensured to secure children and adolescents health needs and reproductive rights linking them to the National Health Mission (NHM).

Modification in incentive provisions: The outreach of Janani Suraksha Yojana (JSY) must be intensified in urban areas, especially the urban poor localities, to promote institutional deliveries. The cash transfers to beneficiaries should be allocated based on completion of the continuum of care, such as full antenatal check-ups and completion of the protocol of full vaccinations. This will strengthen the quality and functioning of the mother and child tracking system (MCTS) in urban India.

3

Nutrition

3.1 Introduction

Nutrition as a subject has occupied an important place in the global development agenda. At the Scaling Up Nutrition (SUN) Movement Strategy and Roadmap (2016-2020), the United Nation's 8th Secretary-General, Ban Ki-Moon, acknowledged nutrition as both the maker and marker of the overall development of a country. In the United Nations General Assembly (2015), countries across the world showed their commitment to reducing the burden of undernutrition. The agenda focused on eradicating poverty and hunger in all developing countries by 2030 (Haddad, 2015). The SUN movement has further promoted the interest of many countries to overcome the impediments of health and well-being of many nations.

In recent times, the challenges in nutritional deficiency have become a social priority due to its integration with SDG-2 'Zero Hunger', SDG-3 'Good Health and Well-being', and SDG-5 'Gender Equality' (Coll-Seck, 2019; Haddad et al., 2015). Undernutrition being a medical issue, has substantial social and economic intricacies, especially among the vulnerable sections of societies exposed to a multitude of adversities (Haddad et al., 2015). Eradication of malnutrition is identified as a major challenge and well-known agenda in developing countries. This is because several of these countries, including India, have failed to achieve Millennium Development Goals (MDGs) in poverty and nutrition due to various country-specific socio-economic and demographic constraints (Mukherjee, 2016). Importantly, current efforts towards the fulfilment of commitments on various SDGs are potentially impossible to succeed without making progress towards the identified priorities in poverty and nutrition.

In a developing country like India, the burden of nutrition is a longstanding issue in women and children. It is equally severe in adolescents aged 15-19 years. Both the age groups 0-5 and 15-19 are of prime importance as they form the basis of overall development for successive life-course events (Rayhan et al., 2019; Grantham-McGregor et al., 2007). For the age group 0-5 years, nutritional status is related to the physiological, cognitive, and overall development which affects the learning capabilities of children (McCoy et al., 2016; UNICEF, 2013). However, nutritional deficiencies during adolescence impart far more severe challenges as they may cause psycho-social and health adversities leading to significant socio-economic deprivations. Urban India, being home to 377 million population constituting 36.57 million (9.7%) children aged below 5 years and 72.52 million (19.2%) adolescents in the age group 10-19 years is experiencing diverse challenges with regard to the nutritional well-being of these sections. The ex-ante analysis of United Nations suggests that urban populations will reach up to 600 million by 2030 and extend future challenges for the sustainable development of cities (Cohen, 2003; Economy New Climate, 2014). The expansion of urban areas without adequate investment in social development underscores a multitude of health issues, including malnutrition among children and adolescents, especially for the poor and vulnerable population. Importantly, slum dwellers, the homeless, and families located in informal settlements are more susceptible to the added burden of malnutrition. Also, their deprivations operate under several unobserved heterogeneities, which in turn lead to multilevel impediments to their growth and well-being.

The problem of malnutrition remained a fundamental concern in every Five Year Plan since independence. In this regard, the green revolution of the 1960s could be marked as the turning point towards increasing self-

reliance on food grains produced in the country. However, like many Asian countries, India also faced severe challenges of crop diversification which resulted in emphasis on quantity of crop production rather than nutritional qualities. Therefore, the first National Nutritional Programme (NPP-1993) was intended to combat the high prevalence of macro- and micro-level nutritional deficiencies among children and adolescents. The provision of subsidised food, nutritional surveillance and prevention of food adulteration were other essential components of NPP-1993 besides monitoring of the Integrated Child Development Services (ICDS, 1975) scheme. However, the intended rate of decline in malnutrition was not observed in the country (Pathak and Singh, 2011). In this respect, a series of policies and regulations such as the Special Nutrition Programme National Plan of Action on Nutrition (1995), Midday Meal Schemes (1995), National Population Policy (2000), National Health Policy (2002), National Guidelines for Infant and Young Feeding (2004), National Rural Health Mission (2005), Food and Safety Standard Regulations (2016), National Nutritional Strategies (2017), and Prime Minister's Overarching Scheme for Holistic Nutrition (POSHAN) Abhiyan (2018) have been launched for the holistic development of children and adolescents in India. Besides, global partners such as UNICEF, World Food Programme (WFP), the Bill and Melinda Gates Foundation (BMGF), OXFAM, Population Council etc. remained involved as active stakeholders in India's strategic plans to scale up the nutritional status of children and women in India. In spite of these efforts, malnutrition is still prominent in India (IIPS and ICF, 2017; Mazumdar, 2010; Radhakrishna and Ravi, 2004).

A sizeable share of children and adolescents in the country are reported nutrition deficient. Prevalence of malnutrition in the above two age groups is a paramount public health concern due to its direct and indirect linkages with several allied SDGs. Studies suggest that children and adolescents of the poor and vulnerable segments of societies are mostly affected by the burden of malnutrition. But there is a substantial lack of information on macro- and micro-nutrient deficiencies at various levels of disaggregation in urban India. Notably, no studies in the past looked at the situational mapping of disparities in malnutrition among children and adolescents in urban India and at the state level. Also, assessment of heterogeneity in nutritional deprivation among urban poor children and adolescents in India was never attempted. Therefore, this study using NFHS-4 unit-level data attempts to examine the intricacies of undernutrition in urban India, especially among poor children and adolescents. Further, an exhaustive empirical analysis has been carried out to understand and distinguish the relationship between early childhood deprivations in feeding practices and malnutrition in urban India. This study also quantifies the status of malnutrition in slums of eight million-plus cities to show changes in deprivation over time.

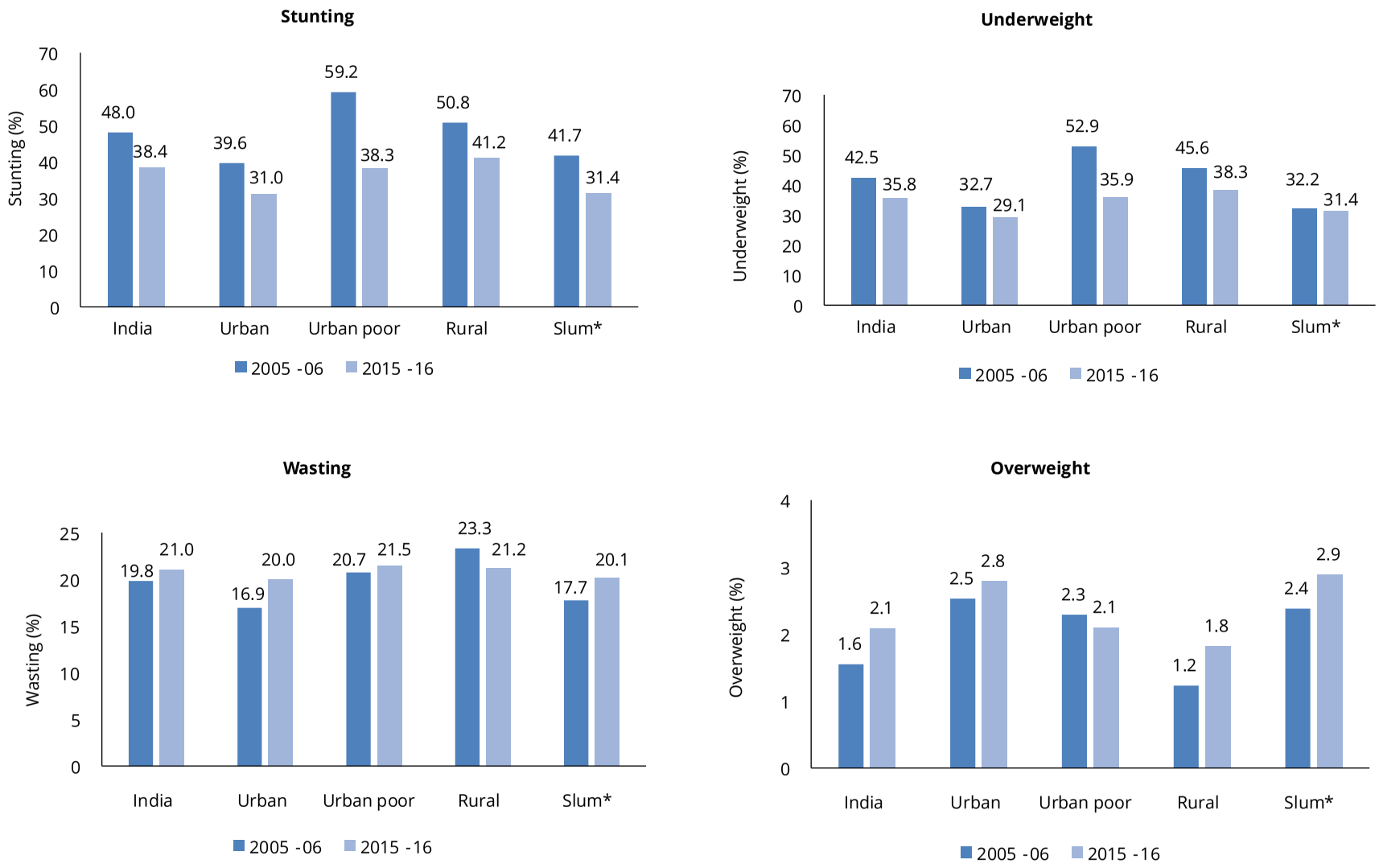
3.2 Data and Methods

Variations in the status of malnutrition have been captured through the recent two rounds of National Family Health Survey (NFHS-3, 2005-06 and NFHS-4, 20015-16). The lowest two quintile classes of wealth index in NFHS have been considered to represent poor households while the upper three quintiles are referred to as the non-poor category. Further, for disaggregated assessment of the malnutrition status in UNICEF intervention states the lowest two quintiles of urban wealth index have been considered to represent urban poor. Using NFHS-4, the estimation of indicators of macro-level nutrition deficiencies such as stunting, wasting and underweight among children aged below five years is based on 2,19,796 samples at country level of which 60,124 samples are from urban areas. The analysis of micro-level nutritional deficiency such as anaemia among children of age 6-59 months is based on the 1,96,233 samples at the all-India level out of which 53,690 samples were from the urban region. Malnutrition estimations of adolescent male and females aged 15-19 years in India were done on the country sample of 17,996 and 114,001, respectively. However, the estimation of overweight in urban adolescent males and females was worked out on 6,433 and 34,565 samples, respectively. A total of 3,050 households belonging to slums of eight million-plus cities were interviewed during the fourth NFHS. These households constitute 2,459 children aged below five years. Data on height, weight, and haemoglobin was derived from them. Data on height, weight, and haemoglobin were derived from them.

3.3 Variations in Malnutrition among Children

The situational assessment of malnutrition among children aged five years based on indicators such as stunting, wasting, underweight, overweight and anaemia shows a notable change in the past one decade. Among all measures of malnutrition, stunting is highly prevalent in India. Notably, a significant reduction

Figure 3.1: Variation in the Prevalence of Undernutrition Among Children Under 5 Years of Age in India During 2005-06 and 2015-16

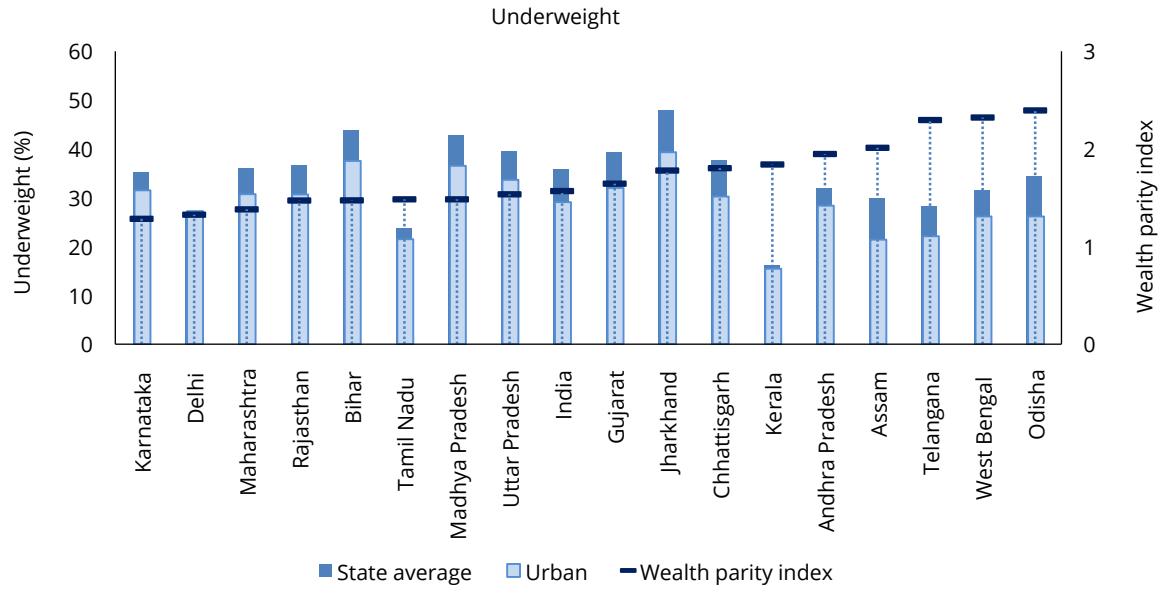


Note: *= Information on slums is based on eight million-plus cities: Delhi, Chennai, Mumbai, Kolkata, Indore, Nagpur, Hyderabad and Meerut.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

has been noticed in the share of stunted children over the past decade. Nearly four out of ten children were reported to be stunted in India in 2015-16, which is lower by ten percentage points from the estimated figure of 2005-06. A significant decrease in stunting has been observed among the children belonging to urban poor families where it has gone down by 21 per cent point in the last ten years.

It is worth mentioning that the pace of decline in stunting remained faster among the urban poor compared to the rural areas. A similar pattern of decline is also seen in the share of underweight children where the urban poor have registered a notably higher decline over time compared to their rural counterparts. At the same time, the recent data from NFHS-4 (IIPS and ICF, 2017) depicts a worrisome picture of the status of wasting and overweight children and adolescents in the country at various levels of segregation. Both indices have shown an increase in their respective shares over time. The analysis demonstrates that wasting has marginally gone up from an estimated 19.8 per cent in 2005-06 to 21.0 per cent in 2015-16 with the majority of the increase noticed in the urban areas. Contrary to the observations of urban areas, the percentage of children suffering from wasting has declined in the rural areas of the country for the same period. The analysis shows that the increase in wasting is an urban-centric phenomenon where, besides urban poor households, it was also high in the slum areas as suggested from data collected from the eight million-plus cities, namely Delhi, Chennai, Mumbai, Kolkata, Indore, Nagpur, Hyderabad and Meerut. Like wasting, the share of overweight children and adolescents has also increased in the past ten years in India. This increase is mainly due to a rise in the incidence of overweight children among the urban non-poor families, and that the share of overweight children has declined among the urban poor. Contrary to this finding, however, it has increased among the slum children of the eight million-plus cities. As brought out by Chatterjee (2002), overweight is increasingly becoming an urban phenomenon. Moreover, the higher incidence of overweight children in slums could be an indication of housing poverty in big cities, where many low- and middle-income group households are unable to access good quality housing due to exorbitant rents and have to settle down in slums which are known for higher illiteracy and unhealthy lifestyles and its ill effects (Raj and Ploriya, 2018). Also, some of the poor households get influenced by the food habits of the rich due to easier access and exposure to media, altering their food preference towards fast food. A few reasons that seem to encourage this trend are: eating out behaviour (increasing in urban areas in general), children (at times younger children) being left to feed themselves at home as mothers are also working till late, the shift towards ready-to-eat fast food, and of course, the lack of exercise. Also, the higher usage of smart phones and gadgets (numbers higher in urban areas compared to rural areas) lead to limited physical activity coupled by the limited number of parks and open spaces that have restricted physical activities among children, which also leads to obesity in increasing proportions.

Figure 3.2: Variations in the Prevalence of Underweight Children (under 5 years) and Wealth Parity Index in Urban India, 2015-16

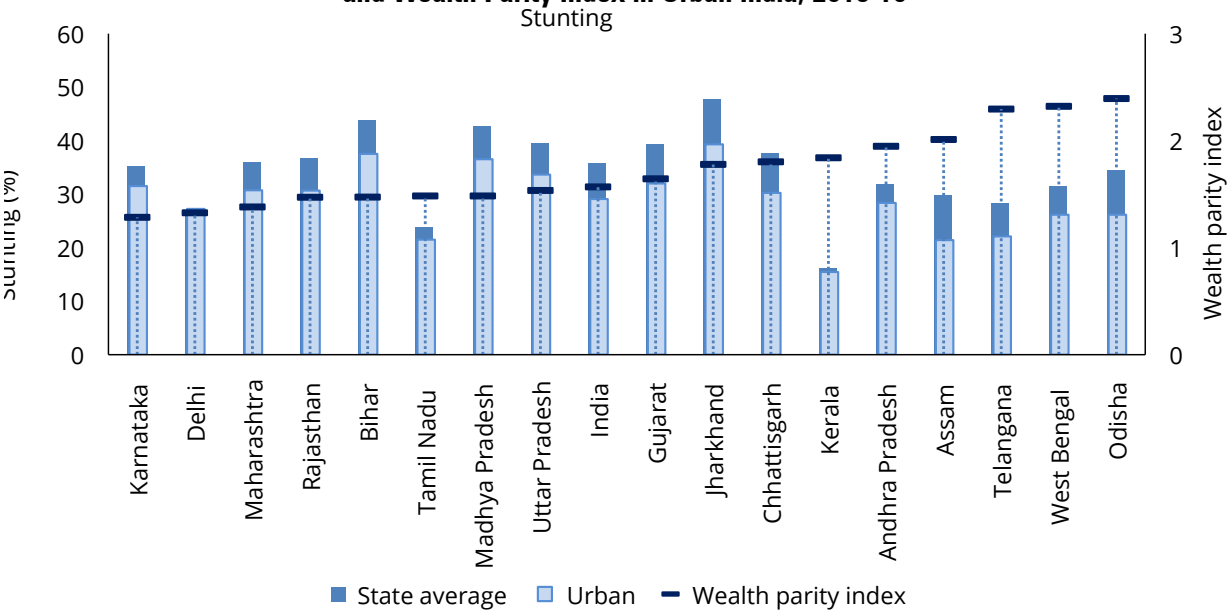


Source: Computed from NFHS-4, 2015-16

3.3.1 Status of malnutrition among children in UNICEF intervention states/UTs

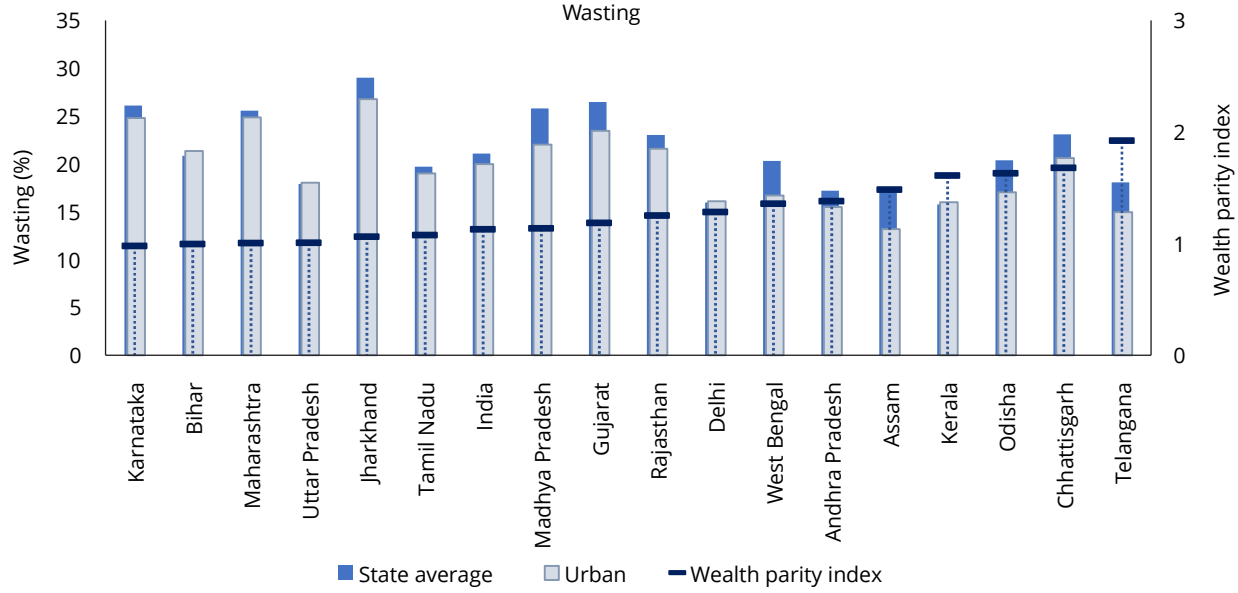
The status of malnutrition is conspicuously heterogeneous at state levels. The disparity in three critical indicators of malnutrition and the corresponding wealth parity index is presented in Figures 3.2, 3.3 and 3.4, respectively. The statistical findings show that nearly five of ten children are underweight in Jharkhand while every four of ten children are underweight in Uttar Pradesh, Bihar and Madhya Pradesh. Compared to other states in India, the percentage of underweight children is also higher in urban areas of these four states. The finding also suggests that in states like Maharashtra and Karnataka, every three out of ten children are underweight among urban poor households. The wealth parity index[1] (WPI) in underweight children aged

Figure 3.3: Variations in the Prevalence of Stunting Among Children (under 5 years) and Wealth Parity Index in Urban India, 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 3.4: Variations in the Prevalence of Wasting Among Children (under 5 years) and Urban Wealth Parity Index in Urban India, 2015-16



Source: Computed from NFHS-4, 2015-16

1 Wealth Parity Index = WPI is a ratio of status of undernutrition in the poor to that of the non-poor. Here in this section, Wealth Parity Index for stunting, wasting and undernutrition has been worked out for urban children.

below five years in India indicates that disparity is in favour of non-poor households. This reflects a better prevalence of the age-appropriate weight situation among urban non-poor children (below 5 years).

There is a big gap in the prevalence of underweight children between poor and non-poor households in the below 5 years age group in the three states of Odisha, West Bengal and Telangana . In nearly all states, urban poor children have reported a poor prevalence of age-appropriate weight, including in the national capital Delhi, indicating a high disparity between the poor and non-poor. Surprisingly, wealth parity in being underweight is also high in Kerala, where the prevalence of underweight children is the lowest in the country. Stunting in children under 5 years is a grave situation in urban India in all states. The percentage of children with worst age-appropriate height is noticed in Bihar and Uttar Pradesh where about five children out of every ten are found to be stunted. The situation of stunting is equally deplorable in urban children belonging to these two states, where nearly four out of ten have heights inappropriate to their corresponding ages. Urban areas in other major states including Madhya Pradesh, Jharkhand, Rajasthan, Karnataka, Delhi, Gujarat and Chhattisgarh have a percentage of stunted children higher than the national urban average.

Kerala and Andhra Pradesh have the lowest prevalence of stunting among children aged below 5 years. Also, as in the status of underweight children, the WPI in stunting depicts a disparity in favour of non-poor households, which reflects a better prevalence of the age-appropriate height situation among urban non-poor children (below 5 years). The gap in stunting among urban poor and non-poor children is notably higher in states of Assam, West Bengal, Odisha and Jharkhand. Similar to underweight and stunting in children under 5 years of age, wasting rates also demonstrate widespread disparity at the state levels in India.

The prevalence of wasting is conspicuously highest in Jharkhand, Karnataka and Maharashtra, where one in every four children have weight inappropriate to their heights as per the global WHO's child growth standard. On an average, two in ten children residing in urban India have inadequate height appropriate to weight. The state level estimates, however, show a huge disparity ranging from the highest incidence of wasting in Jharkhand to the lowest in Assam. The WPI in this respect presents stimulating evidence in several states such as Karnataka, Bihar, Maharashtra, Uttar Pradesh, Jharkhand and Madhya Pradesh, where children belonging to both poor and non-poor households have a similar level of wasting. However, wasting among children in urban India depicts disparity in favour of non-poor households, which reflects a better prevalence of the height-appropriate weight situation among urban non-poor children (below 5 years) in the states of Kerala, Odisha, Chhattisgarh and Telangana.

3.3.2 Status of malnutrition in selected million-plus cities

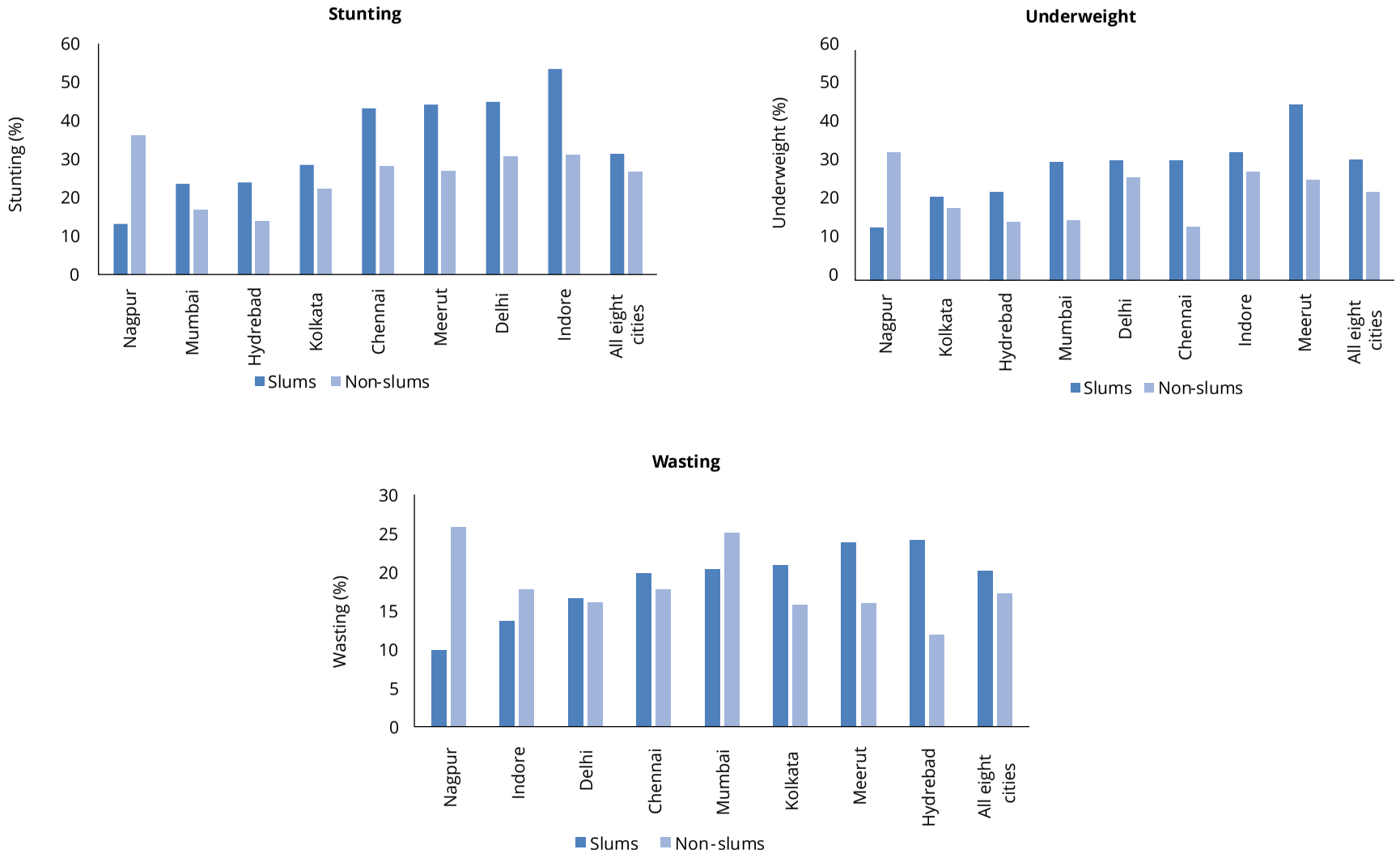
The National Family Health Survey provides information on the maternal and child health indicators for eight million-plus cities in India including the slum and non-slum population. The empirical assessment of malnutrition has been carried out in eight million-plus cities to capture heterogeneity in level of deprivation among children under 5 years living in slum and non-slum areas. Figure 3.5 depicts the distribution of undernutrition among children below age 5 for three sub-categories, stunting, wasting and underweight, in these cities of India. Non-slum children are in a better position in terms of their nutritional status than slum children. Also, the gap is higher for the underweight category almost by 8 percentage points, followed by stunting, around 4 percentage points, and it is lowest for wasting. At the city level, except for Nagpur, the remaining seven cities showed a higher prevalence of stunting and underweight children in slum areas compared to non-slum locations. In Nagpur, slum areas show an almost 23 and 19 percentage points respectively higher prevalence of stunting and underweight in children under 5 years.

More than half of the children belonging to slums in Indore suffer from stunting whereas the prevalence of underweight is highest in slums of Meerut (around 46%). The prevalence of wasting is high in non-slum areas of Nagpur, Indore and Mumbai. It is highest in Nagpur (26%) followed by Mumbai (25%) and Indore (18%). In the slum category, the prevalence of wasting is highest in Hyderabad and lowest in Nagpur.

3.4 Deficiency of Micro-Nutrients Among Children

Micro-nutrients such as iron, iodine, zinc and vitamin A are very crucial for the overall growth and development of children. The deficiency of micro-nutrients in the early ages of life manifests a greater likelihood of

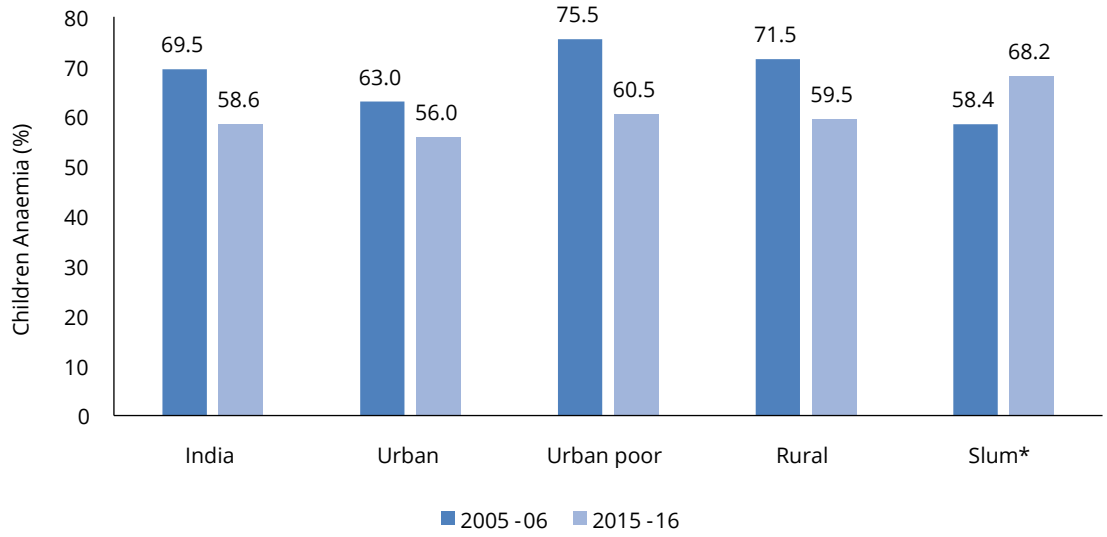
Figure 3.5: Percentage of Undernutrition Among Children (under 5 years) in Selected Million-plus Cities, 2015-16



Note: Estimation of overweight has not been carried out in eight million-plus cities due to small sample size. Source: Computed from NFHS-4, 2015-16

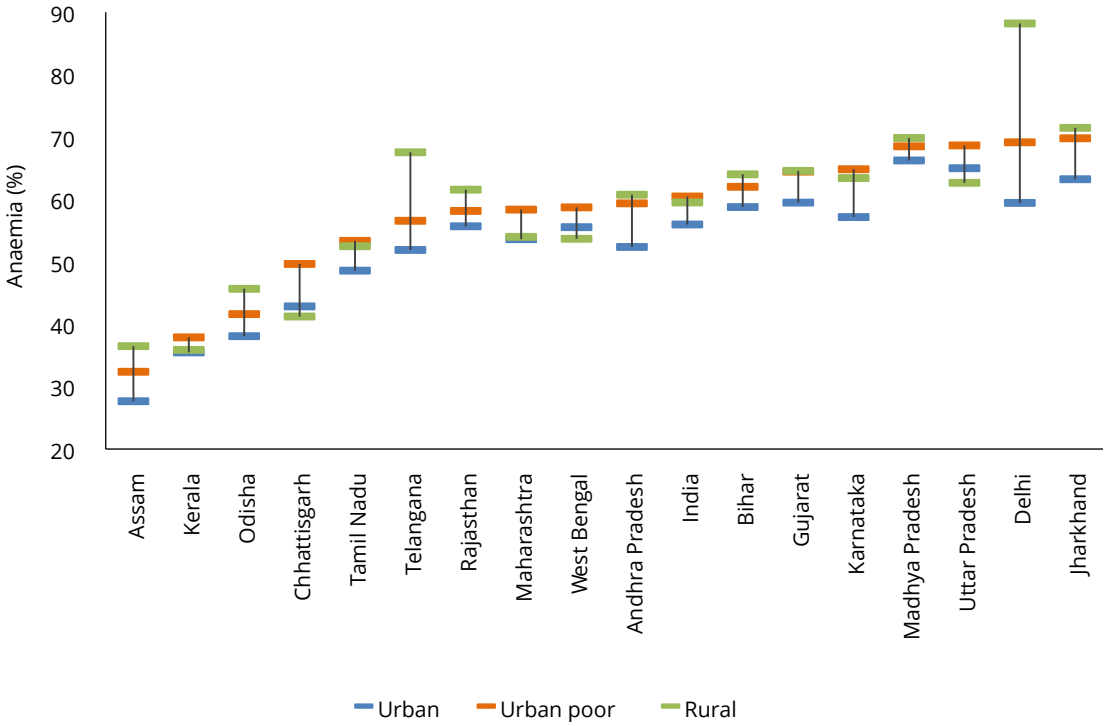
malnutrition and hence creates exposure to both chronic and frequent infections. The studies suggest that the lack of micro-nutrition is a serious impediment to early childhood development, which leads to a decline in cognitive ability, intelligence quotient and immunity levels. In NFHS, the disaggregated information on anaemia is given from its second rounds on wards. It captures iron deficiency among children in the age group of 6-59 months at various levels of disaggregation. An empirical assessment from the recent two rounds of NFHS shows a decline in the prevalence of anaemia among children in this age group. It is worth mentioning that six out of ten children are anaemic in India Significantly, this figure stands nearly the same for urban all-India as well as for the urban poor. Figure 3.6 shows that though the trend is negative, still more

Figure 3.6: Variation in Anaemia Among Children Aged 6-59 months in India, 2005-06 and 2015-16



Note: * = Information from Slum is based on eight million-plus cities only.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 3.7: State-wise Prevalence of Anaemia Among Children (6-59 months) in Urban and Urban Poor Households, 2015-16



Source: Computed from NFHS-4, 2015-16

than half of the children in the country suffer from anaemia regardless of the categories. Except for slum dwellers from the eight million-plus cities which registered an increase by about 10 points, all other groups, including the urban poor, show a decline in the percentage of anaemic children over the last decade.

It is difficult to draw any generalisation for overall India from the analysis restricted to the eight million-plus cities. However, a decline in the incidence of anaemia among the urban poor by 10 percentage points reflects the positive impact of various programmatic interventions by the GoI, UNICEF and other stakeholders working in this space. Figure 3.7 shows that nearly all larger states in India have an alarming high prevalence of anaemia in both rural and urban areas. But compared to the overall urban scenario, the prevalence of anaemia is more pronounced among urban poor children particularly. This finding is conspicuous in the selected states as well. Evidently, Jharkhand has the highest prevalence of anaemia among urban poor children (almost 70%) followed by Delhi (around 69%) while it is lowest in Assam and Kerala. Surprisingly, anaemia prevalence among children aged below 5 years is highest in the rural areas of Delhi (88.2%) followed by Jharkhand and Madhya Pradesh. The states of Uttar Pradesh, Maharashtra, Karnataka, West Bengal, Chhattisgarh, Tamil Nadu and Kerala have a higher prevalence of anaemia among urban poor children compared to rural children. At the same time, the states of Madhya Pradesh, Andhra Pradesh and Jharkhand reported a similar percentage of children suffering from anaemia both in rural areas and among the urban poor.

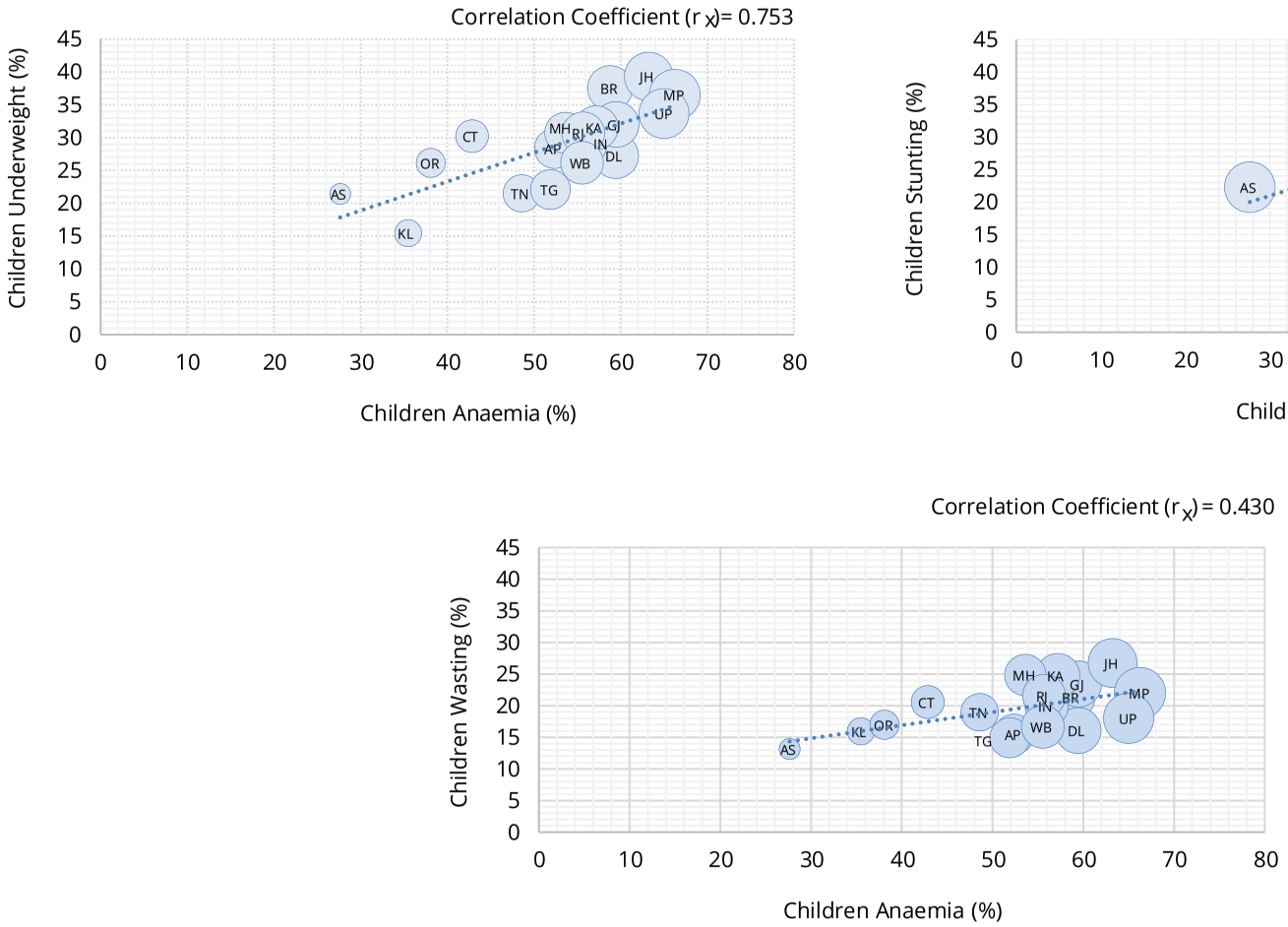
Furthermore, urban children in states such as West Bengal, Chhattisgarh and Uttar Pradesh have a higher prevalence of anaemia compared to their rural counterparts. The deficiency in iron leads to poor early childhood development, which percolates to subsequent life courses leading to weak physical and mental growth.

3.5 Interlinkages Among Indicators of Malnutrition

There are several factors which affect malnutrition among children. Studies have acknowledged women's education, gender, community, caste, birth order, WASH, place of residence, and wealth of the family as the key drivers of the well-being of children (Joe, Mishra and Navaneetham, 2009; Mukherjee, 2016; Mazumdar, 2010). These studies suggest that besides the quantity of food, it is the quality of food and variety therein that plays an essential role in reducing various forms of malnutrition. Essentially, vitamin A, iron and other micro-nutrients significantly affect the growth and development of children in their early ages. Similar results are found with regard to iron deficiency and undernutrition (Figure 3.8) among children in urban areas. The analyses posited a significantly high positive correlation between anaemia among children and stunting, wasting and being underweight in urban India, especially in the UNICEF intervention states. The micro-nutrient deficiency in terms of lack of iron content in the food seems to have a major impact on the malnutrition status of urban children as noticed in the UNICEF intervention states. It has been repeatedly argued that in deprived geographical locations like slums, micro-nutrient deficiencies are predominant in children suffering from acute as well as chronic malnutrition.

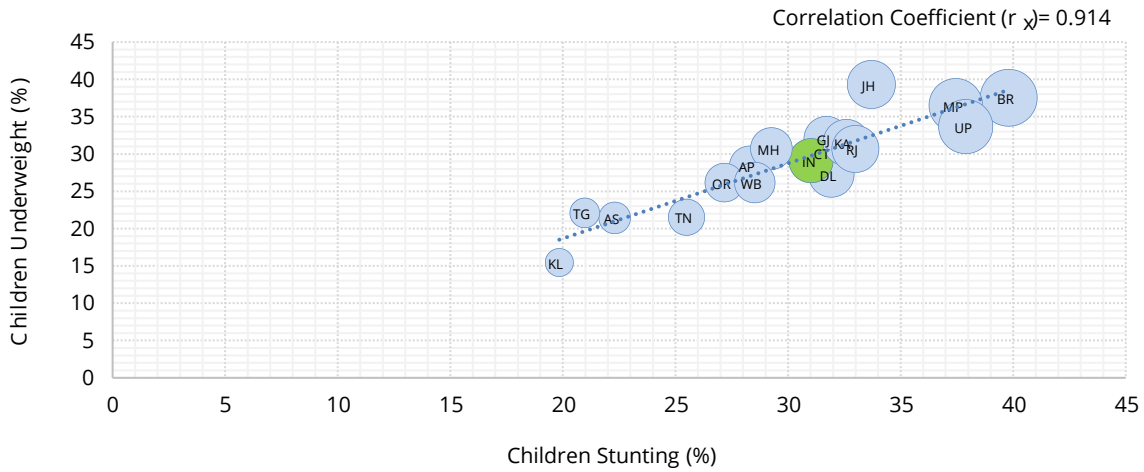
Figure 3.8 shows a higher clustering of states in the region where anaemia and child underweight are both high. The states falling in the high clustered zone are Jharkhand, Madhya Pradesh, Uttar Pradesh, Bihar and Gujarat while Kerala has the lowest level of underweight as well as child anaemia. Similarly, child anaemia is also correlated with chronic malnutrition in urban India. It may be pointed out from the correlation exercise that states like Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand and Gujarat have higher child anaemia as well as stunting, while Kerala has the lowest prevalence of both anaemia as well as stunting. It is interesting to note that states like Tamil Nadu, Telangana, West Bengal and Delhi have relatively higher cases of child anaemia but lower cases of underweight, and that in states like Kerala, Orissa, Assam and Chhattisgarh the level of anaemia and acute malnutrition are both at the lower end. Therefore, this study reiterates the likelihood of concurrent deprivation of both micro- and macro-nutritional deficiencies among children in urban India (UNICEF, 2013). Thus, it is argued that poor performing states such as Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Gujarat and Rajasthan need more strategic interventions for elimination of layers of undernutrition. Simultaneously, there is need to address higher anaemia prevalence among urban children in states like Tamil Nadu, Telangana, Andhra Pradesh, West Bengal and Delhi, especially among children living in vulnerable poor urban settings. A significant reduction of anaemia could lead to a substantial decline in the incidence of undernutrition in these states.

Figure 3.8: Association Between Underweight, Stunting and Wasting in Children with Child Anaemia in Urban India, 2015-16



Note: Weight = Percentage of anaemia among children aged 6-59 months.
Source: Computed from NFHS-4, 2015-16

Figure 3.9: Association Between Child Stunting and Child Underweight in Urban India, 2015-16



Note: Weight = Percentage of anaemia among children aged 6-59 months.
Source: Computed from NFHS-4, 2015-16

Micro-nutritional deficiencies are interdependent with malnutrition being significantly related to each one of them. Evidently, children being underweight and stunted children showed a very high level of positive correlation (r_x = 0.914) with each other. This demonstrates that children suffering from being underweight are more likely to become stunted or vice-versa. Therefore, urban children in Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh and Gujarat have a seemingly higher possibility of falling into the double burden of malnutrition coupled with another deficiency.

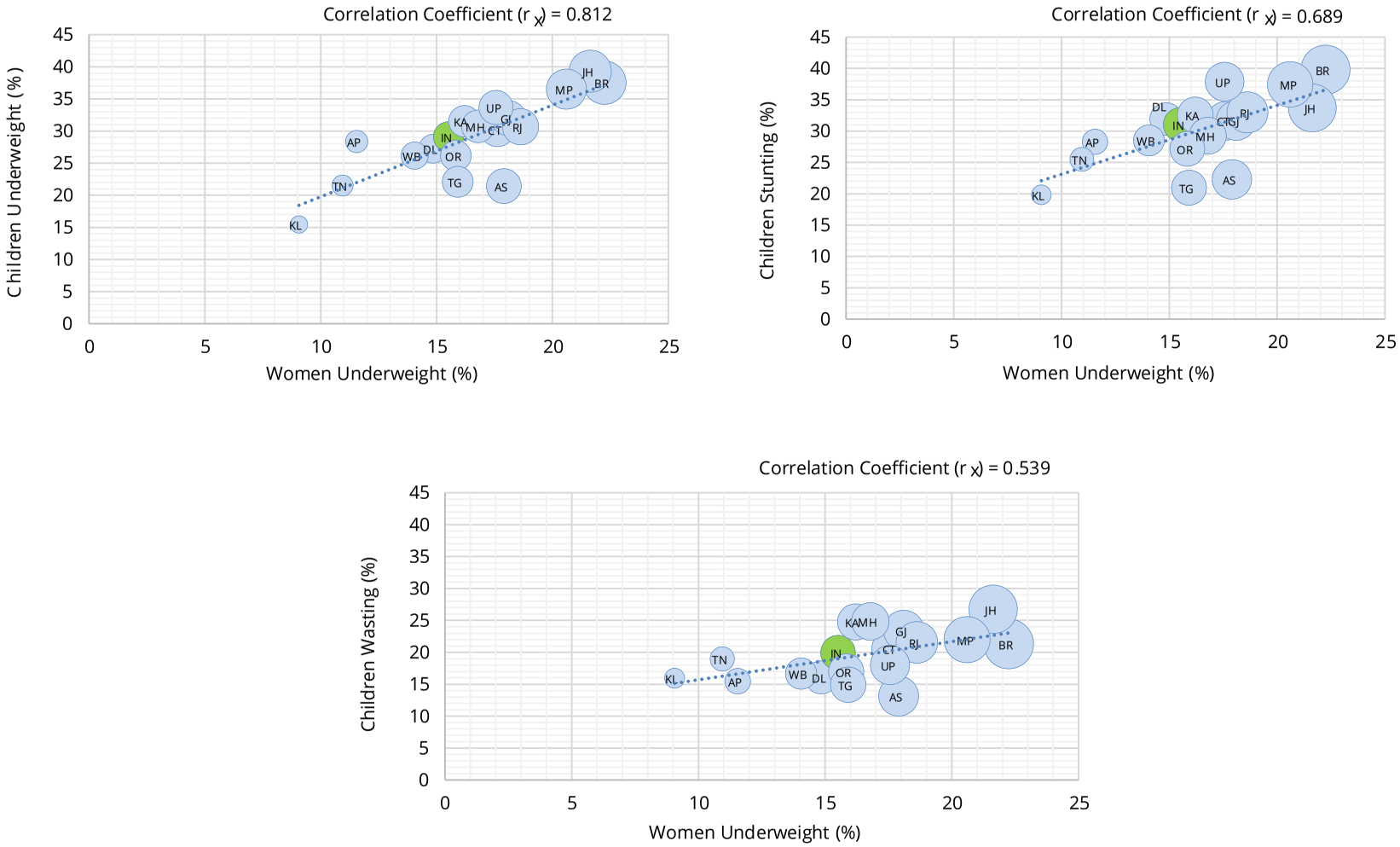
Policies and programmes have been formulated in India to upgrade the ability of women to provide optimal care for children. However, several studies have also argued that it is women's own nutritional status that significantly affects the nutritional well-being of their children. Figure 3.10 testifies to the association between underweight women and their children exhibiting nutritional outcomes such as stunting, underweight and wasting. Interestingly, a woman's nutrition level is positively related to malnutrition in her children. Such examples are clearly visible in Uttar Pradesh, Madhya Pradesh, Bihar and Jharkhand, where both women and children are severely deprived of adequate nutrition. On the other hand, states like Kerala and Tamil Nadu performed better in reducing nutritional deficiencies in both women as well as children. Therefore, a coherent monitoring approach must be adopted to screen women as well as children falling in the high-risk urban areas with the help of ULBs. The capacity of the ULB staff thus needs to be improved to undertake this task.

Besides childhood morbidities both acute and chronic malnutrition is related to child mortality (WHO, 2016). Thus, both stunting and being underweight offer a greater risk of child deaths and these vulnerabilities are higher among the poor sections of society. Figures 3.11 and 3.12 depict the relationship between stunting and being underweight on child mortality among urban poor households in India. The analysis indicates that the coefficient of correlation among stunting and U5MR among urban poor children works out to be 0.62, while among underweight children and U5MR, it is nearly 0.53. These high degrees of correlation suggest that stunting and being underweight are positively related with U5MR in urban poor families. These indicate that the higher the prevalence of stunting and being underweight, the higher is the likelihood of child deaths among the urban poor households. Uttar Pradesh and Madhya Pradesh are the two states where prevalence of acute and chronic malnutrition as well as U5MR is highest.

3.6 Exclusive Breastfeeding Practices

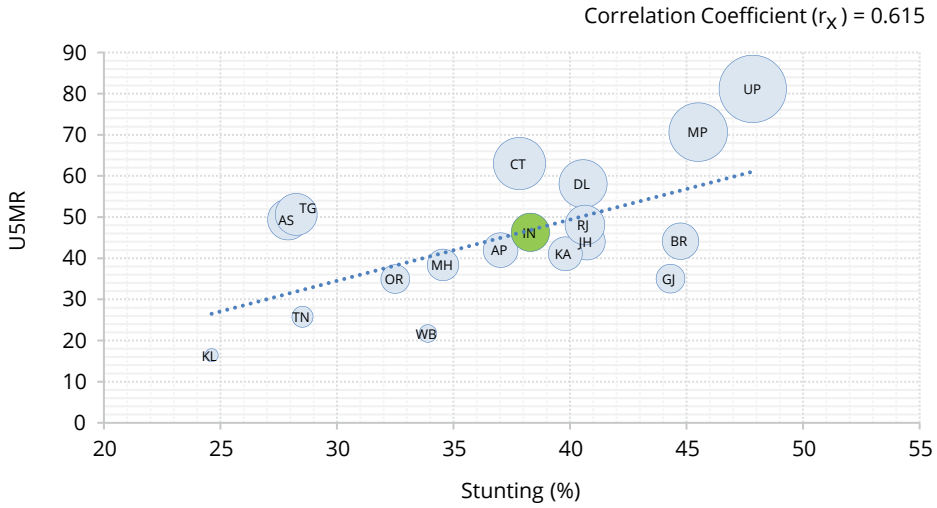
Exclusive breastfeeding is a very essential source of macro- and micro-nutrients needed for a child in the first six months of life. It is highly recommended that in these six months an infant should be fed on mother's breast milk only. It is essential for the early development of the brain as well as for cognitive and visual ability. Conspicuously, the findings from NFHS indicate that breastfeeding practices for children under age 5 months have noticeably increased during 2005-06 and 2015-16

Figure 3.10: Association Between Underweight in Women and Underweight, Stunting and Wasting in Children in Urban India, 2015-16



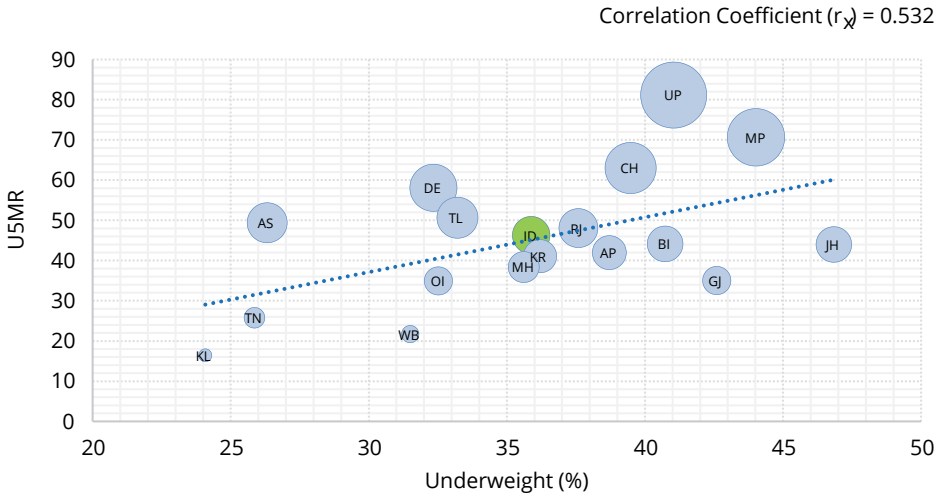
Note: Weight = Percentage of underweight women.
Source: Computed from NFHS-4, 2015-16

Figure 3.11: Association Between Child Stunting and U5MR in Urban India, 2015-16



Note: Weight= Under-5 mortality rate (U5MR).
Source: Computed from NFHS-4, 2015-16

Figure 3.12: Association Between Child Underweight and U5MR in Urban India, 2015-16

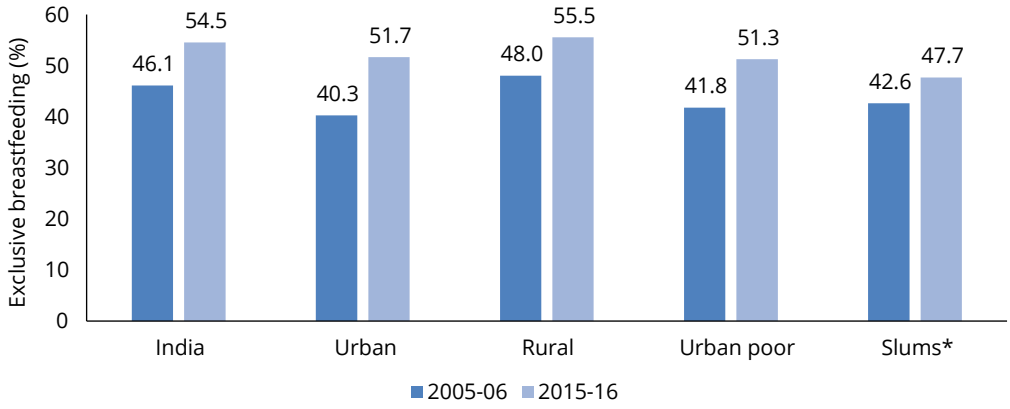


Note: Weight = Under-5 mortality rate (U5MR).
Source: Computed from NFHS-4, 2015-16

Exclusive breastfeeding has increased from 46.1 per cent in 2005-06 to 54.5 per cent in 2015-16 in India, with the increase being higher in urban areas, although in overall percentage, it is lower in urban areas as compared to the rural counterparts. In India, breast feeding practices are nearly universal (IIPS and ICF, 2017). In addition, the variation in exclusive breastfeeding practices between all-urban and urban poor in India is small. One in every two children was deprived of exclusive breastfeeding in 2015-16, and this figure was lowest among slum children from the eight million-plus cities. Nearly half of the children living in slum areas of the million-plus cities did not get access to mother's breast milk for a continuous period during the first six month of birth. On the other hand, rural children had a consistently higher record of exclusive breastfeeding compared to urban children in both the surveys.

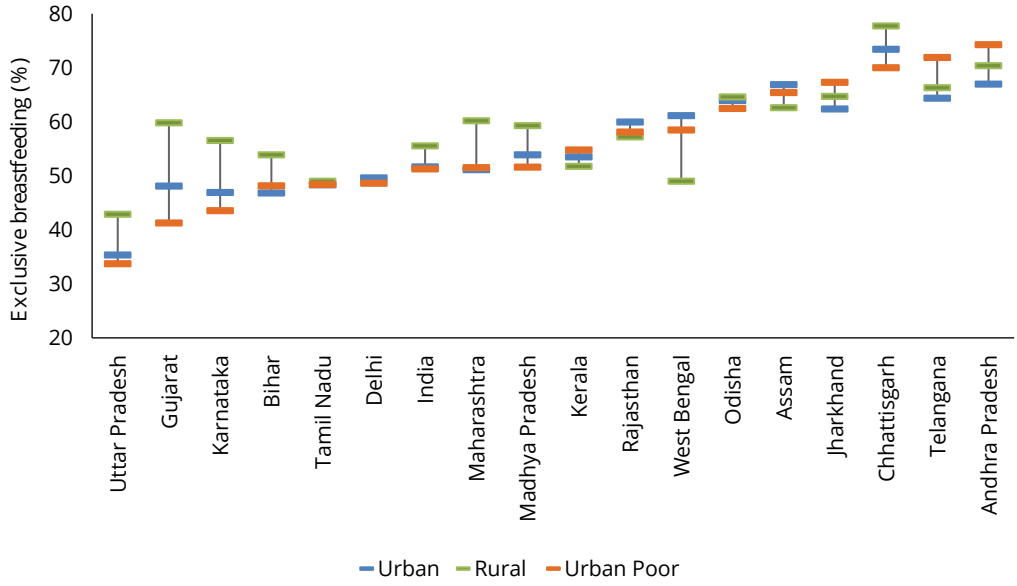
The data confirms a substantial improvement in the pattern of exclusive breastfeeding among the poor and all-urban across the states. However, the differences in the practice of exclusive breastfeeding at the national level among the all-urban and urban poor show abundant heterogeneity at the state level. Figure 3.14 depicts the higher prevalence of exclusive breastfeeding among rural children in most of the selected states compared to the all-urban and urban poor except for Kerala, West Bengal, Rajasthan and Assam, where it is

Figure 3.13: Change in Exclusive Breastfeeding Rate (0-5 months) in India During 2005-06 and 2015-16



Note: * = Information from Slum is based only on the eight million-plus cities.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 3.14: State-wise Pattern of Exclusive Breastfeeding Rate Among All-urban and Urban Poor Children (0-5 months), 2015-16



Source: Computed from NFHS-4, 2015-16

lower. The prevalence of exclusive breastfeeding is uniformly lower in urban poor children compared to the all-urban average of the states and rural counterparts, except for Telangana and Andhra Pradesh. Exclusive breastfeeding practices range from 35.4 per cent in urban Uttar Pradesh to about 73.4 per cent in urban Chhattisgarh. However, some states have a higher share of exclusive breastfeeding in poor groups as well compared to the urban average. These states are Bihar, Kerala, Jharkhand, Telangana and Andhra Pradesh. The prevalence is highest among the urban poor children of Andhra Pradesh (74%).

3.7 Complementary Feeding Practices

Complementary feeding after six months of birth is vital for children's nutrition. Regarding child feeding practices, WHO has worldwide recommended adopting exclusive breastfeeding practices at least until six months after birth, followed by complementary feeding practices for 6-23 months as essential (WHO, 2002). Studies suggest that the mother's breast milk cannot alone be sufficient for a growing child after the age of

six months. Thus, breast milk should be supplemented with other sources of micro-nutrients. Complementary feeding practices are quintessential for children due to their high correlation with indicators of early childhood development (ECD), such as cognitive development, learning capabilities and mental development. The feeding age 6-23 months is susceptible to occurrences of various diseases or deficiencies including malnutrition. However, safe, timely and adequate feeding of children aged 6-23 months depends upon the dietary diversity of the household as well as the feeding practices of the mother or other caregiver. Thus, complementary feeding practices rely upon the household environment in which a child is brought up, such as a caregiver's knowledge, attitude and practices. However, despite the uncountable benefits of complementary feeding it is not a compulsory norm in many societies (Rollins et al., 2016). It has been argued that the damage incurred due to lack of micro- and macro-nutrition, especially in the first two years of a child's life leads to irreversible damage in his/her physical and cognitive development. WHO (2006; 2003) has provided intensive guidelines to create awareness and monitoring of infant and young child feeding (IYCF) practices in the world, specially the developing countries.

Estimates present deficient complementary feeding practices at the national level in India. Figure 3.15 shows that eight per cent of the children aged 6-23 months have utilised a minimal acceptable diet (MAD), which means that even less than one in every ten children of age 6-23 months is given complementary feeding in the country. The situation of MAD is equally deplorable in rural areas and among the poor living in urban areas. However, infants and children belonging to slums of the eight million-plus cities have a relatively better condition with respect to MAD compared to both the national urban and rural averages. However, both MMF and MMD are highest among urban infants and children in slums from the selected eight million-plus cities. The differentials in the levels of minimum meal frequencies among children under aged five months are quite noticeable by states. Estimates are given in Figure 3.16. In almost all selected states urban poor dwellers have a lower prevalence of minimum meal frequencies, except for Telangana and Orissa which reported about 2 and 1 point higher advantages than the urban and rural state averages. Almost 60 per cent children in Chhattisgarh had minimum meal frequencies, which is the highest recorded among all selected states. Also, here the differentials offered by the all-urban and urban poor are the lowest (less than 1%). Nationally, only 38 per cent of urban children aged five months or less had received minimum meal frequencies, and this figure is two per cent lower among the all-urban poor. Most of the states, such as Karnataka, Assam and Bihar offered a lower than average prevalence rate of minimum meal frequencies.

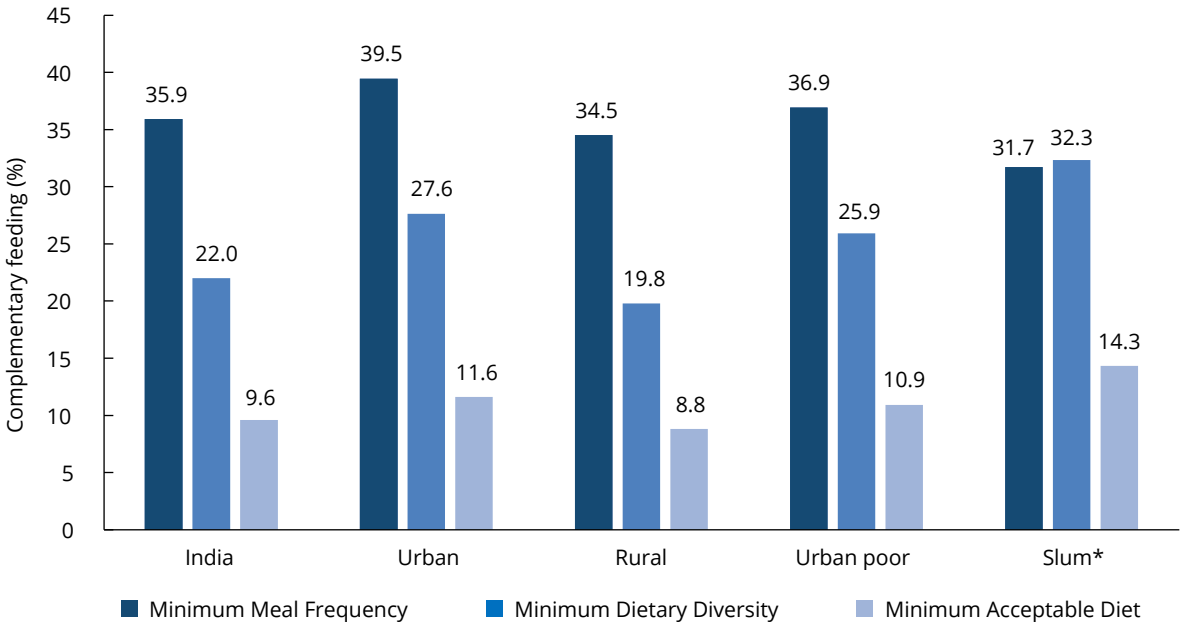
Overall 27 per cent of urban children aged 6-23 months were seen to have access to MDD. However, this per cent is almost 2 points lower in poor children living in urban areas. This pattern is quite similar in most of the states, where the urban poor children had a lower percentage of MDD than the all-urban children, with the exception of Rajasthan, Delhi, Andhra Pradesh and Tamil Nadu. The percentage gap in MDD among the all-urban and urban poor segment of children aged 6-23 months is higher in Telangana, Karnataka, Assam, Chhattisgarh and West Bengal. In addition to this, states representing minimal access to MDD, such as Uttar Pradesh, Bihar and Jharkhand also demonstrated an insignificant gap in coverage of MDD across rural, all-urban and urban poor children. The difference in Minimum Dietary Diversity between the all-urban and urban poor children is highest in Telangana (almost 8%) and lowest in Madhya Pradesh (less than 1 percentage point).

The state-wise Minimum Acceptable Diet (MAD) among children aged 6-23 months is similarly estimated and presented in Figure 3.18. Conspicuously, a skewed coverage of MAD among children aged 6-23 months was also reported among the UNICEF intervention states (Figure 3.18). It is evident that the coverage of MAD was extremely low in Rajasthan, Delhi, Gujarat, Uttar Pradesh, Madhya Pradesh, Maharashtra and Bihar, where nine of every ten children are deprived in urban areas. The coverage of MAD in urban poor children was reportedly deplorable compared to that of the urban children in all UNICEF intervention states. Tamil Nadu, on the other hand, had a relatively better position with regard to MAD, where at least three in every ten urban poor children had access to a minimum acceptable diet. Interestingly, urban poor children in Tamil Nadu had a higher utilisation of MAD compared to all-urban and rural children.

3.7.1 Association between early childhood feeding and child malnutrition

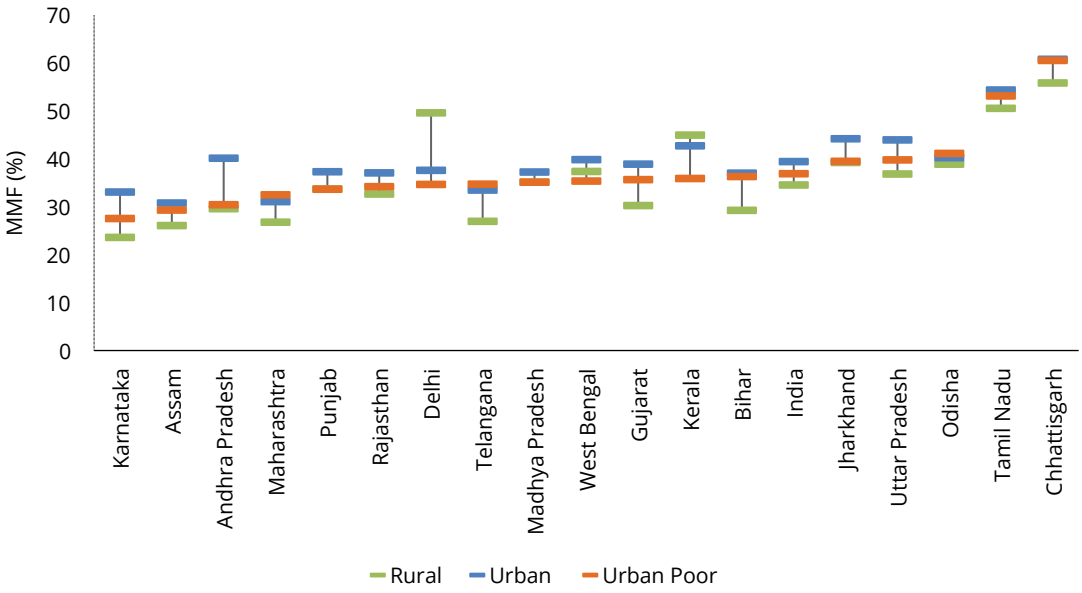
The government of India has regularly highlighted the importance of exclusive breastfeeding and complementary feeding for children in its various policies (NNP, 2015; NNP, 1993). Inadequacy in feeding practices in the critical years of growth leads to an adverse and severe detrimental effect on nutritional

Figure 3.15: Complementary Feeding Practices in India, 2015-16



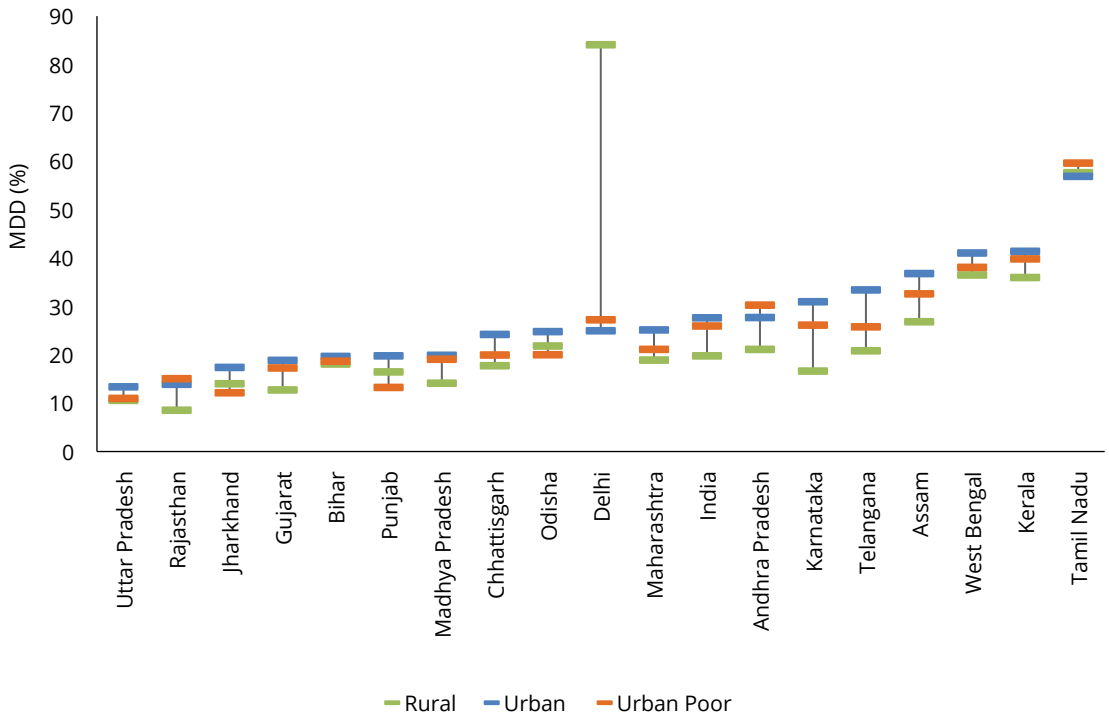
Note: * = Information from Slum is based only on the eight million-plus cities.
Source: Computed from NFHS-4, 2015-16

Figure 3.16: State-wise Percentage of Minimum Meal Frequency (MMF) Among Children (0-5 months), 2015-16



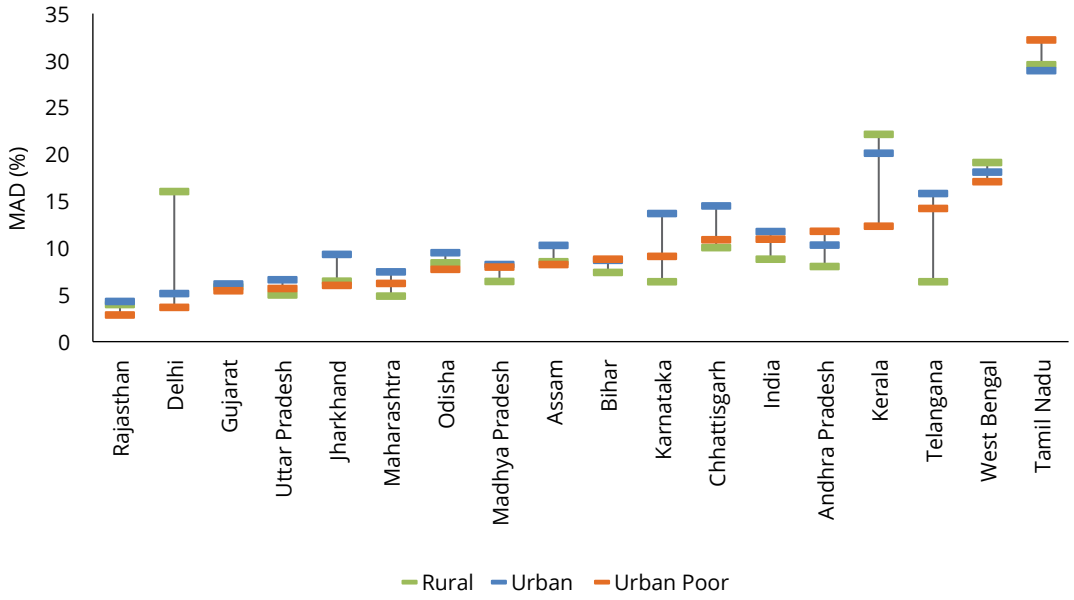
Source: Computed from NFHS-4, 2015-16

Figure 3.17: State-wise Percentage of Minimum Dietary Diversity (MDD) Among Children (6-23 months) in Urban India, 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 3.18: State-wise Percentage of Minimum Acceptable Diet (MAD) Among Children (6-23 months) in Urban India, 2015-16



Source: Computed from NFHS-4, 2015-16

well-being. Studies suggest that the incidence of acute and chronic malnutrition among children depends substantially on childhood feeding practices adopted in the critical early years of life. To address various nutritional challenges, the Infant and Young Child Feeding (IYCF) guidelines were developed (Ministry of Women and Child Development, 2004). But even after a decade of advocacy, complementary feeding is shallow in both urban and rural India. A majority of the children are still not receiving the minimal diet prescribed for them. Persistent malnutrition among children cannot be eliminated successfully without addressing the deep-rooted deficiencies that exist in the early childhood feeding pattern.

Figure 3.19 shows a highly negative correlation between MDD and child anaemia, stunting and underweight. The high degree of correlation between MDD and stunting and underweight indicates that utilisation of diversified nutrient rich food can significantly reduce the incidence of chronic undernutrition. However, a very small proportion of the children in their early ages have received coverage of four or more nutritious foods prescribed by WHO. States like Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, Rajasthan and Gujarat have the least intake of MDD and a higher prevalence of anaemia, stunting and underweight. On the other hand, Kerala and Assam have performed relatively well in early childhood feeding and reduction in micro- and macro-malnourishment.

A similar negative association is also observed between MAD and micro- and macro-malnourishment in all-urban India (Figure 3.20). A clustering of states can be observed around MAD less than 10 per cent and highest level of anaemia, stunting and being underweight.States such as Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Jharkhand and Gujarat are identified under this category. At the same time, Kerala is found to be doing relatively well with regard to early feeding practices as well as reduction in malnourishment. Tamil Nadu has also performed well in making available diversified food to infants and children in the early ages. However, the reduction in malnutrition does not appropriately match with the prevalence of anaemia, stunting and being underweight. The relatively better position with regard to MDD and MAD in Tamil Nadu may be attributed to higher food subsidies and community mobilisation for organic food farming. However, the higher incidence of child malnutrition could be due to the higher incidence of anaemia among women as well as less exclusive breastfeeding. Therefore, inadequacies in diet should be addressed both for the mother and child.

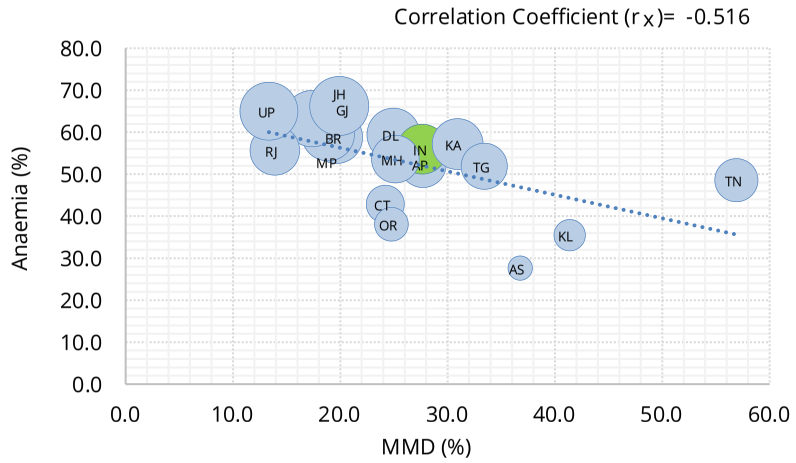
3.8 Malnutrition Among Adolescents

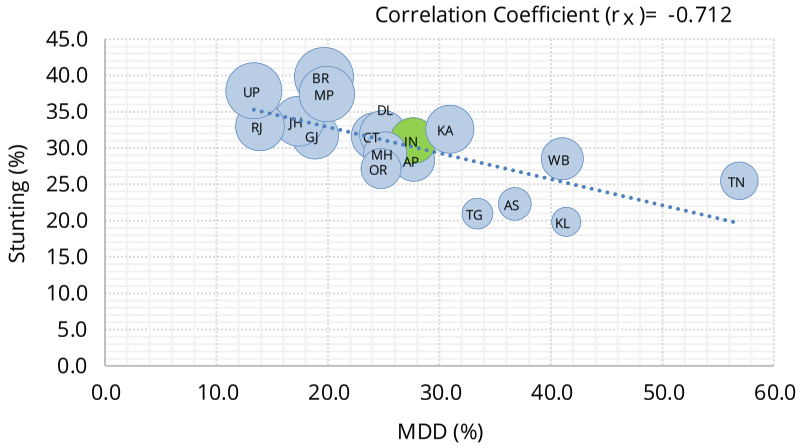
3.8.1 Anaemia among adolescent girls

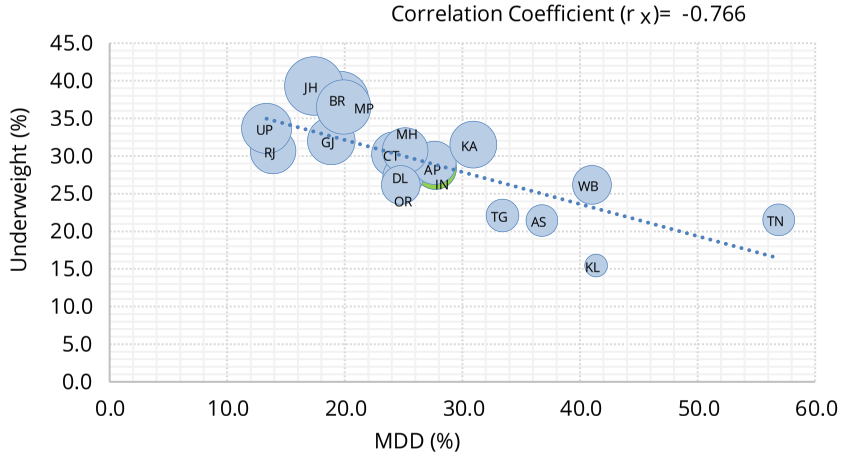
Anaemia among women has remained a pertinent public health concern in the country. Globally, India has persistently shared the largest burden of anaemia, along with sub-Saharan African countries (Nguyen et al., 2018; WHO, 2015; 2013). Several initiatives have been taken by the government to minimise the prevalence of anaemia in the country. It started with the National Anaemia Prophylaxis Programme (NAPP) in 1971 with a particular focus on pregnant and lactating women. This programme was however renamed as the National Nutritional Anaemia Control Programme (NNACP) in 1991 with an enlarged focus on women of reproductive ages and pre-school children. A provision for distribution of iron and folic acid (IFA) tablets and syrups was warranted under this programme to safeguard women and children from anaemia and other morbidities. With the inception of the National Nutrition Policy (1993) and National Plan of Action on Nutrition (1995), intensive approaches were adopted to combat micro-nutrient deficiencies among women of reproductive age and children. Despite these efforts, the prevalence of anaemia remained one of the highest in the world in India. More than one in every two women was reported anaemic during 2005-06 (IIPS and Marco International, 2007). The National Nutrition Mission in the name of Poshan Abhiyan envisages bringing down anaemia among children and adolescents, especially from the most disadvantaged and vulnerable sections of the country. The most vulnerable group susceptible to anaemia is adolescent girls belonging to rural and poor urban settings. The chances of occurrence of anaemia in this age group are high because of the initiation of menstruation and other physical, social and behavioural changes.

This study reveals that more than half of the adolescents in India were anaemic in 2015-16. Though the prevalence of anaemia has decreased in the last decade, the quantum of decline is low (about 2%). Also, the level of anaemia among urban girls offered no significant change in the past one decade (Figure 3.21). In contrast, anaemia among adolescents from rural areas declined by 2.5 percentage points over the last two surveys. It was 57.2 per cent in 2005-06, which decreased to 54.7 in 2015-16. As is evident, across all

Figure 3.19: Association Between Minimum Dietary Diversity and Child Anaemia, Stunting and Being Underweight in Urban India, 2015-16

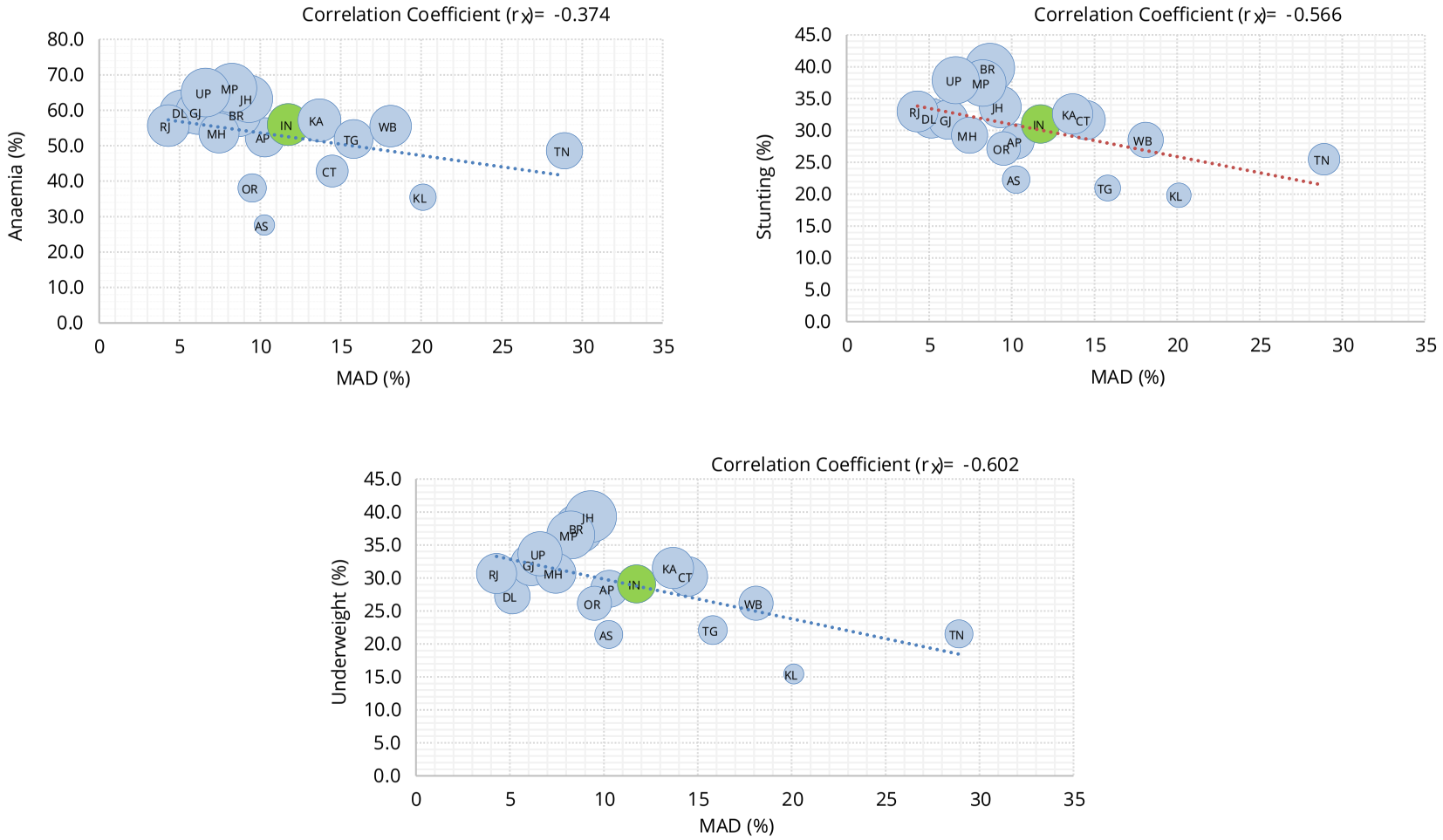






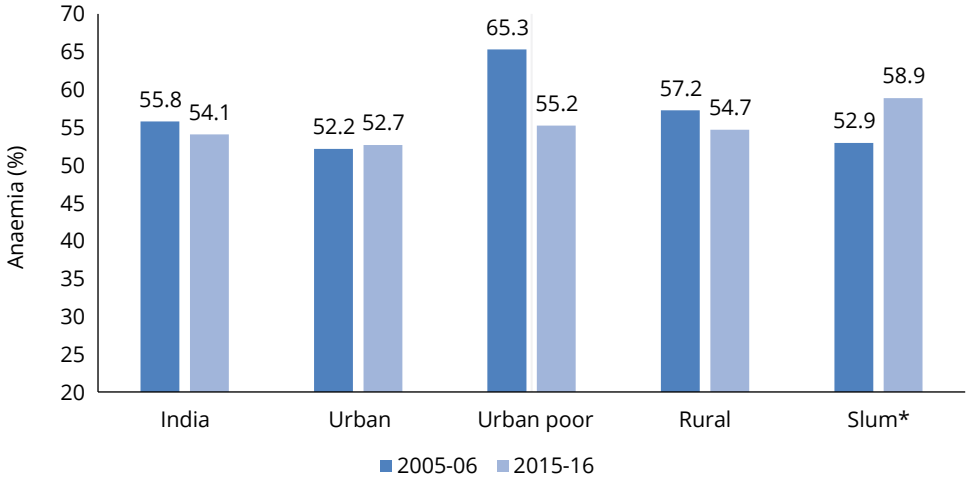
Note: MDD= Minimum Dietary Diversity.
Source: Estimated from NFHS-4, 2015-16

Figure 3.20: Association Between Minimum Acceptable Diet and Child Anaemia, Stunting and Being Underweight in Urban India, 2015-16



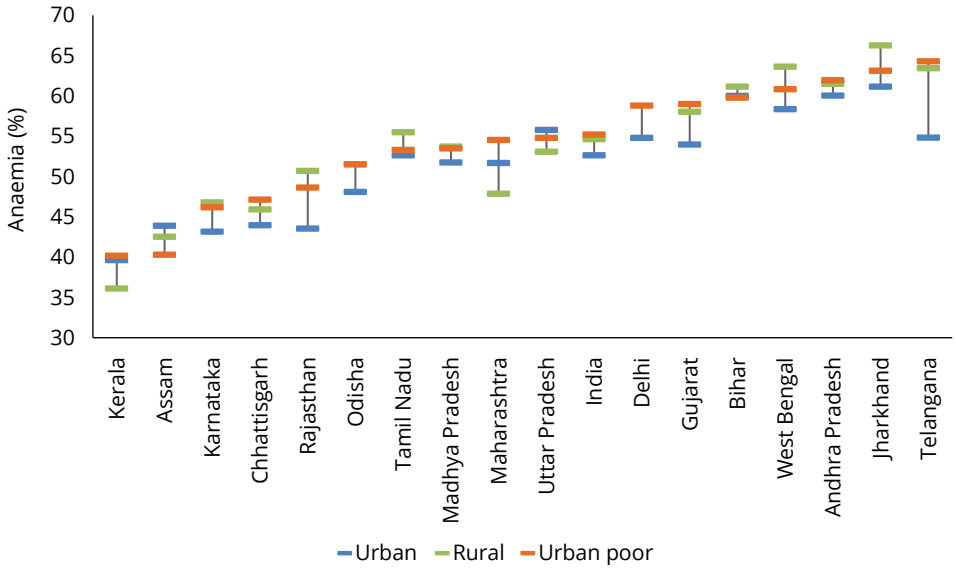
Note: MAD= Minimum Acceptable Diet.
Source: Estimated from NFHS-4, 2015-16

Figure 3.21: Variations in Anaemia Among Adolescent Girls (15-19 years) in India During 2005-06 and 2015-16



Note: * = Information from Slum is based only on the eight million-plus cities.
Source: Computed from NFHS-4, 2015-16

Figure 3.22: Prevalence of Anaemia Among Adolescent Girls (15-19 years) in the Larger Indian States, 2015-16



Source: Computed from NFHS-4, 2015-16

groups and in both the surveys, more than half of the adolescent girls were still suffering from anaemia. In 2005-06, the prevalence was highest among adolescents in poor urban settings, where every one-third of five adolescents was reported to be anaemic. Interestingly, anaemia among adolescents from urban poor households has registered the highest decline of about 10 per cent points—from a high of 65.3 per cent in 2005-06 to 55.2 per cent in 2015-16. Contrary to this, adolescent girls residing in slum areas of the eight million-plus cities of India recorded an increase of 6 percentage points—from 52.9 per cent in 2005-06 to 58.9 per cent in 2015-16. The empirical underpinning suggests that the prevalence of anaemia has notably increased both in children aged 6-59 months, as well as in adolescent girls aged 15--19 years in the past decade in the eight million-plus cities.

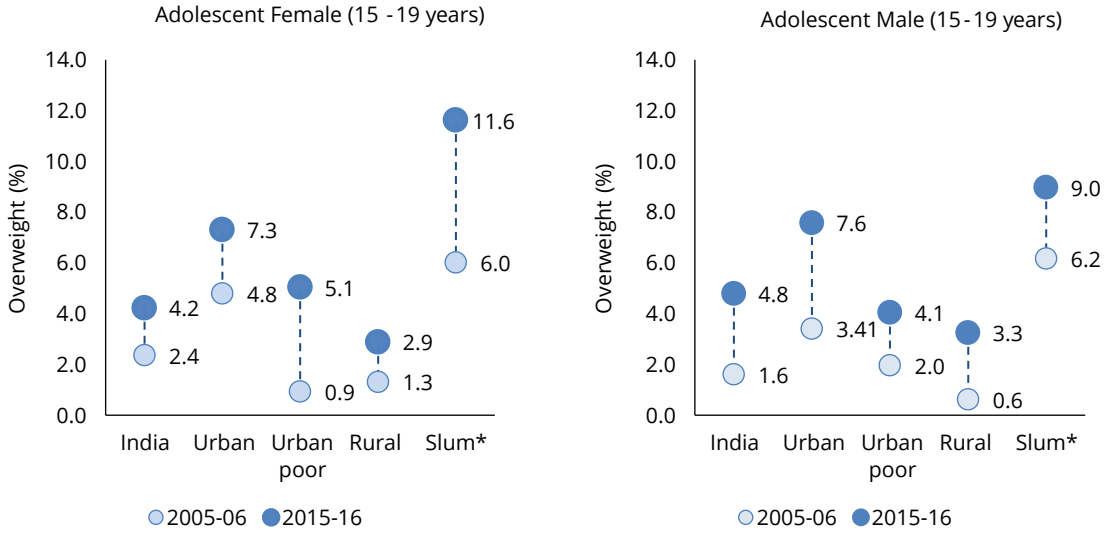
State-level analyses in adolescent anaemia show that there is a significant variation in the incidences of anaemia in both urban and rural areas. States like Telangana, Jharkhand, Andhra Pradesh, West Bengal and Bihar have shown a higher prevalence among adolescents aged 15-19 years. It was equally high among adolescents from rural as well as urban settings, where every one-third of five adolescent girls were anaemic. However, among the selected states, Kerala reported the lowest prevalence of anaemia among adolescent girls. Among urban poor adolescent girls aged 15-19 years, it is highest in Telangana followed by Jharkhand and Andhra Pradesh. Contrary to this, the prevalence of anaemia among urban poor adolescents was lowest in Kerala and Assam. It is worth noting that except for Assam and Uttar Pradesh, every state reported a higher prevalence of anaemia among adolescents belonging to poor urban settings compared to the urban average. Similarly, compared to their rural counterparts, adolescents belonging to urban poor households in Maharashtra, Uttar Pradesh, Chhattisgarh and Kerala have a higher level of anaemia.

3.8.2 Being overweight among adolescents

The risk of obesity has increased manifold among urban inhabitants over the past few decades in the world (WHO, 2005). It has increased not only among socio-economically affluent families but also the weaker sections of urban society. The urban poor in many developing countries are burdened not only with undernutrition due to inadequate diet but a poor living environment as well (Hawkes, 2006). Like many developing countries, the prevalence of obesity has also increased in urban India (IIPS and ICF, 2017). It has increased equally among adolescent girls and boys over the last decade, as shown in Figure 3.23. The prevalence of the condition of being overweight has increased in both adolescent boys and girls aged 15-19 years in all groups between 2005-06 and 2015-16. As compared to adolescent boys, adolescent girls reported a higher prevalence of being overweight in 2005-06. This has systematically increased over ten years, accounting for a higher obesity in adolescent males than females in 2015-16.

Among adolescent girls, obesity has nearly doubled during the past decade, while among adolescent boys it has tripled in the same period. The urban children of either sex have a higher prevalence of being overweight than their rural counterparts in both the survey rounds, where obesity has increased by three times among adolescent boys aged 15-19 years. It is surprising to note that nearly 11.6 per cent adolescent girls living in slums of the eight million-plus cites are overweight, whereas this figure is slightly lower in adolescent boys (about 9.0%). In addition to this, the condition of obesity has shown a substantial increase among adolescent girls and boys living in poor urban households as well. For both sections it has increased by five times during the past one decade.

Figure 3.23: Variation in Prevalence of Overweight Condition Among Adolescent Males and Females (15-19 years) in India During 2005-06 and 2015-16



Note: * = Information from Slum is based only on the eight million-plus cities.
Source: Computed from NFHS-4, 2015-16

3.9 Macro Level Analysis

The cross-sectional analysis carried out in the previous sections showed a positive association between child malnourishment and woman's malnutrition, especially the incidence of underweight among mothers. It further yielded a significant positive correlation between child malnourishment and early childhood feeding practices and childhood morbidities. However, the assessment made on the recent NFHS round (2015-16) substantiated that a significant negative association between stunting and underweight with the coverage of safely managed water attempted in the chapter on WASH. These factors, however, are not sufficient to capture variability in the level of malnutrition among the children. Therefore, a set of 12 distal variables have been compiled across four cross-sectional time points (1992-1993, 1998-1999, 2005-2006 and 2015-2016) to understand important determining factors of child malnutrition. These factors include three demographic and eight socio-economic factors in addition to one programmatic factor. Further, to establish the causal relationship between child malnutrition and these distal factors, both child stunting and underweight have been considered in this are available in NFHS-1 for children aged below 48 months, while in NFHS-2, it was collected for children below 36 months, whereas in NFHS-3 and NFHS-4, the information on stunting and wasting was collected for children aged below 60 months. Thus, to maintain parity in the analysis, stunting and underweight have been considered for children below age 36 months. Also, seven pooled regressions have been worked out on both the measures of malnutrition.

The first model in Table 3.1 shows an unadjusted effect of demographic variables, namely TFR, SRB and modern contraceptive use on childhood stunting in urban areas of UNICEF intervention states and Delhi. Conspicuously, fertility is positively related to stunting. Evidently, a unit increase in the level of fertility could lead to a 10.7 unit increase in the level of stunting. A similar finding is also noticed in Table 3.2, where a unit

Table 3.1: Pooled Panel Regression Estimates: Effects of Demographic, Socio-economic and Programme Factors on Stunting Among Children Aged Below 3 Years

Predictor Variables	Model-I	Model-II	Model-III	Model-IV	Model-V	Model-VI	Model-VII
Demographic Indicators							
Sex ratio at birth	0.008						0.007
Total fertility rate	10.681***						10.581***
Modern contraceptive use	-0.023	-0.033					0.051
Socio-economic Status Indicators							
Female age at marriage					-0.954*	-0.905**	-0.272
Mean year of schooling		-1.350***			0.659	0.890	0.312
Logarithm of NSDP			0.772	-2.752***	-2.875**	-0.301	2.111
Female workforce participation rate		-0.539***			-0.725***	-0.497**	-0.171
Poverty ratio			0.138**			0.114	0.014
Net migration rate				0.021*	0.014	-0.008	0.012
Urbanisation			0.093**	0.108	0.084	0.098	0.003
Full immunisation			-0.277***			-0.205***	-0.145***
Programme Factors Indicator							
Public health expenditure			-0.001***			-0.001***	-0.001***
Constant	3.141	53.886***	37.220**	57.587	83.298***	61.945***	-2.726
Observation (n)	57	57	54	56	56	53	53
Wald chi2	65.58	26.94	181.79	72.32	59.96	272.08	749.7
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: Level of Significance: *p<0.10; **p<0.05; ***p<0.01.
#: Sex ratio at birth (SRB) = (number of female births/number of male births) *1000.

increase in TFR attributes to a 13.3 unit increase in childhood stunting. Surprisingly, SRB is also positively related to both childhood stunting as well as underweight. However, the magnitude of the relationship is very weak. For example, every unit increase in SRB could yield an insignificant increase of 0.003 units in stunting and 0.02 unit in being underweight among children. Besides, female use of modern contraception is also negatively associated with both childhood stunting and being underweight.

The regression coefficients for the variables on female social status included in Model-2 demonstrated a significantly negative association with childhood stunting and being underweight. A unit increase in the mean year of schooling in females could yield a 1.4 unit decline in stunting and 3.5 unit decline in being underweight. Similarly, female workforce participation posited a significant negative relationship with stunting and underweight children. For a unit increase in the quantum of female workforce participation, there would be a 0.54 unit decline in stunting and 0.61 unit decline in being underweight. Expectedly, the use of modern contraception has a negative relationship with childhood stunting and underweight children. But, for both the present analyses, it has statistically no significant relation with childhood malnutrition.

The third model examines the causal relation among stunting (Table 3.1) and an underweight child (Table-3.2) and a set of three development indicators plus a programme and service factor respectively. Of these variables, full immunisation among children exhibited a significant negative association with childhood stunting and being underweight. For every unit increase in the level of child immunisation, there would be a corresponding 0.28 unit decrease in stunting and 0.18 unit decline in being underweight. At the same time, poverty ratio and urbanisation manifested a significant positive relationship between stunting and underweight children. A unit increase in poverty ratio could yield a 0.14 unit increase in child stunting and 0.35 unit increase in underweight children.

Table 3.2: Pooled Panel Regression Estimates: Effects of Demographic, Socio-economic and Programme Factors on Being Underweight Among Children Aged Below 3 Years

Predictor Variables	Model-I	Model-II	Model-III	Model-IV	Model-V	Model-VI	Model-VII
Demographic Indicators							
Sex ratio at birth	0.022**						0.016***
Total fertility rate	13.334***						6.170*
Modern contraceptive use	-0.013	-0.087					-0.096
Socioeconomic Status Indicators							
Female age at marriage					-0.802*	-0.602	-0.263
Mean year of schooling		-3.458***			-1.056	-0.790	-0.974
Logarithm of NSDP			-1.331	-5.013***	-3.321***	-1.420	0.142
Female workforce participation rate		-0.606***			-1.002***	-0.719***	-0.604**
Poverty ratio			0.349***			0.289***	0.240***
Net migration rate				0.078*	-0.039***	-0.068**	-0.050***
Urbanisation			0.134**	-0.024*	0.094	0.197*	0.131
Full immunisation			-0.184***			-0.061	-0.030
Programme Factors Indicator							
Public health expenditure			-0.0006			-0.0005	-0.0005
Constant	-15.288	72.223***	42.289***	79.688***	100.190***	63.657***	10.889
Observation (n)	56	56	54	55	55	52	52
Wald chi2	78.58	103.76	181.79	24.92	173.54	425.8	1441.58
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: Level of Significance: *p<0.10; **p<0.05; ***p<0.01.
#: Sex ratio at birth (SRB) = (number of female births/number of male births) *1000.

The analysis in the fourth model (Table 3.1 and Table 3.2) estimates the impact of urban development and migration on the prevalence of childhood stunting and an underweight child. The results of pooled regression revealed that a unit increase in per capita NSDP would yield a significant 2.8 unit decline in stunting and 5.0 unit decline in underweight children.

It is significant that childhood stunting and being underweight revealed a different relationship with e levels of urbanisation. With the increase in level of urbanisation, underweight children would observe a decline. At the same time, childhood stunting would increase with every single unit increase in urbanisation. This may be because the chronic and acute nature of being underweight can be positively addressed and diminished due to urban health advantages. However, child stunting being due to chronic malnutrition may not show such a relationship with urbanisation. The analysis further suggests that with a unit increase in net migration, the levels of both stunting and being underweight among children will positively increase by 0.021 and 0.078 units, respectively.

The indicators of urban development in the fifth model when controlled with the indicators of social development of women in urban areas show interesting findings which have been taken up in the fifth model. This model demonstrates that per capita NSDP, female WPR and female age at marriage have a significant negative relationship with childhood stunting and incidence of underweight among children. The result clearly shows that with a unit increase in the female age at marriage, childhood stunting will decline by 0.95 unit and suffering underweight will decrease by 0.80 units. Similarly, a unit change in female WPR would bring a 0.73 and 1.0 unit decline in stunting and being underweight respectively.

The sixth and seventh regression models are comprehensive models where a causal relation between urban childhood stunting and underweight children were examined under the controlled effect of demographic variables. The results from the sixth model indicate that female WPR and child immunisation have a significant negative influence on both child stunting and underweight children. Besides, female age at marriage also has a notable adverse effect on childhood stunting (Table-3.1). At the same time, development factors such as per capita NSDP, poverty ratio, net migration and urbanisation seem to have a significant impact on children being underweight (Table 3.2). The seventh and final model showed that child immunisation is negatively associated with childhood stunting but positively with TFR and SRB. On the other hand, children being underweight is majorly associated with e development factors. The statistical inferences drawn from this analysis suggest two approaches towards the nutritional well-being of urban children. The first is related to increasing the awareness of mothers and improvement in the level of early childhood care (like complete immunisation). The second approach includes reduction of poverty, which could only happen with inclusive policies in place.

3.10 Conclusion and Policy Implications

A situational assessment of indicators of malnutrition at various levels of disaggregation revealed several challenges with regard to children and adolescents in urban India. A list of questions related to the issue remained unaddressed due to the absence of data at various necessary levels of disaggregation, especially concerning the nutritional status of children aged 6-14 years. In essence, a dearth of information on nutritional deficiencies in this particular age group stands in the way of policy making and coping strategies. Therefore, the need of the hour is to explore the range of nutritional issues in this age group through rigorous research. Early childhood nutritional deprivation for the majority of school-going children becomes an impediment to their cognitive and learning growth. The following section concludes and outlines the major recommendations to improve the nutrition status of children.

Nutrition and contamination in the feeding environment: Given the recurring association between malnutrition and infant and young child feeding (IYCF) practices, micro- and macro-nutritional intakes in early childhood, and a mother's nutritional well-being, a comprehensive framework is needed with regard to scaling up of nutrition in India, especially among the marginalised sections of society. This study reveals that reducing stunting and being underweight among children, both of which are manifestations of malnutrition, can be possible pathways for reducing under-5 deaths among the urban poor. It has been observed that malnutrition can significantly be reduced when a smaller number of children suffer from water-borne diseases (diarrhoea). Also, it is a well-established fact that frequent or chronic diarrhoea resulting from use of contaminated water and an unhealthy environment, under the cumulative effect of poverty leads to impeded growth in height and

weight corresponding to the age of children. The incidence of diarrhoea can also be minimised by adoption of safe hygienic practices by mothers at the time of breastfeeding as well as during complementary feeding practices. Therefore, besides direct suggestive policies on scaling up of nutrition, awareness regarding hygienic practices must be promoted among mothers or caregivers living in poor urban settings. Besides, a proper monitoring scheme is essential in the form of continuum of care which must start with registration of birth till the time a child reaches six years of age. Also, outreach of comprehensive knowledge of food protection and the need for micro- and macro-nutrition is important among adolescents.

Intergenerational transfer of malnutrition: The study indicates the coexistence of maternal and childhood undernutrition in several poor performing states. The depth of vulnerability was higher in urban areas of the Empowered Action Group (EAG) states. A mother's malnutrition penetrates into her children's well-being in the form of various adversities. Therefore, the intergenerational transfer of malnourishment from mother to child must be addressed in urban India, especially among poor households where the incidence is high. Child marriage and early childbearing, a larger number of births, and the small interval between two births are the major reasons that lead to malnourishment in women. Besides, there are several dogmatic, cultural and social practices which lead to biased eating practices in a household, affecting the dietary pattern of females which bars them from eating much needed micro- and macro-nutrients. Therefore, it is important that social awareness through community participation be promoted to educate women about the cultural and behavioural inhibitions to their nutritional well-being. The government of India has launched several programmes to understand the continuum of care approach towards Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A - 2013), which focuses majorly on the most disadvantaged and vulnerable sections of society. However, besides lack of comprehensive intervention and guidelines to increase iron and vitamins in adult women, the level of drop-out in the intake of folic acid is extremely high. At the same time, the reasons for such drop-outs have not been addressed. Therefore, dedicated attention must be provided to prevent higher drop-out cases. This may help to overcome the overarching problem of anaemia among women and related deficiencies in children.

Social and behavioural change in communication: The low level of malnutrition is reinforced by illiteracy, an inadequate housing environment, sanitation and water. Thus, to overcome the issues of severe malnutrition among underprivileged sections, an integrated approach in various programmatic and strategic interventions is the need of the hour. A concerted and integrated approach is needed among the various stakeholders working at different levels in the nutrition sector. Many of the poor illiterate families are unaware of the measures to be adopted in cases of chronic diarrhoea and thus fall in the trap of both acute and chronic malnutrition. Also, even now a very low percentage of the urban poor are aware about the safety standards for water and sanitation. The two significant challenges usually faced by vulnerable sections of society are lack of financial resources and knowledge preventive methods against malnutrition.

Since the First Five Year Plan period, the government of India has acted on two coherent strategies to overcome the challenges of malnutrition in the country: first, direct interventions in reducing poverty through subsidised arrangements for people of marginalised communities; and second, by creating a knowledge base for making them self-reliant towards scaling up their nutritional intake. Notably, a series of programmatic interventions have been launched to achieve maximum advantage from the long-term investments in malnutrition in India. These are: Integrated Child Development Services (ICDS), Special Nutrition Programme (SNP), Balwadi Nutrition Programme (BNP), Wheat-based Supplementary Nutrition Programme (WNP), Mid-Day Meal Programme (MDM), Nutritional Anaemia Prophylaxis Programme, Goitre Control Programme, and Eat Right India. The primary concern of these programmes was to reduce the burden of both micro- and macro-malnutrition among children and adolescents in India, especially from the marginalised sections. These programmatic interventions have led to an impressive reduction in the incidence of malnutrition. Yet, the decline was not uniform in all the indicators of malnutrition and across the different states. There is still a high disparity in the incidence of malnutrition in India. In order to address this, the government adopted a target-based approach in the form of Poshan Abhiyan in 2018. The programme attempts to curb malnutrition by 6 per cent and anaemia by 9 per cent among children and adolescents every three years. The achievement of such ambitious targets is possible only though a comprehensive and inclusive mechanism of social and behavioural change about health and hygiene among the poor at the household and community levels. A unified effort should be undertaken by various stakeholders to create awareness among the masses of the need for preparedness and coping mechanisms for timely detection of malnourishment in early childhood.

Mass awareness regarding irreversible outcomes of malnutrition should be promoted through proper campaigns and media to increase the outreach of knowledge.

Strengthening of institutional capacity: The proposed targets underlined in Poshan Abhiyan demand a coherent and concerted effort across governmental and non-governmental agencies, academia and various stakeholders. Also, the shortfall in the timely assessment of indicators of undernutrition poses serious challenges. In this regard, the government has designed incentive-based approaches to facilitate the digital assessment of malnutrition by grassroots workers. However, lack of manuals complying with standard growth measurement, an inadequate knowledge base and technological incompetence are serious challenges before the government. Also, lack of integration in approach among the state and central agencies leads to diversification in priorities and strategies and hence the allocation of financial resources.

Therefore, for complete elimination of undernutrition in India, especially among the poor and vulnerable sections of society, a series of concerted programmatic interventions are needed at various levels of disaggregation. As brought out in this study, a notable disparity prevails in the condition of malnutrition within and between the states. This needs serious policy attention especially for poor urban households in the larger states. However, the current programmes do not institutionalise community participation and an incentive-based mechanism for promotion of good practices through peer learning among community/self-help groups working for the urban poor. A holistic understanding of the negative consequences of malnutrition is important for all stakeholders to address the status of nutritional deprivation in every stage of a mother's life. It is worthwhile remembering that a mother's nutritional status impacts her own as well as her children's nutritional well-being. In essence, it becomes necessary to categorically address various barriers to healthy life. This starts with early pregnancy care and continues to post-partem care, inculcating in the mother the good practices of exclusive breastfeeding starting from the birth of the child to early feeding practices. Strategic programmes must be designed and implemented for better outreach of comprehensive knowledge of self-care of the mother. This can surely be promoted through community participation and media outreach.

4

Water, Sanitation and Hygiene Facilities

4.1 Introduction

India is committed to ensuring equitable and affordable access to water, sanitation and hygiene (WASH) facilities to its people by 2030 (World Health Organization, 2015). The country strongly believes that attainment of WASH targets as underlined in the sixth goal of UN's Sustainable Development Goals (SDG) could positively reap the benefits of several allied goals such as 'No poverty' (goal-1), 'Zero hunger' (goal-2), 'Good health and well-being' (goal-3), and 'Sustainable cities and communities' (goal-11). According to WHO, every dollar investment on providing clean water and sanitation to citizens leads to a return of 5.5 dollars in a country (WHO, 2013). The return for South Asia alone amounts to 4.6 dollars for every single dollar investment in water and sanitation. UNICEF and WHO together have devised several strategic plans to assist candidate countries towards accomplishment of WASH goals with special focus on vulnerable households, children and adolescents living in uncongenial settings (WHO and UNICEF, 2015).

Lack of water, sanitation and hygiene are major concerns of several developing countries, including India. Particularly where the young are concerned, studies have identified improvement of water and sanitation infrastructure as indispensable pathways to enhancing good health and survival of children and adolescents in any country. Nearly 2.2 million child deaths could be averted in developing countries if households had infrastructure complying with the goals of WASH (Guntur, 2011). Inadequate access to WASH is accountable for 88 per cent of childhood deaths in the world (Anan, 2003). Unimproved sanitation and water increase the risk of multifarious water-borne and vector-borne diseases among children and adolescents. Diarrhoea, being a water-borne disease is a highly recognised cause of child mortality. Besides ensuring good health and survival, access to WASH facilities is associated with the social and economic progress of any society and has a high correlation with the incidence of crime (UNICEF, 2013). Absence of toilet facilities within a premise firstly affects the dignity of women and girls, raises the probability of sexual harassment and even rape. In addition, a large number of girls drop out from schools at puberty due to the absence of safe and secured sanitation facilities within the school premises.

WASH integrates crucial linkages, not only among SDGs priorities but also with holistic human development and economic growth of a country. UNICEF, in alliance with WHO, is attempting to address and overcome WASH related challenges among vulnerable sections of societies, especially among children and adolescents in developing countries and has devised the Joint Monitoring Programme (JMP) as an instrument to assess the progress of a nation on a global scale.

The Indian government has been persistently attempting to reach the benchmark of improved sanitation in urban India and introduced the National Urban Sanitation Policy (2008). Creation and maintenance of toilets has been an integral component of various national level programmes and missions. Concerted efforts have been made under the ambit of Mega City Schemes (1992-1997), National Slum Development Programme

(1997), Valmiki Ambedkar Awas Yojana (VAMBAY, 2001), Jawaharlal Nehru Urban Renewal Mission (JNNURM, 2005), Rajiv Awas Yojana (RAY, 2015) to address critical challenges of water and sanitation in urban India, especially with regard to the urban poor. Currently, Swachh Bharat Mission (SBM), Nirmal Shahars, and Atal Mission for Rejuvenation of Urban Transformation (AMRUT) are ongoing schemes which address these issues in urban areas. Despite these concerted efforts, several studies have shown that people living in poor urban settings and slums still suffer from inadequate access to water, sanitation and hygiene facilities (Bhagat, 2013; Chaplin, 2011; Kundu, 2009; Sclar, Garau and Carolini, 2005). In light of the above, this chapter attempts to address the gaps in the current access to WASH in urban areas of the country at various levels of disaggregation, with special focus on the urban poor.

4.2 Data and Methods

It has been observed in all routine surveys except the Demographic Health Survey (DHS) that in a majority of the developing countries the mechanism of monitoring handwashing practices was nearly absent. DHS provides important information on various indicators of WASH in all its rounds of survey. Thus, the Indian DHS, also known as National Family Health Survey (NFHS), has been used in this study for making a situational assessment of WASH over time and space. Needless to say, most of the large-scale surveys in India also do not capture menstrual health hygiene among girls in their prime age (10-14 years). The current study has tried to address these gaps to the extent possible using unit level data from NFHS.

In this section, access to WASH facilities in urban India is analysed in two sub-sections, namely, WASH and menstruation hygiene. Availability and accessibility of WASH has been computed as per the definition adopted by the WHO-UNICEF Joint Monitoring Programme for water supply, sanitation, access to safe drinking water and hand washing (WHO and UNICEF, 2008). Levels of disaggregation in this study are rural and urban (at national level), macro regions (in the absence of adequate sample size at state level), states where UNICEF has interventions, the urban poor, and both slum and non-slum dwellers. Importantly, analysis for slums and non-slums is limited to eight cities namely Delhi, Chennai, Mumbai, Kolkata, Indore, Nagpur, Hyderabad and Meerut.

The analysis is based on the two waves of National Family Health Surveys (NFHS) where 1,09,041 and 6,01,509 households were surveyed in 2005-06 and 2015-16 respectively. In NFHS-4, a total of 209,807 households were surveyed from urban areas, out of which 85,267 belong to the urban poor. For the first time in NFHS, a separate wealth index has been created separately for rural and urban areas. Similar to other chapters in this study, the urban poor have been defined as those who are at the bottom two quintiles of the urban wealth index. The lowest two wealth quintiles constitute 40 per cent of the population

4.3 Utilisation of Basic Drinking Water

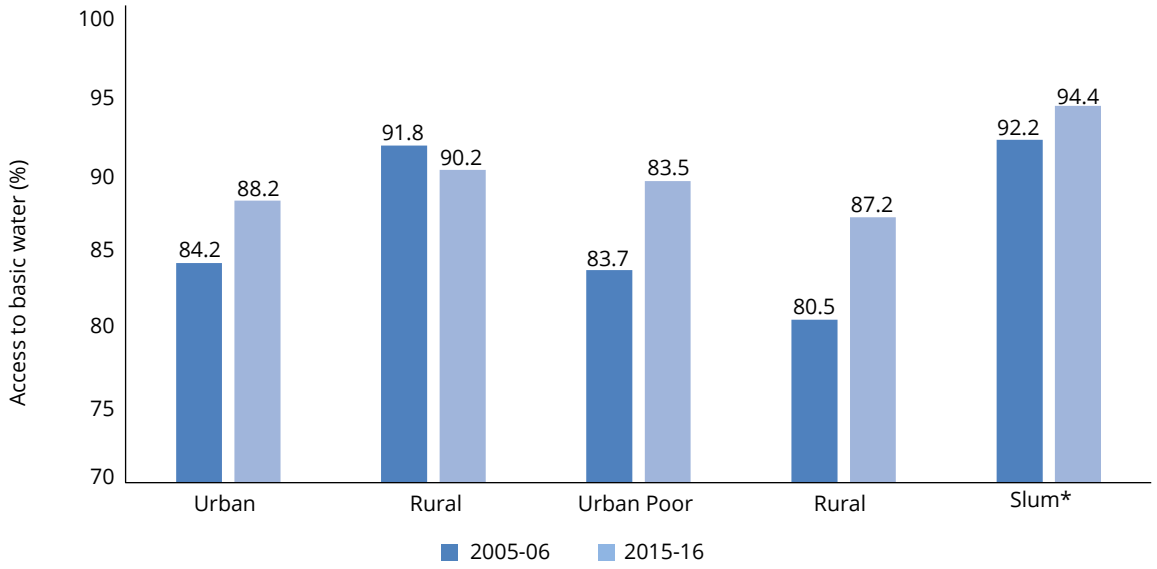
UNICEF and WHO under their Joint Monitoring Programme (JMP) define 'basic water' as: access to improved water sources such as piped water, public taps, stand pipes, tube wells, borewells, protected dug wells, rain water, and community reverse osmosis (RO) plants, as well as the time taken to fetch water to be less than 30 minutes.

About 9 out of 10 households in India utilised basic drinking water facilities in 2015-2016, registering an increase of four per cent from the national average of 2005-06 (IIPS and Marco International, 2007; IIPS and ICF, 2017). It is important to mention that an increase in coverage of water is observed mostly among the urban poor households and households in rural areas. The coverage of basic drinking water declined by 1.6 per cent in urban areas, perhaps due to the increase in usage of bottled water among the non-poor. Importantly, bottled water has come up as an important source of drinking water in the past two decades. However, the quality of bottled water remains uncertain. Thus, in many large-scale surveys it is reported under the unimproved source of water.

Access to basic water was higher at the national level than in rural India. This could be attributed to the high coverage of basic water that urban India occupies in all India. Decline in access to basic water in urban India could be attributed to the inclusion of 2,530 new census towns in 2011 where the situation was not good. The study reveals the fact that access to basic amenities including water facilities is much poorer in census

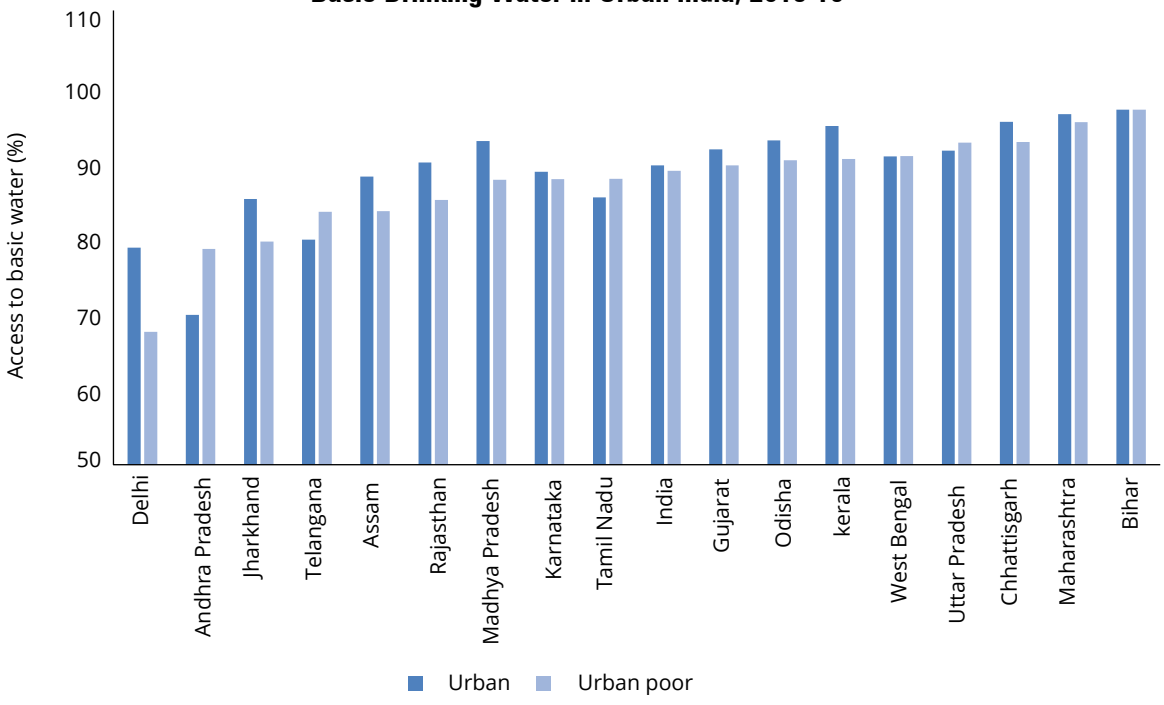
towns as compared to statutory towns (HSMI-HUDCO Chair — NIUA, 2017). Furthermore, several cities with more than one million population underwent expansion of their municipal limits to include pre-existing rural settlements. This explains the decline in the coverage of water in the last decade. Also, there has been a decline in access to water in urban areas with a concomitant improvement among the urban poor and marginal improvement in slums. Therefore, it would be important to focus strategies to improve coverage of water in peri-urban areas as well as in newly created urban centres classified as 'urban' by definition but still under rural administration. The analysis also demonstrated that coverage of basic water in slums of selected eight cities with more than one million population has marginally progressed between 2005-06 and 2015-16.

Figure 4.1: Change in the Coverage of Basic Drinking Water in India (in %), 2005-06 to2015-16



Note: * = The estimate for Slum is based on only the eight million-plus cities in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16.

Figure 4.2: State-wise Pattern of Households with Coverage of Basic Drinking Water in Urban India, 2015-16



Source: Computed from and NFHS-4, 2015-2016

A state level analysis exhibited that the coverage of basic water was least in urban households of Andhra Pradesh, while it was highest in Bihar and Maharashtra. Besides these two latter states, every 9 out of 10 urban households have coverage of basic water in Gujarat, Odisha, Kerala, West Bengal, Uttar Pradesh and Chhattisgarh. It is surprising to note that poor households in the national capital Delhi had the least coverage, where one in every three is deprived of basic water facilities. At the same time, more than 90 per cent of urban poor households in all states except for Delhi and Andhra Pradesh have access to basic water facilities.

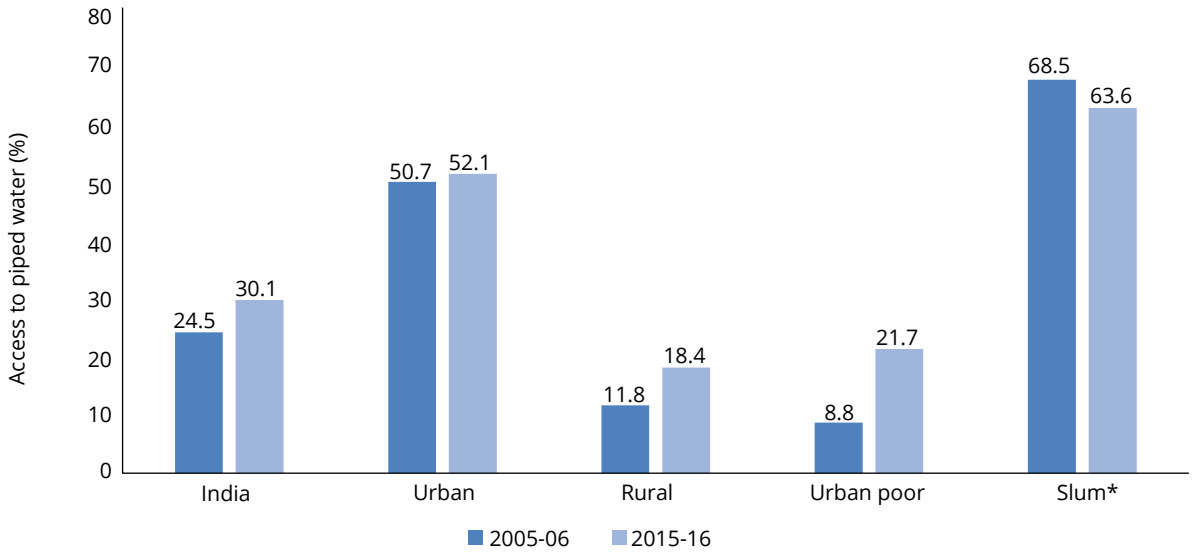
It may be further noted that urban poor households had higher access to basic water compared to the all-urban average in states like Telangana, Andhra Pradesh and Tamil Nadu. Additionally, the dwellings located in all-urban and urban poor settings in Bihar, Maharashtra, Uttar Pradesh, West Bengal and Chhattisgarh have a similar level of coverage of basic water. This may be because of the higher dependence of urban poor households on improved water sources such as closed public taps, stand pipes, tube wells, borewells, protected dug wells, and rain water which are easily available to households in urban poor settings.

4.3.1 Disparity in piped water in urban India

The previous section indicates that basic water has reached a majority of households in urban India. However, there is ample disparity in the coverage with regard to its individual components or means such as piped water. Conspicuously, there is a stark disparity in the coverage of piped water in the country and its urban areas, specifically among the urban poor households. Merely 30.1 per cent of the households in India have access to piped water (2015-16), which is slightly up from the estimated figure of 24.5 per cent in 2005-06. This change in access to piped water may be attributed to the significant rise in its coverage in rural households and among the urban poor.

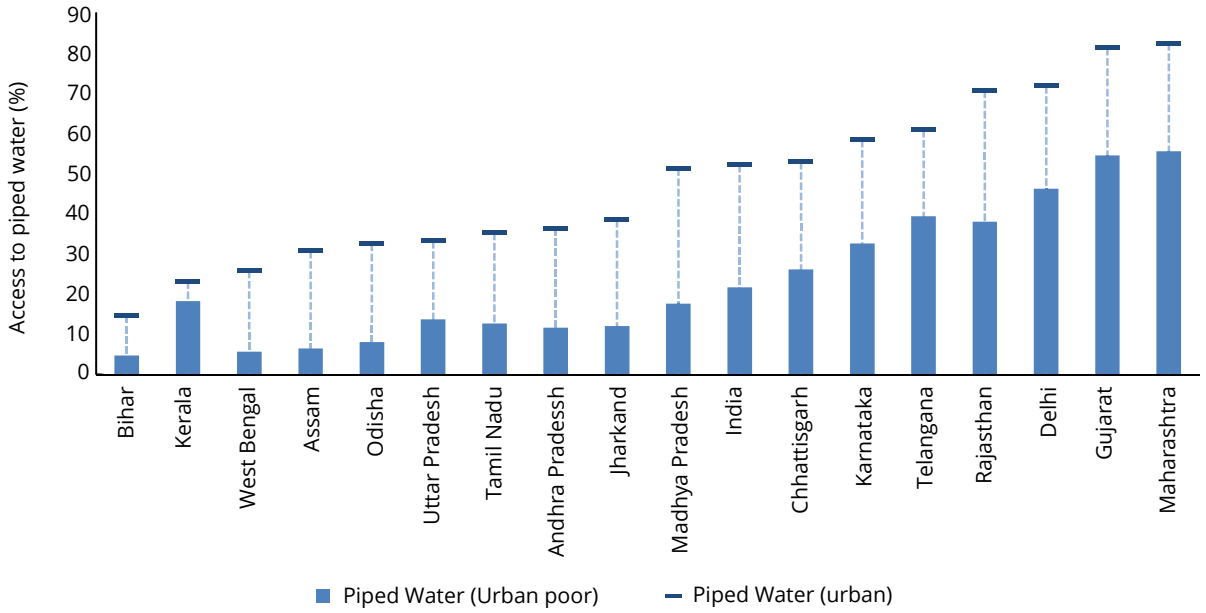
Figure 4.3 demonstrates the marginal improvement in coverage of piped water that was seen in urban areas in the past decade. Among urban poor households, access to piped water has remarkably increased from 8.8 per cent in 2005-06 to 21.7 per cent in 2015-16. However, access to piped water in slum areas in the selected eight million-plus cities has declined by 5 per cent during 2005-06 and 2015-16. It is interesting to note that access to piped water has improved among poor households in urban areas in comparison to the slums of the eight million-plus cities where the condition has worsened over the past decade. This indicates that the increase in access to piped water in urban India is chiefly because of its higher reach to urban poor dwellings and yards or plots.

Figure 4.3: Change in the Coverage of Piped Water in India (in %), 2005-06 to 2015-16



Note: Access to piped water includes piped connection to dwelling/yard/plot. * = The estimate for Slum is based on only the eight million-plus cities in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 4.4: State-wise Pattern of Households with Coverage of Piped Water in Urban India, 2015-16



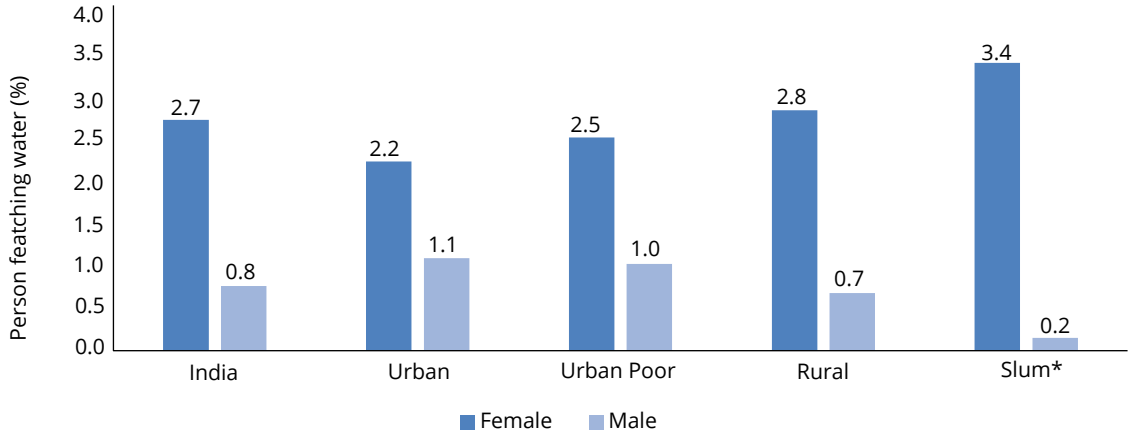
Note: Access to piped water includes piped connection to dwelling/yard/plot.
Source: Computed from NFHS-4, 2015-16.

Access to piped connections varies substantially across states in urban India, especially among urban poor households. Bihar, Kerala, West Bengal, Assam and Odisha are five major states that show the least coverage of piped water in urban areas. Less than one-third of urban households in Kerala have access to piped water. The lesser utilisation of piped water in Kerala is due to high reliance on ground water (Ramachandra et al., 2013; Kundu, 1996). However, the majority of the urban poor rely upon well water for drinking purposes. In contrast, Maharashtra, Gujarat and Delhi had a higher share of urban households with piped connections in the dwelling/yard/plot in 2015-16, though the connection to poor households and plots in urban areas was exceptionally low. Conspicuously, one in only 10 poor households belonging to urban areas of Bihar, West Bengal, Assam and Odisha have coverage of piped water in their dwelling/yard/plot. The situation of urban poor households is equally poor in states like Andhra Pradesh, Jharkhand, Uttar Pradesh, Tamil Nadu, Kerala and Madhya Pradesh, where just one in every five households has access to piped water in a dwelling/yard or plot. The urban poor belonging to Maharashtra and Gujarat, on the other hand, had a higher coverage with more than 50 per cent of the households having access to piped water.

4.3.2 Fetching water from distant sources

NFHS-4 (2015-16) records that nearly 80 per cent of women including children and adolescents were involved in fetching water from outside sources in the absence of water sources within premises (IIPS and ICF, 2017). The share of girls was relatively higher compared to boys in fetching water from distant sources. It was 2.7 per cent for girls below age 15 years compared to 0.8 per cent boys of the same age group. The involvement of girls was twice higher than boys among all-urban, urban poor and rural areas. Also, the involvement of girls in fetching water was reportedly highest among slums of the eight million-plus cities, while for boys it was the lowest. This points to the huge gender difference that exists among the rural, urban poor and slum dwellers in delegating responsibility for fetching water.

Figure 4.5: Children Aged Below 15 years Collecting Drinking Water from Outside Sources, 2015-16



Note: * = The estimate for Slum is based on only the eight million-plus cities.
Source: Computed from NFHS-4, 2015-16

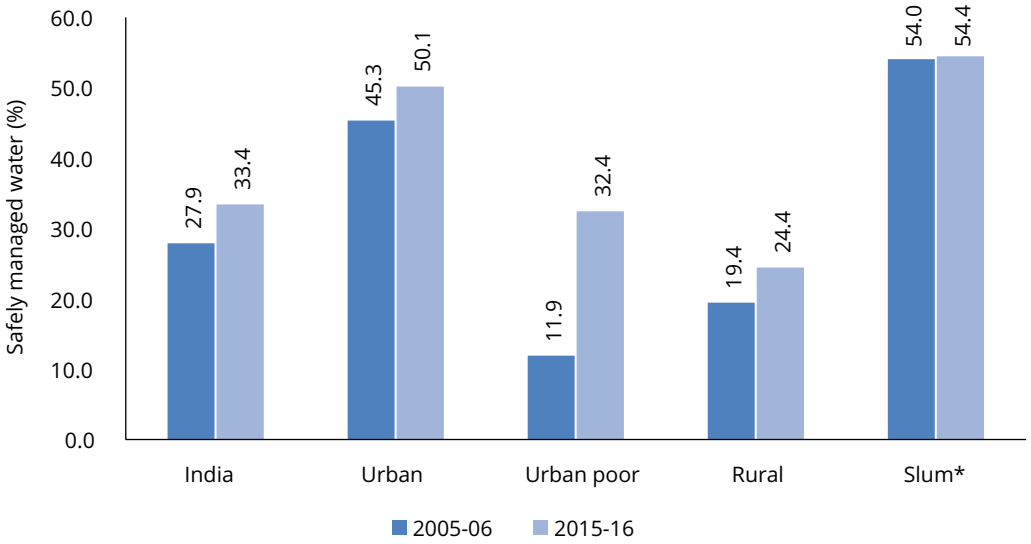
4.3.3 Utilisation of safely managed water

Safely managed water (SMW) mentioned as SDG target 6.1 is the prime achievement of the Joint Monitoring Programmes (JMP) ladder of UNICEF and WHO which specifies basic and improved drinking water. SGD 6.1 ensures equitable access to safe and affordable water for all. Studies suggest that the use of safely managed water can overcome problems of infection and mircobiological contamination responsible for various waterborne diseases (WHO, 2011). Regardless of the importance of SMW in day-to-day life, no studies have discussed issues and challenges associated with its dynamics in India at disaggregated levels.

The analysis carried out in this section shows that there was an improvement in access to SMW in the country over the past decade. However, the distribution of SMW is not equitable across levels of disaggregation. The adoption of best practices for managing water before utilisation has increased among both all-urban and urban poor in India, with the latter reporting a higher increase. The analysis shows that the use of SMW has improved in all groups except for slum areas of eight million-plus cities, where it has stagnated over time.

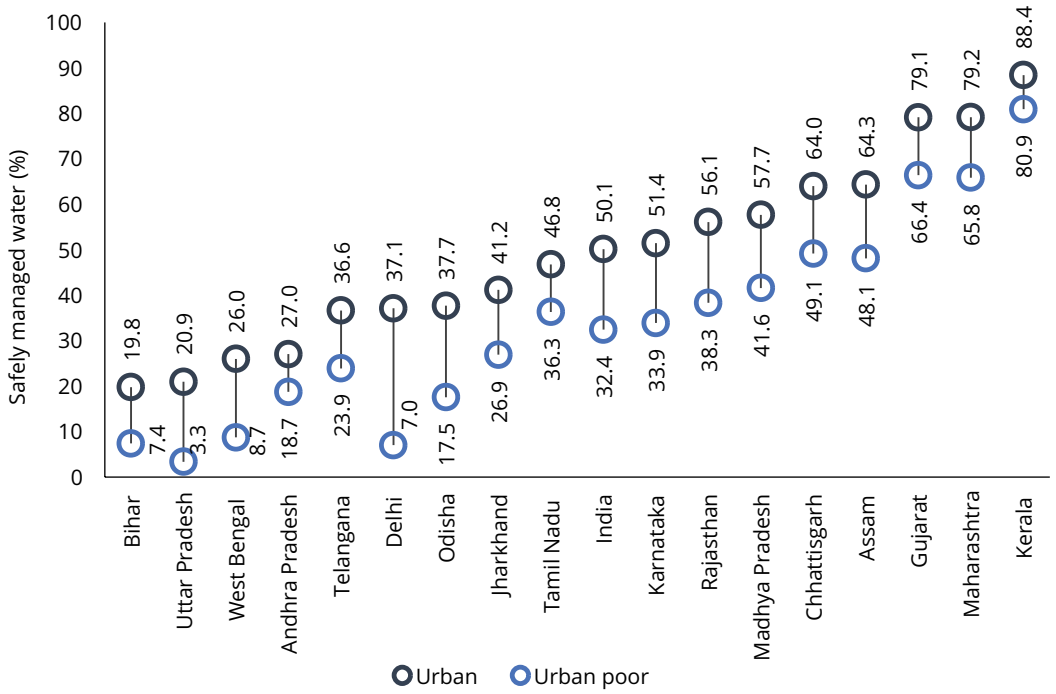
There is a significant disparity in access to SMW at the state levels in urban areas, specially among the urban

Figure 4.6: Change in Safely Managed Water in India, 2005-06 to 2015-16



Note: * The estimate for Slum is based on the eight million-plus cities in NFHS.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-2016

Figure 4.7:State-wise Percentage of Households Using Safely Managed Water in Urban India, 2015-16



Note: Safely managed water has been estimated from basic water which is treated before use.
Source: Computed from NFHS-4, 2015-16

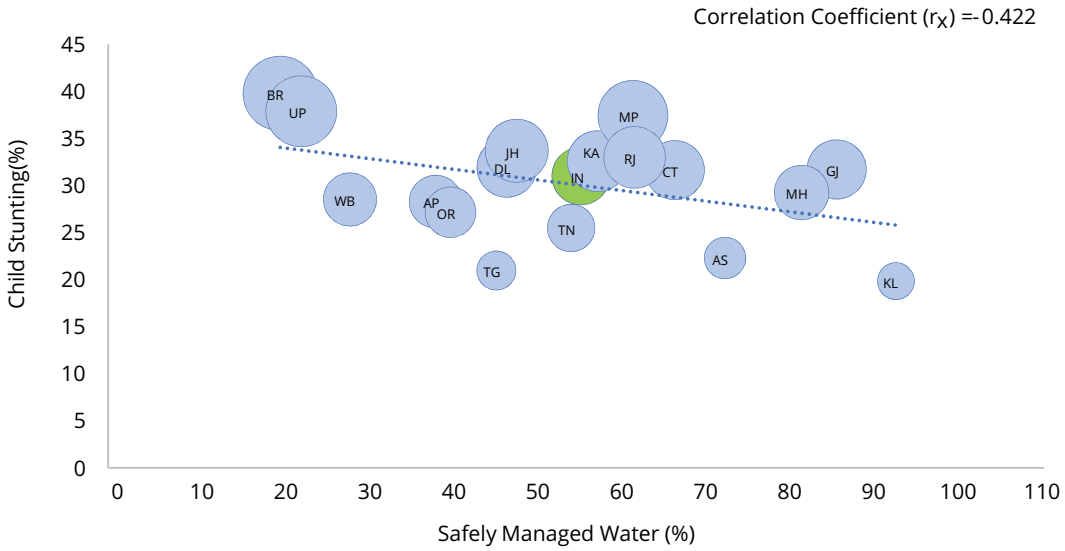
poor. At the national level, findings suggest that only one in every five poor urban households have access to SMW against three in every five in the all urban areas. In urban India, access to SMW ranges between a low of 20.2 per cent in Bihar to a much higher value of 92.6 per cent in Kerala. The overall situation of urban poor households is deplorable in the states of Bihar, Uttar Pradesh, West Bengal and the national capital region (NCR), Delhi, where less than one in every 10 households has access to SMW. The urban poor in states like Odisha, Andhra Pradesh and Telangana show an equally poor condition in SMW where nearly one in five households has access to SMW. On the other hand, Kerala, Gujarat and Maharashtra have performed exceptionally well in adopting best practices in managing water in urban areas as well as among the urban poor. However, there is a considerable gap in SMW between the all- urban and urban poor in all states, including Delhi.

4.3.4 Impact of safely managed water on health and nutrition

The HUNGaMA (Hunger and Malnutrition) report, which is a comprehensive report on hunger and malnutrition based on 100 focused districts reveals that nearly 66 per cent of children to women who have never been to school are stunted. Also, the prevalence of malnutrition is proportionately higher among those households which have no sanitation facility within their premises. The association exercise carried out in this section presents a significant correlation between SMW and acute and chronic health outcomes among children aged below 5 years. Four bubble plots have been plotted between safely managed water (SMW) and child stunting, underweight, diarrhoea and anaemia in urban India. It is evident from the plot that stunting among under-5 children is negatively associated (correlation coefficient (rx) = -0.422) with safely managed water, which implies that improvement in the level of safely managed water may lead to a significant decline in the stunting levels in several states. States like Bihar and Uttar Pradesh have the least access to safely managed water and hence have a high prevalence of stunting in urban India. On the other hand, states like Kerala and Assam have better access to safely managed water and hence have less prevalence of chronic undernutrition among children aged 5 years in urban India.

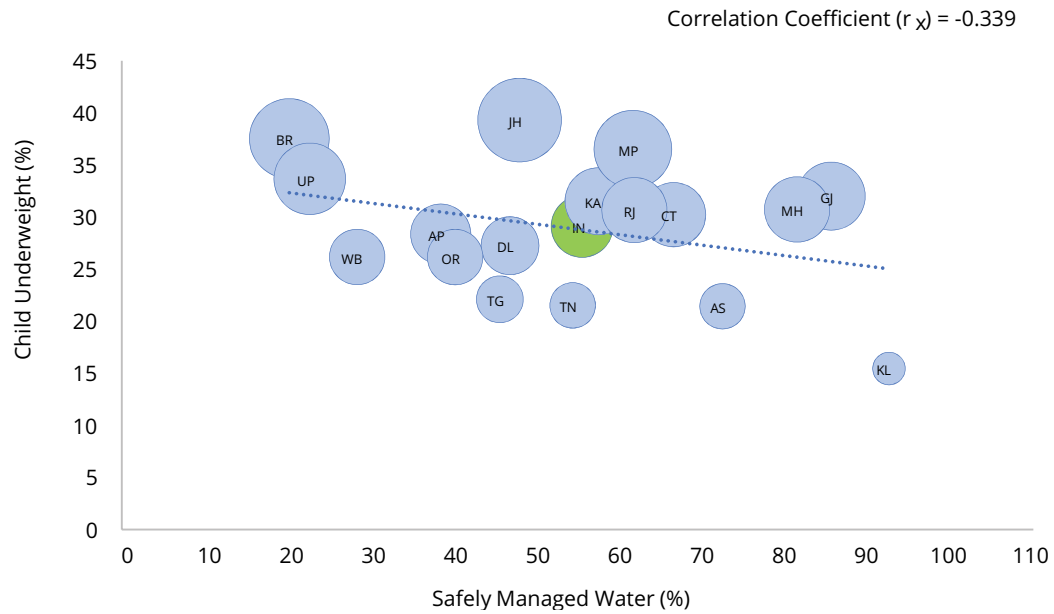
A moderate negative correlation (correlation coefficient (rx) =-0.34) is seen between SMW and underweight children in urban India. Figure 4.9 illustrates the states with higher access to SMW as having less prevalence

Figure 4.8: Association between Safely Managed Water and Child Stunting in Urban India, 2015-16



Note: Weight = Child stunting.
Source: Computed from NFHS-4, 2015-16

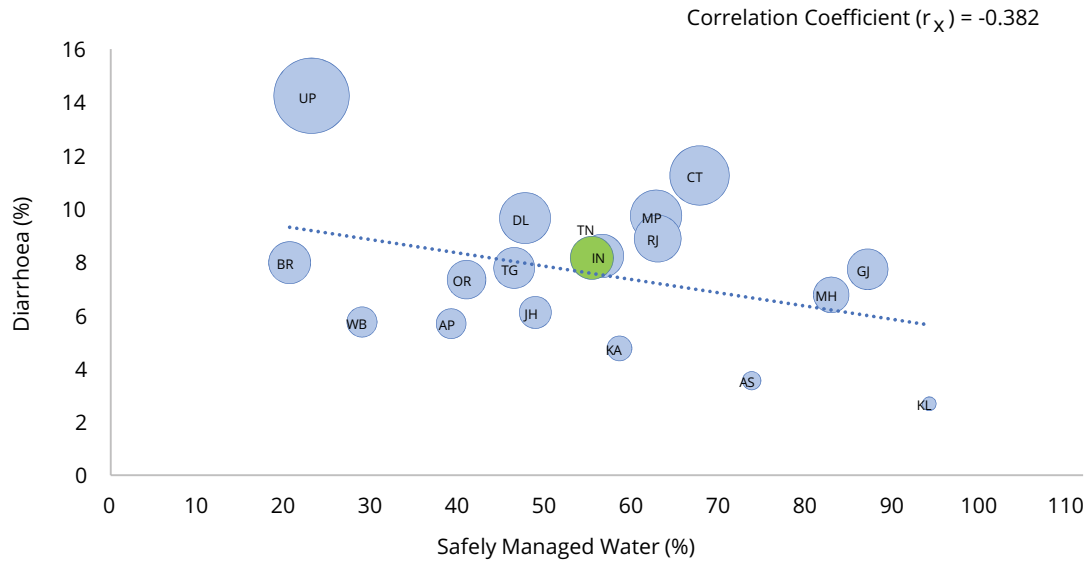
Figure 4.9:Association Between Safely Managed Water and Underweight Children in Urban India, 2015-16



Note: Weight = Child underweight.
Source: Computed from NFHS-4, 2015-16

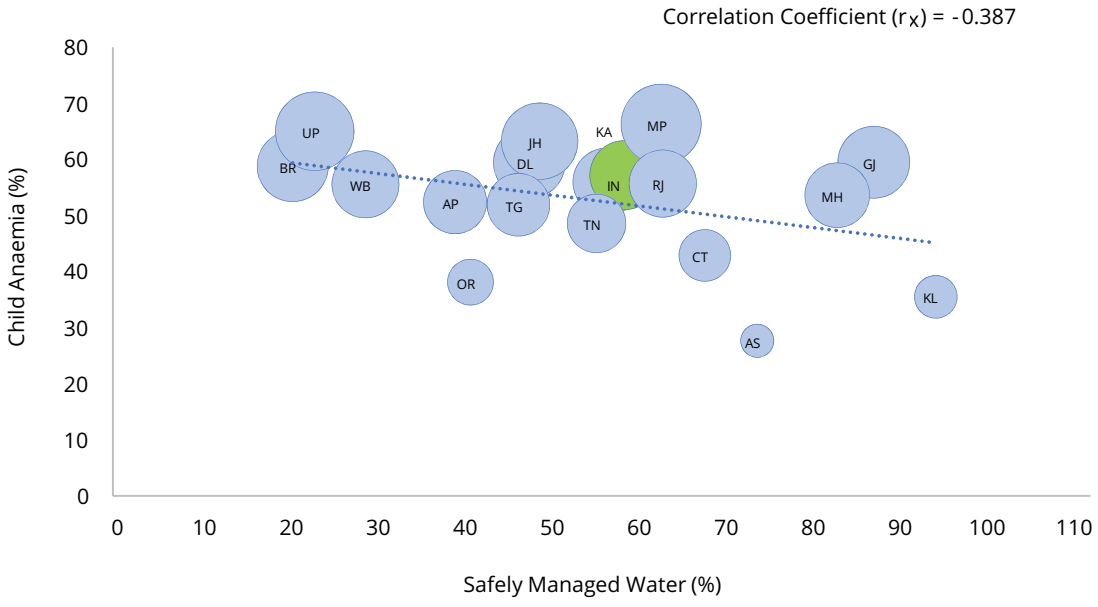
of underweight children aged below 5 years. Larger states like Bihar and Uttar Pradesh have less access to SMW and consequently report a higher share of underweight children. However, urban areas of Assam and Kerala have better access to safely managed water and hence have a lower level of underweight cases among under-5 children. Beside these two categories, there are a few states with exceptions to this relationship, such as Gujarat and Maharashtra where cases of underweight children are considerably higher even if the households have better access to SMW. A similar pattern is observed in Figures 4.8 and 4.9 where states like Madhya Pradesh, Karnataka, Rajasthan, Chhattisgarh and Jharkhand have high levels of child stunting

Figure 4.10: Association Between Safely Managed Water and Diarrhoea in Urban India, 2015-16



Note: Weight= Diarrhoea.
Source: Computed from NFHS-4, 2015-16.

Figure 4.11: Association Between Safely Managed Water and Child Anaemia in Urban India, 2015-16



Note: Weight= Child anaemia.
Source: Computed from NFHS-4, 2015-16.

and being underweight as well as better access to SMW. Like the previous two correlations, the relationship between SMW and diarrhoea at the state level is moderately negative in urban India. A slightly weak but negative correlation (correlation coefficient ($r_{x)}$ =-0.382) is presented between SMW and diarrhoea in urban India. Uttar Pradesh and Bihar were the most unsatisfactory performers of SMW but have a noted difference in the prevalence of diarrhoea.

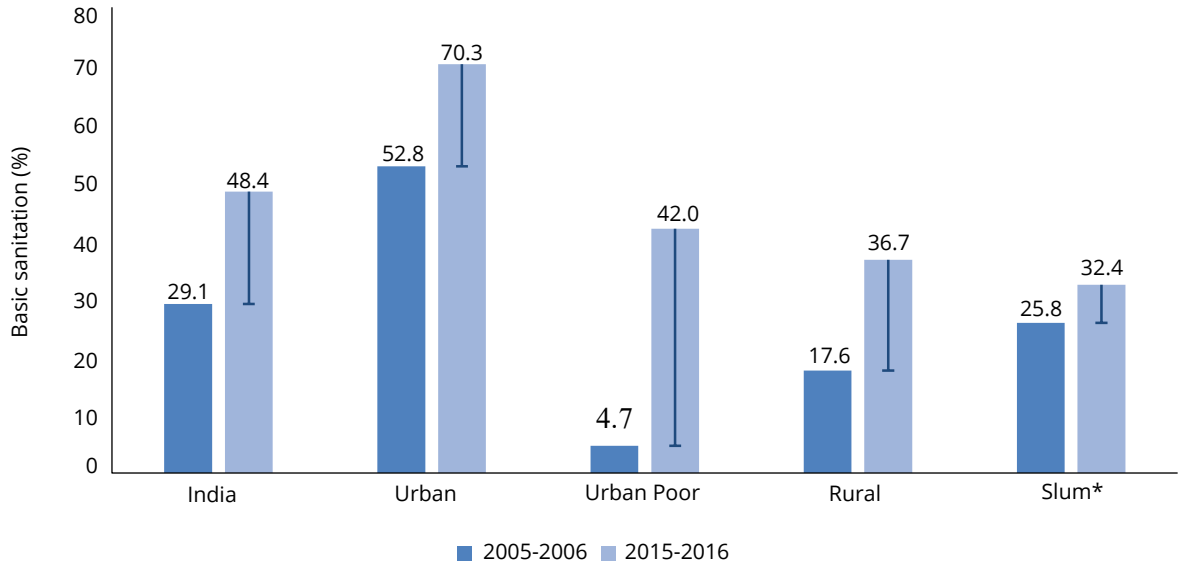
The urban regions in Madhya Pradesh, Chhattisgarh, Rajasthan and Delhi have dissimilar access to SMW but a similar prevalence of diarrhoea. However, the high association is maintained in urban areas of Kerala, and north-eastern states where, with an improvement in SMW, diarrhoea declines. The access to safely managed water also impacts childhood anaemia to a great extent. A negative correlation between SMWand child anaemia indicates that with an increase in access to SMW the prevalence of anaemia will reduce. However, like diarrhoea, childhood anaemia also has different associations with SMW at the state level. Poor SMW leads to a higher prevalence of anaemia in children in urban region of Uttar Pradesh, Bihar and West Bengal. At the same time, there are a few states/UTs with exceptions to this relationship, such as Gujarat and Maharashtra where child anaemia is noticeably higher even in the presence of better access to SMW. The correlation analysis illustrates that states that performed relatively well with regard to the access to SMW such as Kerala and Assam have been able to reduce childhood morbidities such as diarrhoea, stunting, wasting and anaemia.

4.4 Utilisation of Basic Sanitation Facilities

Sanitation challenges in India have gained much needed attention inthe decade 2006-16, especially after the launch of National Urban Sanitation Policy (2008). Enormous efforts by various stakeholders such as UNICEF, WHO, USAID, in cooperation with governmental agencies and communities have led to anoticeable improvement in coverage of sanitation facilities. However, progress is still far behind the UNICEF-WHO JMP apex achievement referred to assafely managed sanitation. Kundu (2009) and Bhagat (2013) have argued that poor states have serious challenges in access to basic amenities compared to economically developed states and metropolitan areas. HSMI- HUDCO Chair-NIUA (2015) has further quantified access to basic services as being directly proportional to the size of cities in India.

The issue and challenges related to sanitation are not merely confined to the construction of toilets, but also to the safe disposal and management of faecal sludges. Lack of safe disposal and management of

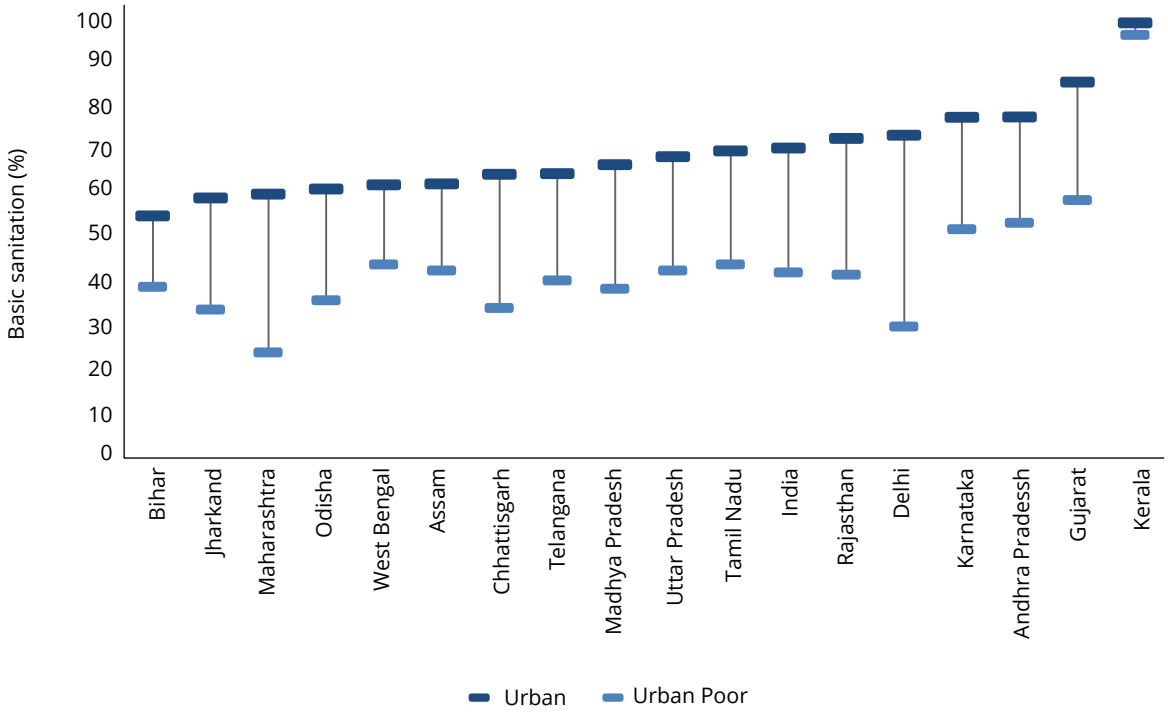
Figure 4.12: Change in Percentage of Households Having Utilisation of Basic Sanitation Facility in India, 2005-06 to 2015-16



Note: * = The estimate for Slum is based on the eight million-plus cities in NFHSbased on the definition of the WHO-UNICEF Joint Monitoring Programme for Water Supply and Sanitation.
Source: Computed from NFHS-3 and NFHS-4.

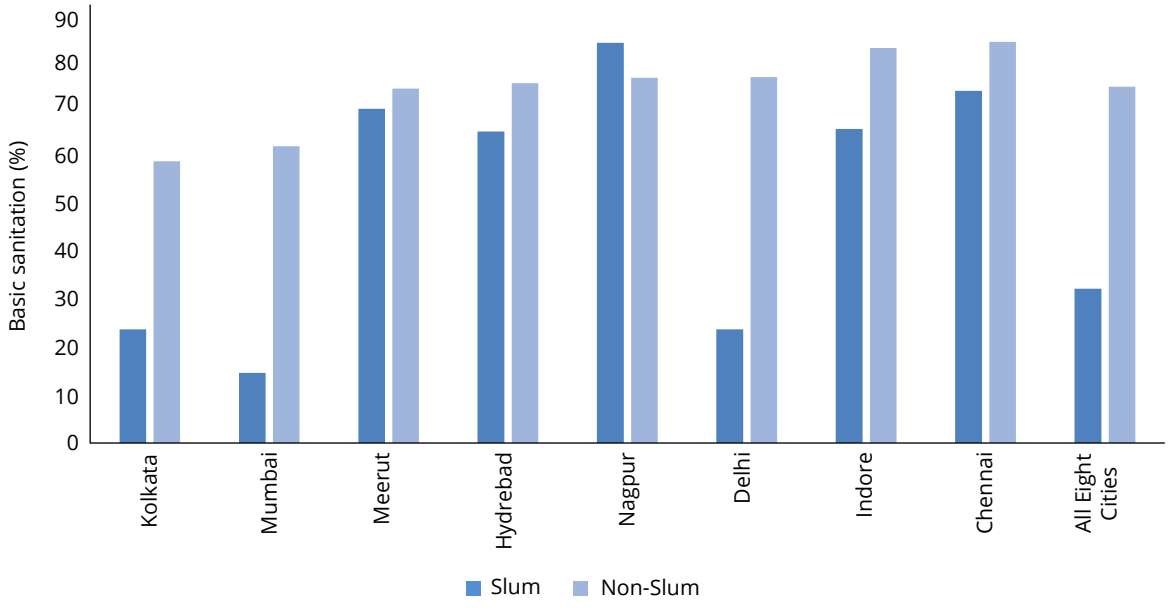
human excreta can affect health and well-being of people living inunsuitableenvironments, especially children and adolescents. Due to lack of information on the mechanism of management of human excreta, complete assessment of a safely managed sanitation system is not possible in this study though the share of toilets has increased in India over many decades (Kundu and Banerjee, 2018).

Figure 4.13: State-wise Percentage of Households with Basic Sanitation Facilities in Urban India, 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 4.14: Percentage of Households Using Basic Sanitation Facilities by Slum and Non-slum in Selected Indian Cities, 2015-16



Source: Computed from NFHS-4, 2015-16

This section of the study is concerned with the situational assessment of sanitation in the country overtime and across states.Findings from the study suggest that utilisation of basic sanitation has systematically improved in India over the past decade. It has nearly doubled from the level of 29.1 per cent in 2005-06 to 48.4 per cent in 2015-16. However, nearly 128.4 million households are still deprived from the usage of basic sanitation facilities in 2015-16. A notable change has been observed in both urban and rural areas but an outstanding change in access to basic sanitation was observed among the urban poor. Access to basic sanitation has improved nearly tentimes among the urban poor in India is the past ten years. But the slums from eight cities with more than one million population show a slow growth in the utilisation of basic sanitation facilities. There is also a significant disparity at the state level utilisation of sanitation facilities in urban India.

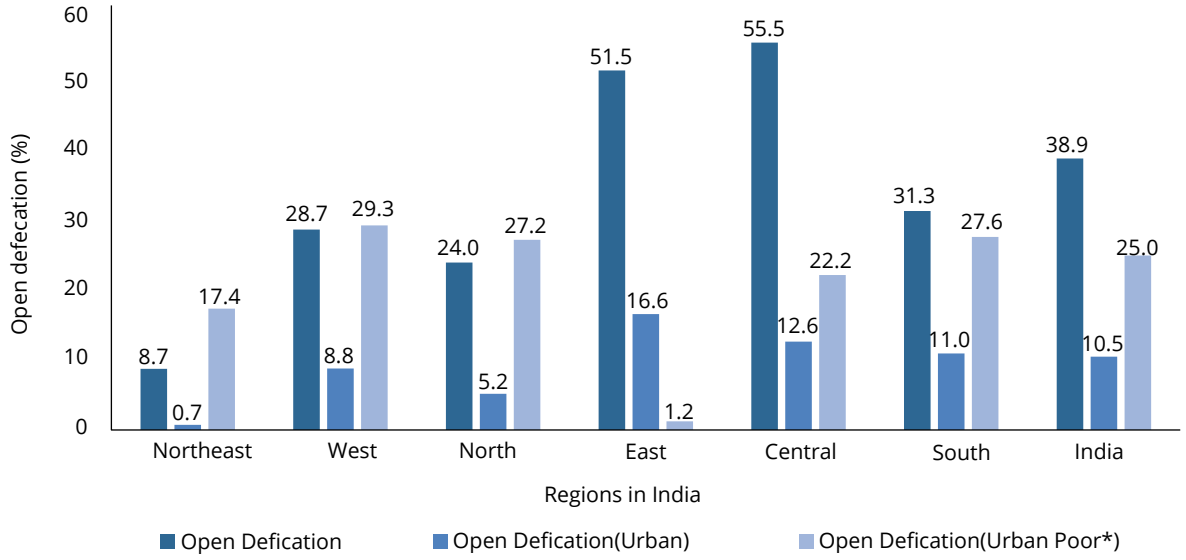
Urban areas in every state have more than 50 per cent coverage of basic sanitation facilities. Their utilisation is highest in urban Kerala and lowest in urban Bihar. It is worth noting that urban and urban poor households in Kerala have similar levels of utilisation of basic sanitation facilities. However, across all other states there is a prominent gap among the all-urban and urban poor dwellers. The gap in the usage of basic sanitation is highest in Delhi followed by Maharashtra, Madhya Pradesh, Rajasthan and Chhattisgarh. Evidently, one in every four households in Maharashtra utilises basic sanitation facilities while in Delhi two in three urban poor households are deprived of the same. The analysis of eight cities with more than one million population shows that utilisation of basic sanitation facilities is lowest in Mumbai followed by Delhi and Kolkata. The lowest utilisation in these three cities is due to the higher usage of shared sanitation facilities. On the other hand, such utilisation is comparatively higher in Nagpur, Meerut and Chennai. This may be due to the relocation of older slums to new settlements with inbuilt sanitation facilities within the households.

The other possible reasons attributed to positive development of sanitation in slums can be accredited to the concerted efforts of various stakeholders such as UNICEF, WHO and World Bank in coordination with government agencies in improving the quality of sanitation services in slums. A study by City-Wide Water Supply Programme conducted in 2008 in Nagpur may also have positively impacted on utilisation of basic sanitation services in the slums (PEARL, 2015).

4.4.1 Open defecation

The world sanitation agenda aims at complete eradication of open defecation from developing countries. India has advocated several schemes and programmes to eliminate open defecation from both rural and

Figure 4.15: Regional Pattern of Open Defecation in India, 2015-16



Note: North: Chandigarh, Haryana, Himachal Pradesh, Jammu and Kashmir, Delhi, Punjab, Rajasthan, Uttarakhand; Central: Madhya Pradesh, Uttar Pradesh, Chhattisgarh; East: Bihar, Jharkhand, Odisha, West Bengal; Northeast: Arunachal Pradesh, Assam, Sikkim, Mizoram, Meghalaya, Nagaland, Tripura; West: Dadra and Nagar Haveli, Daman and Diu; Goa, Gujarat, Maharashtra; South: Andaman and Nicobar, Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Telangana.
Source: Computed from and NFHS-4, 2015-16.

urban areas. A mass movement in the form of media awareness and door-to-door campaigns has been done in India under the aegis of SBM.Under SBM over 90 million nine crores of toilets were constructed to eliminate open defecation.However, the findings from NFHS-4still show a significant prevalence of open defecation at the regional level. At the national level, nearly 11 percent of the urban householdswere noted as defecating in the open against 38.9 percent rural households. The studyalso suggested that nearly one in every four urban poor householdspractised open defecation in 2015-16.

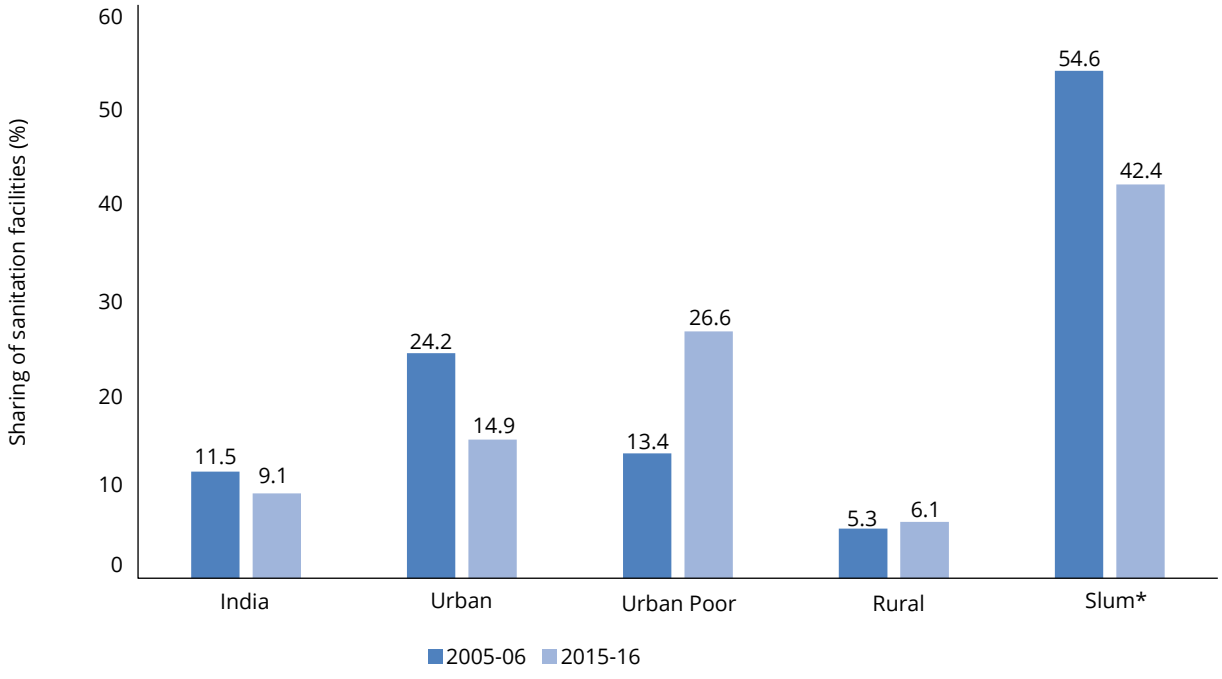
The findings have also shown a significant level of variation in open defecation in India at the regional level. It was highest in the eastern and central regions of India where more than 50 per cent of the rural households defecate in the open.However, the estimate of open defecation was equally high in rural areas of the western, northern and southern regions, while it was lowest in the northeastern region. The estimated figures show that among households located in urban poor settings, one in every four defecated in open space. Interestingly, the urban poor living in the northeastern and eastern regions had the least cases of open defecation in 2015-16 (Ghosh and Cairncross, 2013).

4.4.2 Sharing of toilet facility

Utilisation of basic sanitation is constrained by the sharing of toilet facilities. But it has been established that with an increase in basic sanitation facilities in all India, their utilisation has declined in the past decade (Figure 4.16). A similar trend of decline is evident in urban India as well. At the same time, sharing of toilets has doubled among urban poor households in India. It went up from 13.4 per cent in 2005-06 to 26.6 per cent in 2015-16.

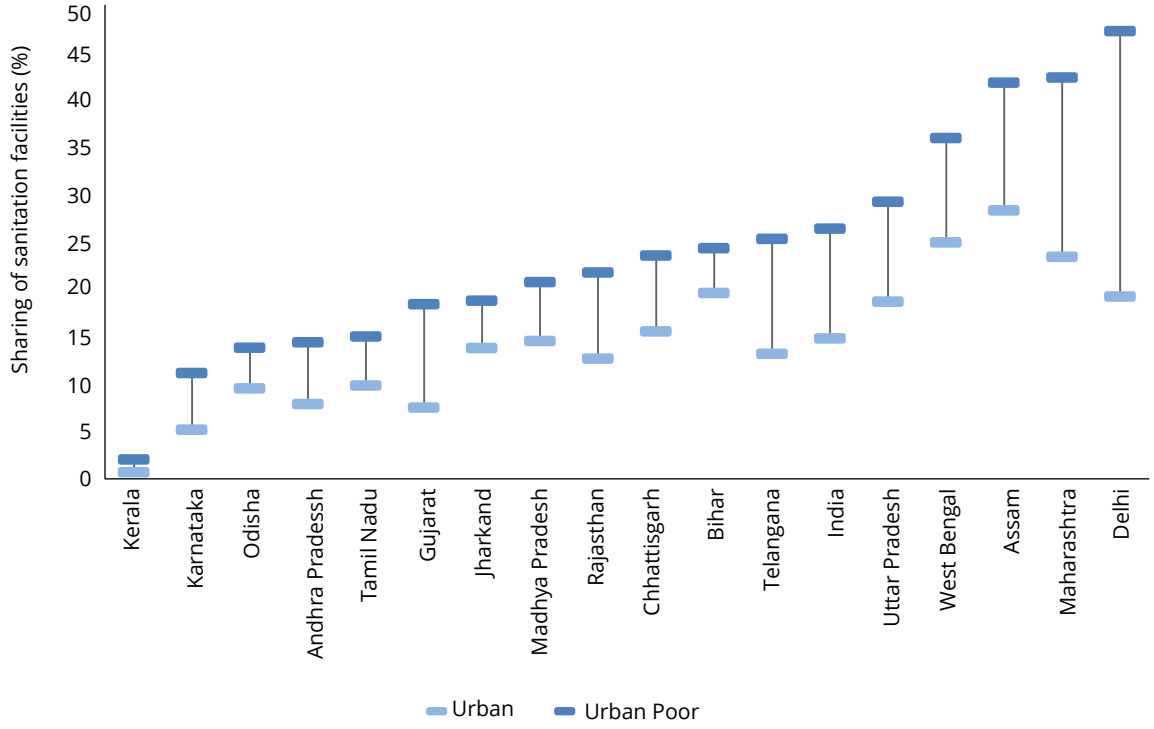
It is important to note that utilisation of basic sanitation facilities as well as sharing have increased among urban poor households. This may be attributed to the rapid increase in construction of individual toilets in the last year between 2015-2016, which went hand in hand with a targeted reduction of open defecation in urban poor societies. Sharing of toilets has declined by more than 10 per cent in the past 10 years in the slums of eight 'million-plus cities' between 2005-06 and 2015-16. A noteworthy disparity in the utilisation of shared sanitation facilities was seen across UNICEF intervention states. Figure 4.17 indicates that in Kerala only 0.7 per cent households were sharing sanitation facilities with other households in urban areas, while it is 2.1 per cent in the case of households living in urban poor localities. On the other hand, Delhi and Maharashtra

Figure 4.16: Trends in Percentage of Households Sharing Toilet Facilities with Other Households in India, 2005-06 to 2015-16



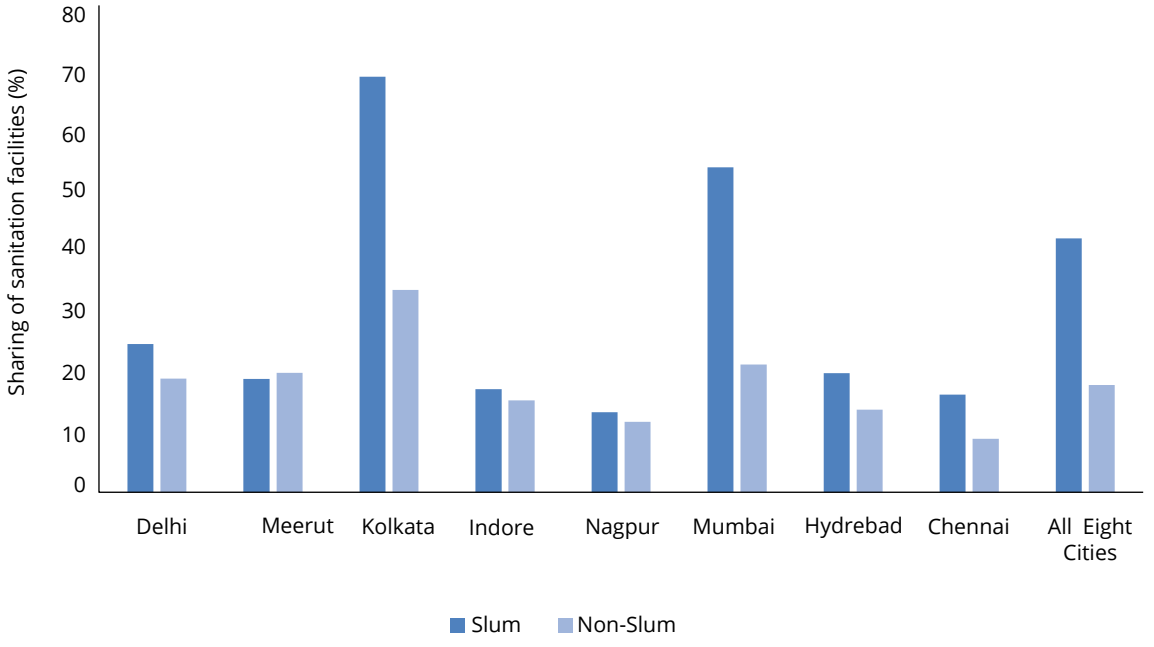
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 4.17: State-wise Percentage of Households with Access to Shared Sanitation Facilities in India, 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 4.18: Percentage of Households Using Shared Sanitation Facilities by Slum and Non-slum, 2015-16



Source: Computed from NFHS-4, 2015-16

showed a huge gap in the sharing of sanitation facilities. Nearly one in every two poor households was sharing sanitation facilities against one in every five households in urban Delhi. Similarly, two in every five poor households in Maharashtra and Assam were found to be utilising shared sanitation facilities against one in every five urban households. Besides these states, there is a significant gap in utilisation of shared sanitation facilities in West Bengal, Uttar Pradesh, Telangana, Chhattisgarh, Rajasthan and Gujarat, where it is on an average more than 10 per cent between the all-urban and urban poor households.

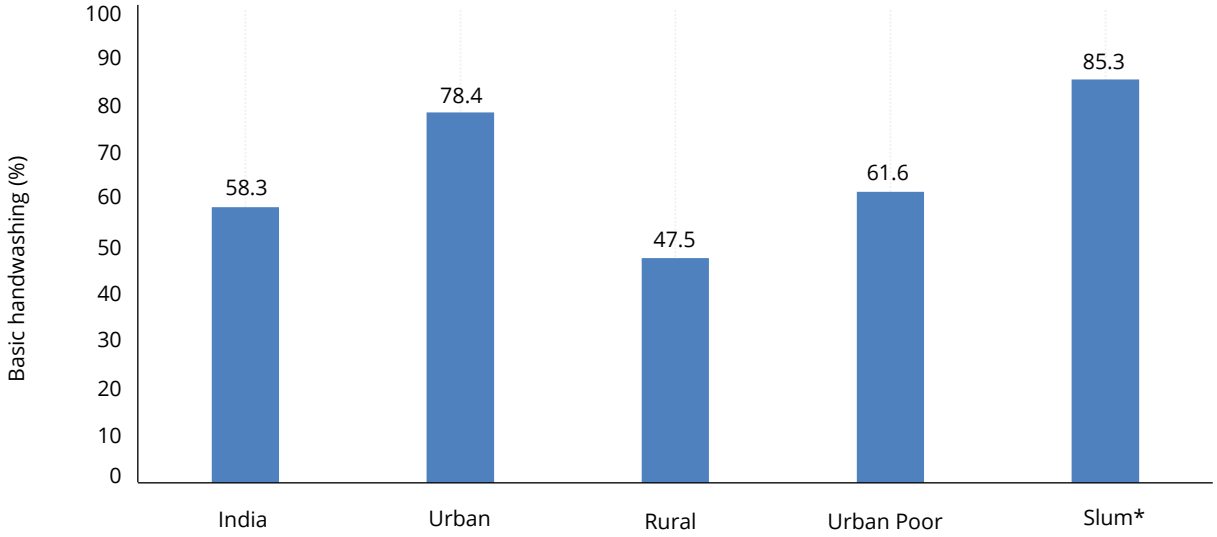
An analysis of the eight million-plus cities shows that sharing of sanitation facilities is more common among the slum households. Nearly two in every five used shared sanitation facilities in 2015-16. The majority of households living in slums of Kolkata and Mumbai have been also been found to utilise shared sanitation facilities, that is, every second household has done so. It is interesting to note that 34 per cent of the households living in non-slum areas in Kolkata uses shared toilets. Slum households of Delhi and Hyderabad have shown a significantly large share in the utilisation of shared sanitation facilities among the eight million-plus cities. Importantly, the gap in utilisation of basic sanitation facilities between the urban poor and all-urban is high at the state level, especially in states with a higher proportion of slum population. Maharashtra, Delhi, Assam and West Bengal fall in this category.

4.5 Hygienic Practices: Basic Handwashing Facility within Premises

Basic handwashing is another critical component of WASH which is acknowledged as a milestone for achieving SDGs 1, 2, 3, 5, 6, 9 and 14.[1] It is a cost-effective intervention which has a significant positive impact on several morbidities, infections and co-morbidities. Handwashing with soap and water is believed to add to the productivity of a person living in a household. It reduces possible obstructions by way of infection and illness to the days of working and education. It further secures the nutritional status of children by reducing repeated ailments such as diarrhoea, cholera and respiratory infections.

However, the challenges to hygienic and safe practices are huge because of the significant gaps in knowledge, attitude and practice of handwashing. Analysis shows that nearly three in every five households utilised basic handwashing facilities in 2015-16. A considerable difference in the practice of handwashing can be seen among households living in urban and rural areas.

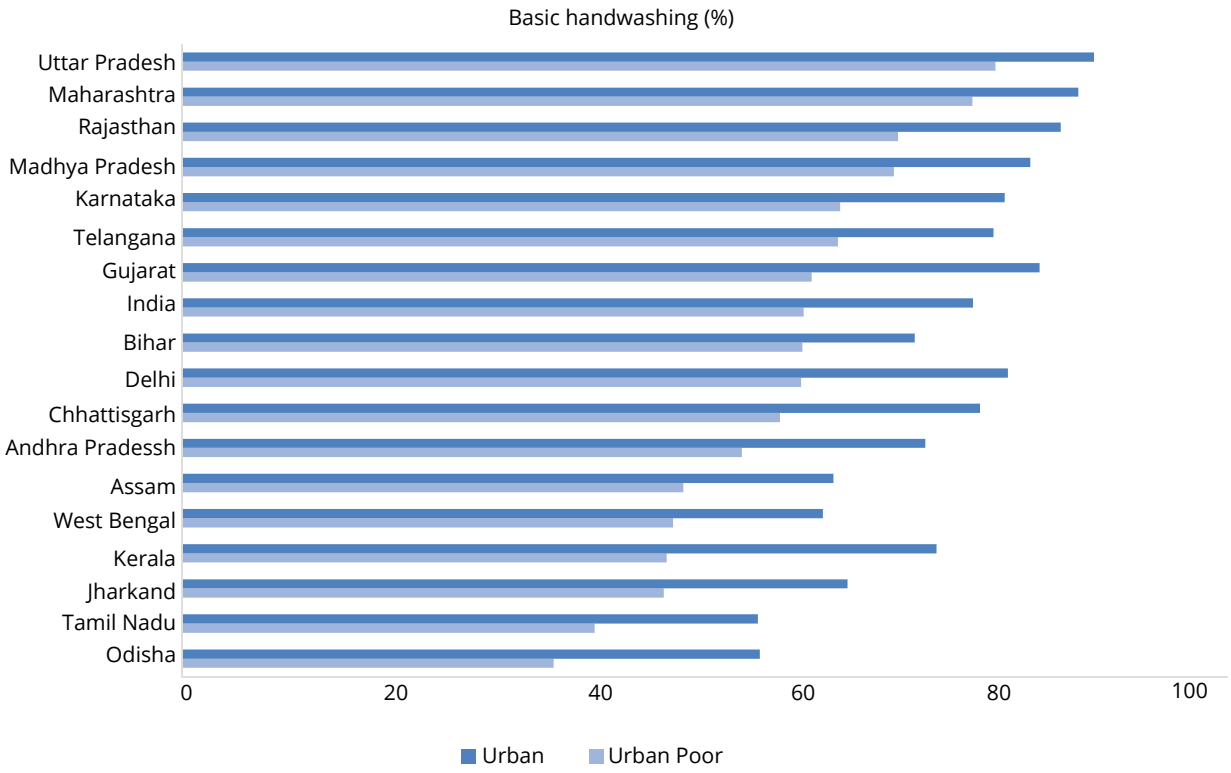
Figure 4.19: Percentage of Households with Basic Handwashing Facility Available, 2015-16



Note: * = The estimate for Slum is based on only the eight million-plus cities in NFHS4, 2015-16.
Source: Computed from NFHS-4, 2015-16

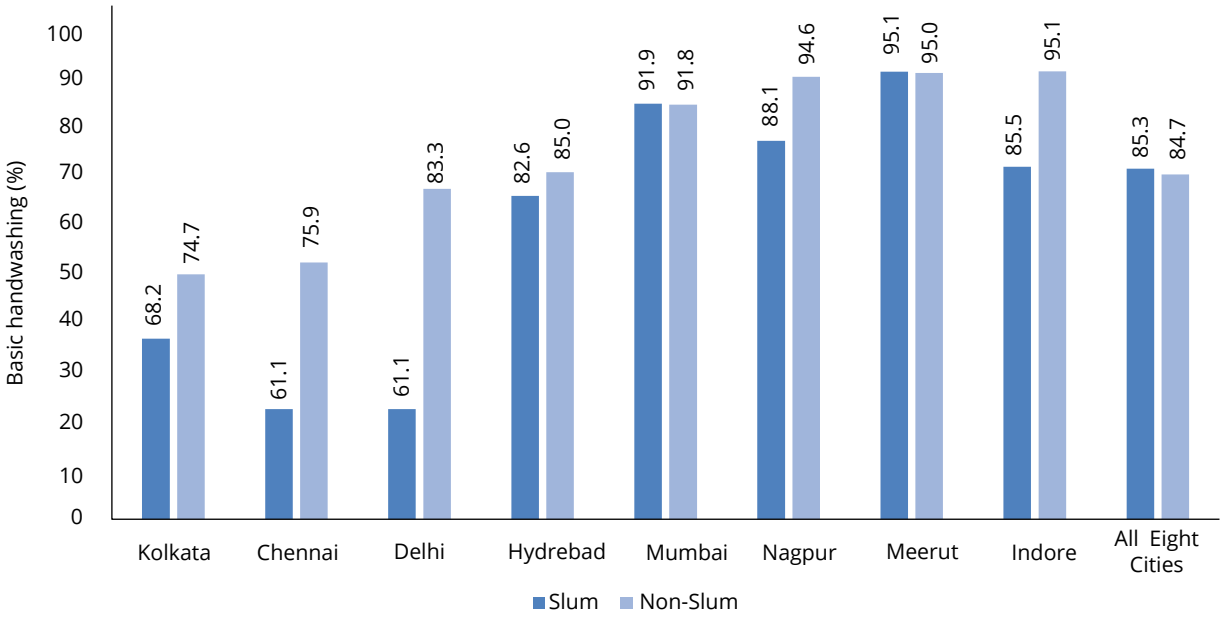
1 https://globalhandwashing.org/hygiene-matters-in-the-sustainable-development-goals/

Figure 4.20: State-level Variation in Basic Handwashing Practice in Urban India, 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 4.21: Percentage of Households Having Basic Handwashing Facility by Slum and Non-slum, 2015-16



Source: Computed from NFHS-4, 2015-16

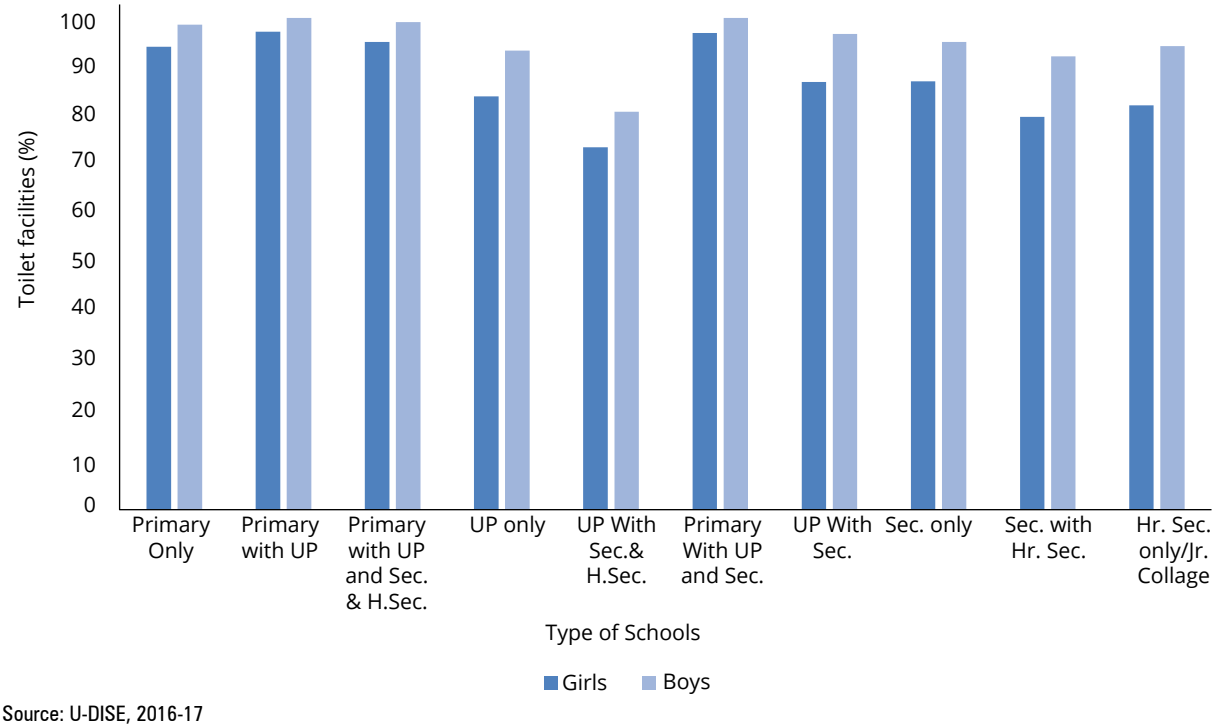
The practice of basic handwashing is severely acute in urban poor households where three in every five were deprived of a basic handwashing facility in 2015-16, which is even lower than that of the rural households. However, the solicited information based on NFHS-4 demonstrates a higher prevalence basic handwashing practices among households located in the slums of eight million-plus cities. The disparity in the level of handwashing practices in urban areas is conspicuous at the state level. Interestingly, urban households of socio-economically less developed states such as Uttar Pradesh and Rajasthan have higher coverage of basic handwashing where more than four of every five households had soap and water at the place of handwashing. On the contrary, among economically developed states like Kerala and Tamil Nadu, half of the households did not have basic hygiene facilities. Similar levels of disparity in the coverage of basic sanitation are also seen among the urban poor living in these states. These differences may be because of the gap in access to both the services together. Also, the majority of new census towns (included in the sampling frame of NFHS-4) still indulge in rural behaviour patterns where handwashing is generally ignored or practised only for specific activities (HSMI-HUDCO Chair — NIUA, 2017).

About three in every five households living in urban poor societies in Odisha didn't have access to basic hygiene facilities, whereas four in every five in Uttar Pradesh did utilise basic handwashing practices. Analysis shows that the urban poor in states like Odisha, Tamil Nadu, Jharkhand, Kerala, West Bengal and Assam are more neglectful of basic hygienic practices, where nearly one in every two households didn't have even water and soap for handwashing. In the eight million-plus cities, slums of Delhi and Chennai performed relatively poorly compared to the slums of Mumbai, Nagpur, Meerut and Indore. About nine in every 10 households living in the slums of the latter four cities utilise basic hygienic practices. Thus, the pattern of handwashing goes beyond the development notion, which states that with economic development risk factors reduce.

4.5.1 Sanitation and hygienic practices in schools

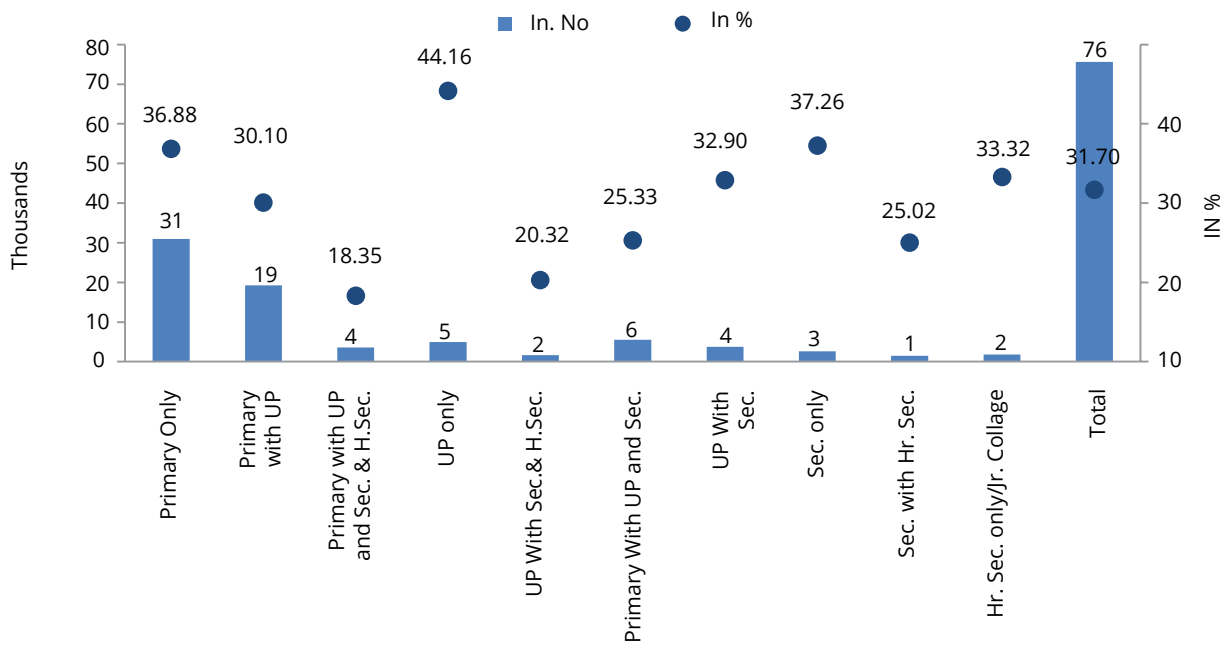
Learning, hygiene and health are strongly linked to each other as children miss school and perform poorly when they suffer from WASH related illnesses. A student spends many hours in school along with several other students where illness can spread easily from one to another. In schools, the health focus is generally on diarrhoea, worm infections and respiratory infections because these diseases affect school-age children most and such illnesses can be drastically reduced through improved WASH facilities. Evidently, the Unified

Figure 4.22: Schools Having Boys' and Girls' Toilets in Urban India, 2016-17



Source: U-DISE, 2016-17

Figure 4.23: Schools Without Handwashing Facility Near Toilet in Urban India, 2016-17



Source: U-DISE, 2016-17

District Information System for School Education (U-DISE) showed a better picture of schools where more than 90 per cent have girls' toilets in urban India. The least coverage of girls' and boys' toilets has been observed among schools with upper primary, secondary and higher secondary levels. There is an apparent gap in girls' and boys' toilets at different levels of urban schools.

There have been efforts to establish handwashing facilities near toilets in India. However, a large number of schools are without them. In 2016-17, 31.70 per cent (76,000) out of all schools in urban India did not have handwashing facilities near toilets. A share of 36.88 per cent (31,000) of schools with only primary level and 30.10 per cent (19,000) with upper primary level did not have handwashing facilities near toilets. Comparatively, a smaller number of combined schools (i.e. schools with more than one level of education) did not have handwashing facilities near toilets.

WASH in schools has been incorporated in the Indian system for the first time under the District Primary Education Programme (DPEP) in 1994. Later, with the launch of Sarva Shiksha Abhiyan (SSA) in 2000-01, efforts to establish WASH facilities in schools and build awareness on sanitation and hygiene among students have been accelerated. Legislative backing to make available WASH facilities at schools has been provided through the adoption of the Right of Children for Free and Compulsory Education Act (2009). Though there has been no school and student specific intervention for WASH in schools in India, there are other mechanisms to build awareness and encourage good practices in sanitation and hygiene among students. The School Sanitation and Hygiene Education (SSHE) launch in 1999 under the Total Sanitation Campaign (TSC) is such a scheme. Under SSHE, water, sanitation and handwashing facilities are provided in schools and hygiene education is linked to homes and communities.

4.6 Menstrual Hygiene

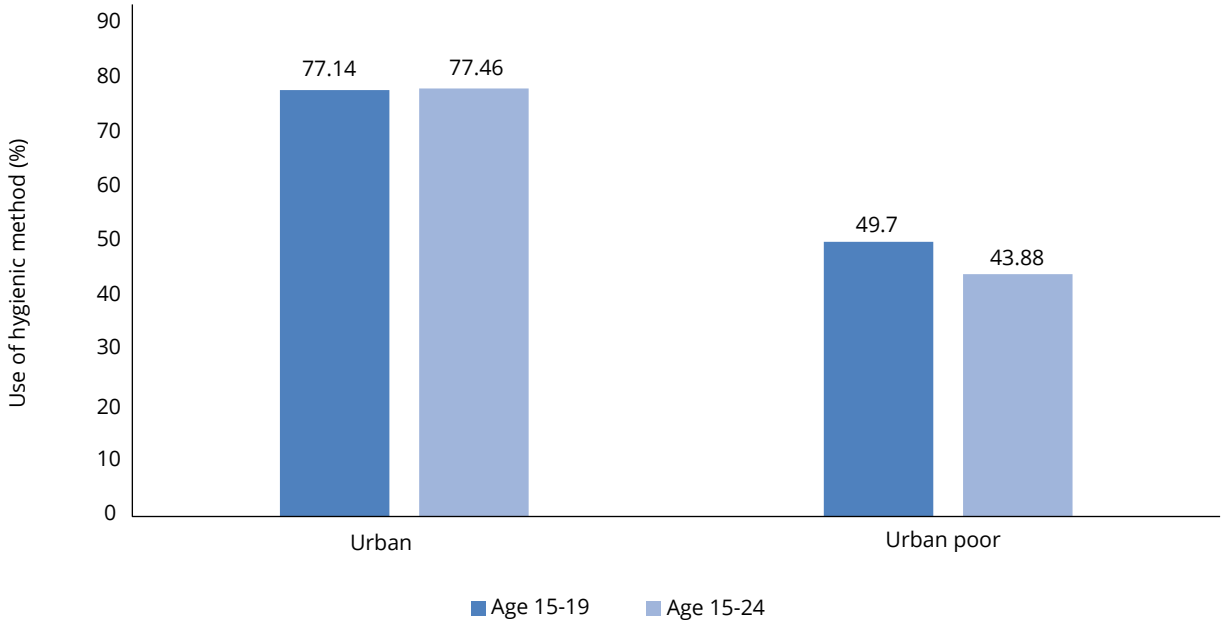
Menstrual hygiene is cited under the sixth Sustainable Development Goal on, availability and sustainable management of water and sanitation for all. Menstrual hygiene relates to two SDGs—6.2 and 4a, which speak about "access to sanitation and hygiene for all with special attention to the needs of women and girls", along with "building and upgrading education facilities that are gender sensitive". Outreach and utilisation of best practices of WASH related issues is a critical path to proper menstrual hygiene management. Lack of adequate sanitation and improper management of hygienic practices in schools are known to result in

less enrolment, absenteeism and drop-outs. These out-of-school girls and adolescents are, therefore, at the higher risk of being included in "nowhere" children. Additionally, these out-of-school girls and adolescents are at risk of early marriages. Thus, enhancing the awareness of menstrual hygiene and safe access to quality basic WASH facilities leads to a significant lessening of child marriages, mentioned in SDG-5.3. The plethora of taboos and misconceptions concerning menstruation creates obstacles in the educational and economic progress of girls and women in both developed and developing societies. These persisting impediments to growth in women on the other hand increase gender inequality, make women vulnerable to forced marriages, unwanted pregnancies, adverse maternal and child health, undernutrition and mortality. Therefore, in addition to the above mentioned three SGDs, menstrual hygiene is also interlinked with SDG-8 and SDG-12.[2]

According to WHO and UNICEF (2014) adequate menstrual hygiene management means that "*Women and girls are using clean menstrual hygiene management material to absorb or collect blood, that can be changed in privacy as and when necessary for the duration of the menstrual period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials*". Notable gradients are seen in the adequate utilisation of menstrual hygiene with respect to womens' age. Similar findings were noted from the analysis based on NFHS-4 for adolescent and young women living in urban poor areas. Conspicuously, half of the urban poor adolescent girls (aged 15-19 years) did not have access to hygienic methods during the menstrual period against two-thirds adolescent girls in urban areas. Surprisingly, the use of a hygienic method among urban poor adolescents has declined with progression to higher ages. It was nearly 43.9 per cent among urban poor adolescents aged 15-24 years against 49.7 per cent in adolescents aged 15-19 years.

A huge variation in the use of hygienic methods during the menstrual period was noticed among the UNICEF intervention states in 2015-16. It was as little as 30 per cent among adolescent and young women belonging to Bihar, while it was highest in Tamil Nadu where nine out of 10 women used hygienic methods during menstruation. The use of hygienic methods is higher among economically developed states such as Tamil Nadu, Kerala, Delhi, Telangana and Karnataka. It is lowest in Bihar, Madhya Pradesh and Uttar Pradesh which are known for their economic backwardness. The condition of adolescents and young belonging to urban

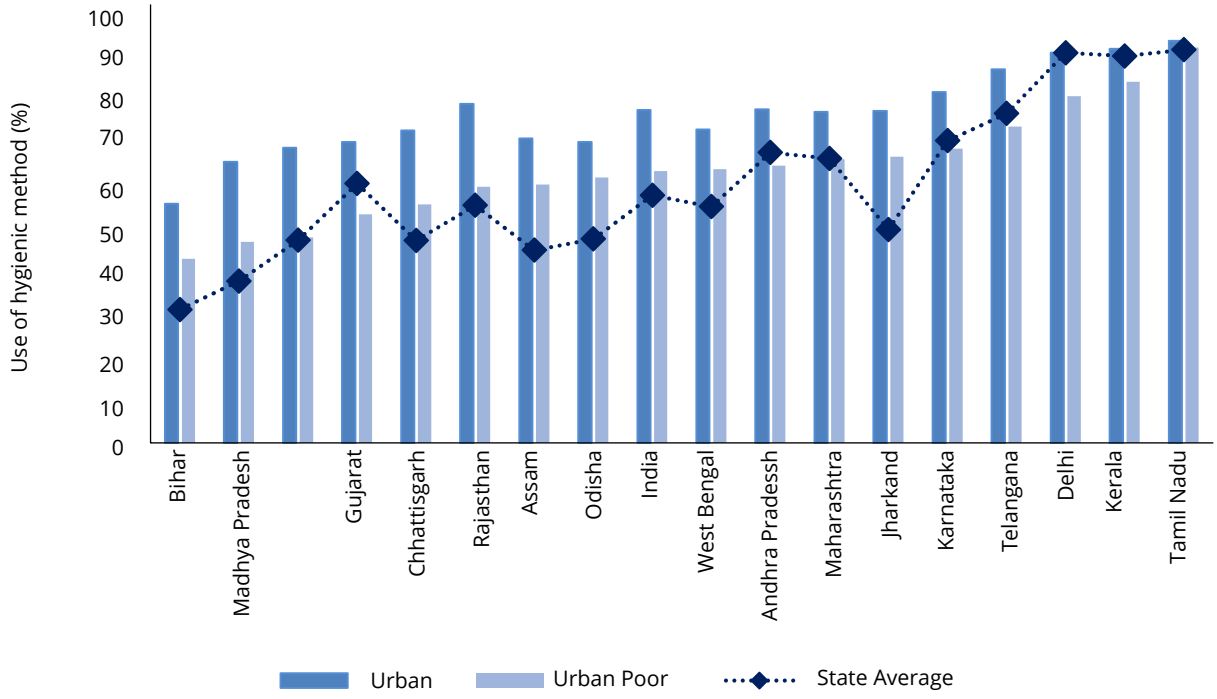
Figure 4.24: Percentage of Women (15-24 years) Using a Hygienic Method during Menstrual Period, 2015-16



Note: Women who use locally prepared napkins, sanitary napkins, or tampons during their menstrual period.
Source: Computed from NFHS-4, 2015-16

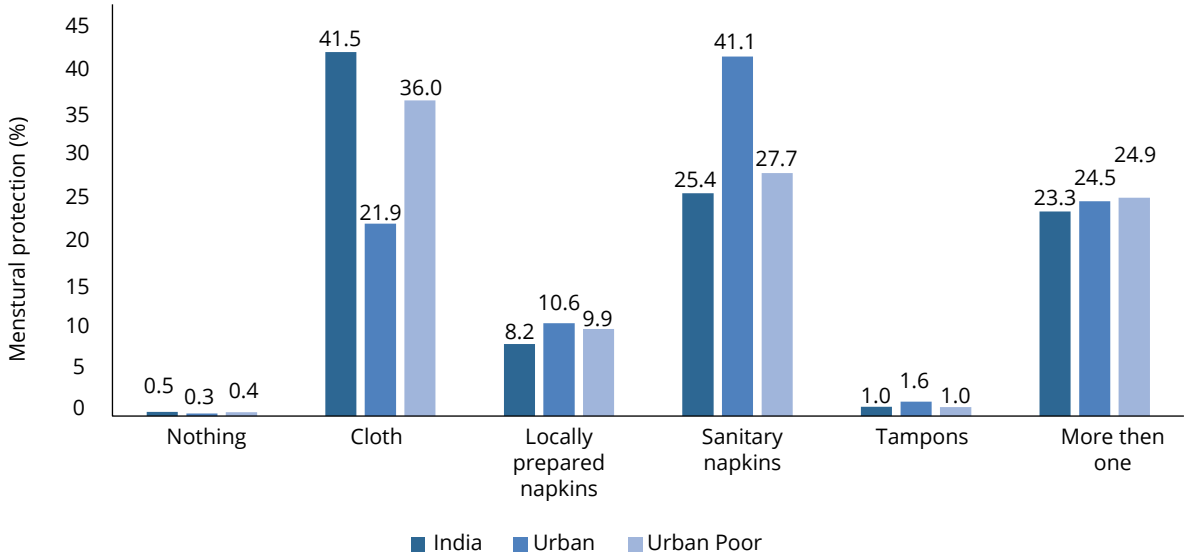
2 https://menstrualhygieneday.org/project/infographic-mhm-and-sdgs/

Figure 4.25: Percentage of Women (15-24 years) Using a Hygienic Method during the Menstrual Period in India, 2015-16



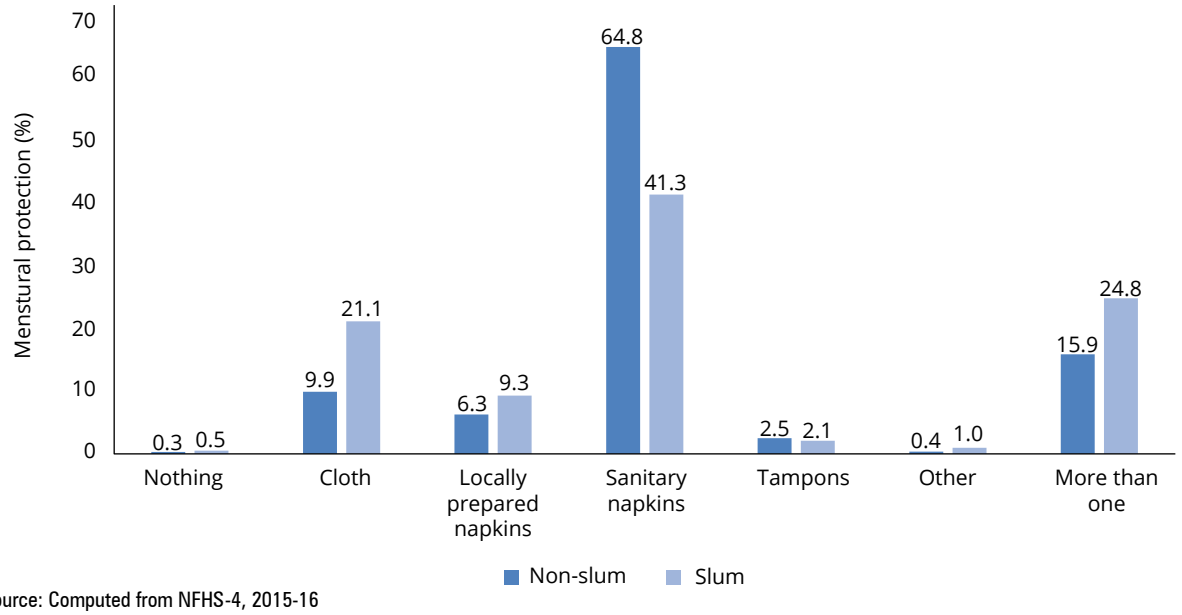
Note: Estimation is based on women aged 15-24 years who have ever menstruated. 1 Locally prepared napkins, sanitary napkins, and tampons are considered to be hygienic methods of protection.
Source: Computed from NFHS-4, 2015-16

Figure 4.26: Type of Menstrual Protection Used by Women (15-24 years) during the Menstrual Period in India, 2015-16



Source: Computed from NFHS-4, 2015-16

Figure 4.27: Type of Menstrual Protection Used by Women (15-24 years) during the Menstrual Period in Slums and Non-slum Areas in Eight Million-plus Cities, NFHS 2015-16



Source: Computed from NFHS-4, 2015-16

poor households is worse in Bihar and Uttar Pradesh where less than two in every four women aged 15-24 years do not have availability of a hygienic method during the menstrual period. Except for Tamil Nadu, Kerala, Delhi, Telangana, Andhra Pradesh and Gujarat, the urban poor have a higher level of utilisation of menstrual hygienic practices than that of the all-urban and state average. The higher gap in the utilisation of menstrual hygiene methods among the all-urban and urban poor adolescents and young women was seen in the least developed states, which systematically narrowed down the increase in level of development.

A further analysis of methods adopted by adolescents and young women in India aged 15-24 years indicates the higher dependence on cloth protection during the menstrual period (Figure 4.26). However, use of sanitary napkins was highest among urban adolescents and young women. It is noteworthy to mention that, like rural areas, adolescents and young women belonging to urban poor societies showed a higher reliance on cloth protection during the menstrual period. It was also clear that nearly one in every four adolescents and young women aged 15-24 years adopted more than one hygienic method during their menstrual period. A situational assessment of adolescents from the eight million-plus cities shows a quite deplorable picture with regard to utilisation of hygienic methods in slums. About one in every two adolescents and young women did not utilise safe practices during their menstrual period.

4.7 Conclusion

This analytical chapter using two rounds of NFHS (2005-06 and 2015-16) displays numerous challenges with regard to access and availability of WASH facilities in India with special focus on urban areas. Some of the findings corroborate with the results from previous studies while some have added fresh insights to the situation. The utilisation of basic water in urban areas has marginally declined in the last decade. A possible reason for this could be the use of bottled water in cities, which is considered as an improved source of drinking water. Besides, the addition of new census towns with deplorable housing amenities to existing urban areas has had an adverse impact on the overall drinking water provisions (HSMI-HUDCO Chair-NIUA, 2015; HSMI- HUDCO Chair-NIUA, 2017). States such as Tamil Nadu, Uttar Pradesh, Andhra Pradesh and Telangana where a large number of new census towns were added show less coverage of basic drinking water in urban areas. In contrast to this, the condition of drinking water among the urban poor has improved over the years. A state-level analysis limited to states having intervention by UNICEF shows that availability of basic drinking water was least in Bihar and highest in Maharashtra. Results show that a major share of the urban poor households are deprived of piped water. There is a notable gap in the utilisation of safely managed water among urban and urban poor households. Kerala performed well in the utilisation of safely managed water while Bihar and Uttar Pradesh showed poor performance.

Multi-level deprivations among the poor living in urban areas and slums has been found. The gap in utilisation of basic sanitation between the urban poor and all-urban is high at the state level especially in states with a higher proportion of slum population. Maharashtra, Delhi, Gujarat and West Bengal fall in this category. At the same time, the difference in the use of basic sanitation among the urban poor and all-urban population is notable in states with a higher share of urban poor households such as Jharkhand, Madhya Pradesh and Telangana. This shows that the gap in utilisation of basic sanitation is high among two groups, slum households and the urban poor. Also, the states where the share of slums is high do not necessarily report a higher share of urban poor households.

Maximum utilisation of shared sanitation facilities is a noteworthy characteristic of the urban poor and slums. The finding was further complemented by the greater usage of shared sanitation facilities in these states. These regions are mostly alluded as the 'hot spots' of open defecation as well. The urban poor lack significantly in terms of hygienic practices, where half of them do not have soap and water at the prescribed place of handwashing. Interestingly, the slums of eight million-plus cities have shown adequate utilisation of basic hygienic practices. The state-level estimates presented a significant gap in the use of basic handwashing practices among the all-urban and poor living in urban areas. This gap was small between slum and non-slum areas of eight million-plus cities. It reflects the impact of NGOs and CBOs in raising awareness among slum dwellers with regard to hygienic practices.

The inadequate access to hygienic practices has been argued as a severe impediment to continued school attendance among girls in India. In fact, hygienic practices are still an unresolved challenge in urban India. Adolescent girls living in poor urban settings are deprived of proper menstrual hygiene facilities, where one in every two girls is unable to use sanitary napkins or tampons during her menstrual period because she cannot afford it. Also, the prevailing disparities in outreach of knowledge of safe practices, including the practice of handwashing, circumstances under which handwashing should be carried out, and inadequate coverage of handwashing facility (both water and soap) are important challenges to be addressed, especially among the urban poor.

4.8 Policy Implication

A serious intensive effort is underway to overcome hurdles in the accomplishment of WASH in India. Achievement of WASH is a fundamental measure in accomplishing several interlinked SDGs. Therefore, government organisations in collaboration with various stakeholders are putting in a lot of effort to address challenges confronted in several components of WASH, including open defecation (OD). However, it is clear that the challenges to WASH are not limited to overcoming OD, but to cutting across a number of hurdles operating at various levels of disaggregation, especially among households living in inhuman and non-congenial urban environments.

Though the country is progressing gradually towards the SDG targets in sanitation, the present situation shows various gradients with regard to achievement of the Joint Monitoring Programme (JMP) ladder. The first of several challenges includes unavailability of adequate data for making a comprehensive assessment of policies and programmes concerning WASH in the country up to the smallest urban units. The second important component of WASH is outreach of knowledge, which could spread awareness on importance of hygienic practices among the people living in urban areas, especially in slums. The third hurdle relates to behavioural factors leading to the gradual discarding of several ill practices such as open defecation and unhygienic handwashing practices, especially among the households living in impoverished surroundings. The fourth and important obstacle is lack of parity and participation among various stakeholders involved in improving WASH in the country.

There are serious challenges at both the supply and demand sides with regard to WASH. The exclusionary nature embedded in the process of urbanisation is the main driver of inequalities prevailing in all states in India. The exclusion of small and urban poor societies from infrastructural development, the big-city bias, inadequate capacity building of urban local bodies (ULBs), and under-utilisation or inadequacy of grants under various housing schemes are significant hurdles in promoting equitable and sustainable urban growth in the country. This is because of disparities in the programme utilisation across cities and urban areas, borne out of lack of ability to generate the matching funds (Planning Commission of India, 2013). Resultantly, a lack of piped water supply, inefficient sewerage and drainage system, and inadequate waste management

have become mounting challenges for the prevailing disparities in urban areas (NSS, 2018). Inequality in the utilisation of sanitation facilities in public schools is mainly attributed to lack of proper cleaning, and non-availability of water and soap at the place of handwashing. These public schools are accessed by children and adolescents from the poor urban communities. Besides poor infrastructure, proximity to open garbage, open defecation and poor coverage of sanitation and water facilities increase the exposure of the urban poor towards multiple morbidities which at times result in severe illness including deaths.

Besides supply side factors, behavioural inertness on the demand side also leads to the deprivation of people living in urban areas, especially in households belonging to urban poor settings. The study elucidates that safe and hygienic handwashing practices depend on several concomitant demarcations which are beyond the socio-economic development of the states. The information on basic hygienic practices from any survey is delimited by various gradients leading to prevailing disparities such as outreach of knowledge of safe practices, timings of handwashing, circumstances under which handwashing is performed and location of handwashing. It has been found that the majority of people wash hands after defecation and before eating food. However, under the most vulnerable circumstances, such as child caregiving, preparation of food, and disposal of children's fecal matter, handwashing is remarkably low in India. A majority of the population in rural areas and urban poor localities relies upon mud/sand for washing hands at various instances. The majority of the population still defecates in the open even after the construction of toilets, due to a resistance to change in habits.

Therefore, addressing the limitations on a war footing in India to both the supply and demand sides with regard to WASH is essential. It is acknowledged that merely investment in handwashing programmes could lead to 92 times economic returns in India (WHO, 2014). Considering the quantum of economic returns in the investment in WASH, the country needs to strengthen the practical implementation of the programme. Awareness campaigns at community and school level must be performed on a routine basis for promoting alertness for safe and best hygienic practices, treatment of water, coping strategies against ailments borne out of contaminated environments, and menstrual hygienic methods (MHM) among adolescents and young women. The structural and administrative impediments to WASH must be overcome and adequate financing and measures must be warranted on a priority basis for improving sectoral efficiency and service levels for inclusive growth of people living in poor urban societies, especially slums. Besides all these measures, an incentive mechanism should be designed for monitoring and rewarding communities who successfully achieve WASH targets before the timeline of 2030.

5

Education

5.1 Introduction

Urban India has been viewed as the site of 'economic betterment' and 'social mobility' through expanding opportunities and social status. Schools and colleges have emerged as a ladder for upward mobility and positional advantages (Nambissan, 2017). Though the 'urban advantages' act in the improvement of educational outcomes, there has been an exclusionary mechanism that positions socio-economically deprived sections of society in a more deprived situation than others. With the expansion of the market through induction of global capital, the landscape of educational opportunities is changing, where already existing 'positional advantages' reproduce the advantage-disadvantage continuum. Urbanisation has led to the emergence of specific concerns and questions regarding the adequacy and quality of basic educational opportunities for the normative development of children through effective learning (Govinda, 1995; Singh, 2015).

Over the years, though the enrolment ratio at different levels of education in urban India has improved significantly with many states performing beyond 90 per cent on a Gross Enrolment Ratio (GER), there is concern with regard to drop-outs, the quality of learning outcomes, methods of teaching and who attends what types of school. Privatisation has impacted accessibility, equity and the concepts of learning. Although the implementation of Sarva Shiksha Abhiyan (SSA) and the RtE ACT, 2009 had led to an improvement in access to education, a large section of children still remain out of the ambit of schooling (Giri and Singh, 2016; Mukherjee and Sikdar, 2012). Based on data provided by Population Census of India, 2011, Child Rights and You (CRY, 2018) has reported that nearly 23 per cent adolescents between ages 15 and 18 years in the urban Delhi-NCR region are drop-outs, while five per cent of the same age group have never been enrolled in any school (*India Today*, 2018). UNICEF Regional Office for South Asia (2014) noted that though the urban-rural gap is smaller in India, the deprivation in urban areas tends to be highly concentrated in specific groups, mainly slum dwellers and street children whose schooling situation is similar to the most disadvantaged in rural areas (UNICEF, 2014b). A significant share of children in India continue to stay out of school with most of them being engaged in different types of work (Lieten, 2000; Burra, 2001; Dev, 2004). Often many of them are dual-burdened with study and work simultaneously, which affects their performance in school. Though most studies (Govinda, 1995; Lieten, 2000, Burra, 2001; Dev, 2004, Singh, 2015) have primarily focused on the educational status of children in India, there has been a lack of research evidence on the gap between economically 'poor' and 'non-poor' children in urban areas. An in-depth analysis of this issue would be very helpful since the economy plays a major role in effective access to differential educational opportunities in today's globalised urban scenario.

Against this backdrop, this chapter explores the educational deprivation of children in urban India. More specifically, it tries to address the issue of how far the urban poor and marginal communities have been left behind in the overall educational development. However, there is a lack of in-depth analysis in participation, expenditure, and achievement in education with reference to poor children in urban India. An analysis of the subject of educational deprivation will help to develop an urban specific education policy.

The chapter is broadly divided into eight sections. The first section deals with access to school among poor children in urban India. This is followed by an analysis of achievement in learning outcomes, student

transition from one to another stage of education, age-appropriate completion, household (private) expenditure in education, reasons for not attending school, and ability to use information and communication technology (ICT) among children aged 6 to 17 years.

5.2 Access: Attendance Status in School

India is home to a large number of out-of-school children. According to estimates by the UNESCO Institute of Statistics (2013), 61 million out-of-school children (OOSC) aged 6 to 17 years (school age) live in India[1]. Though recent statistics claim universalisation of primary education in urban India with a gross enrolment ratio (GER) at 103 (U-DISE, 2016-17), the situation regarding children's attendance in school has been overlooked and unaccounted for. While 'enrolment' simply refers to the admission of children in a school, 'attendance' designates the turn-out of children in school throughout a year. The Global Initiative on Out-of-School Children by UNICEF has recognised that children not attending school are 'invisible' and often not considered in policymaking (UNICEF, 2014b). The Sustainable Development Goal (SDG) 4.1 aims to ensure that all girls and boys complete free, equitable, and quality primary and secondary education, leading to relevant and effective learning by 2030. To achieve this goal, daily attendance of children in school is very much anecessity rather than mere enrolment.

The latest round of National Family Health Survey (2015-16) shows that overall, 12.2 per cent of children aged 6 to 17 years had not attended school in the 2014-15 academic year in urban India. In the primary school age (6 to 13 years), 5 percent and 8.7 per cent among all urban and poor children espectively had not attended school in the same academic year. With the increase in age, there has also been an increase in the share of children-not-attending-school. A marginal gap between rural and urban India has been found, though there has been differentiation in the pattern of educational deprivation (UNICEF, 2014b). In general, low economic status of the household is very clearly associated with a higher share of children-not-attending-school (UNICEF, 2018; UNICEF, 2019). The question on the current status of children attending school among most disadvantaged groups, namely the economically weak, socially marginalised and in slum areas, with particular reference to urban India, has remained unanswered.

5.2.1 Status of attendance

In India, 15 out of 100 school-age children did not attend school in 2014-15 who were supposed to be there. Of this number, in urban areas 12.2 per cent did not attend school and among the urban poor[2] the share was 19.3 per cent children. This means 19 out of 100 urban poor school-age children have not attended any school, which figure is comparatively higher than the rural average. The urban poor are often relatively more deprived than those in rural areas. Fortunately, there has been a considerable decline in the share of urban poor childen not attending school, from 35.1 per cent in 2005-06 to 19.3 per cent in 2015-16, but there is a long way to go.

5.2.2 Status of attendance across gender and social groups

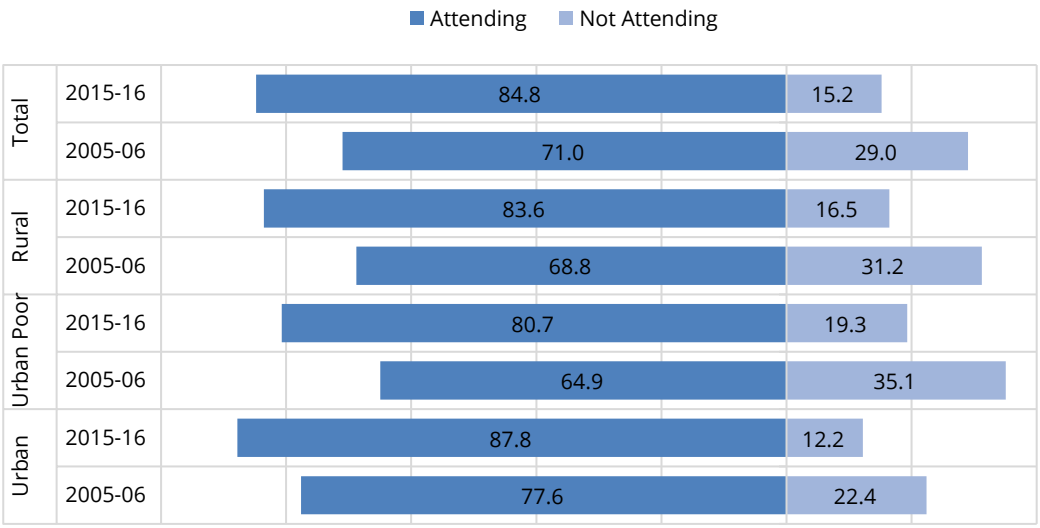
In India, two different pictures of attendance across gender have emerged in schooling. Due to the imbalance in the child sex ratio, a larger number of boys attend school than girls. However, while comparing the share of boys and girls attending school, school-age girls are ahead of their male counterparts. This gendered pattern of attendance is contrary to what is prevailing in work-participation or the labour market outside the domestic sphere.

Besides gender, social categories are also important factors influencing school attendance since the overall development status of households in India is closely associated with social hierarchy. In a similar way, there have been associations in the share of children aged 6 to 17 years attending school across social groups

1 UNESCO Institute of Statistics database as accessed on 26 October, 2019.

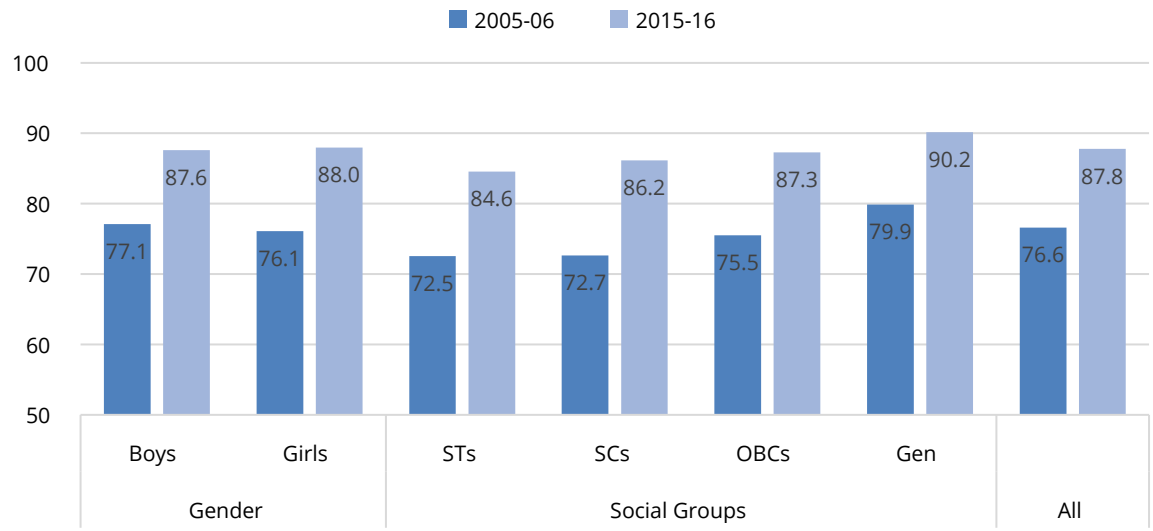
2 The lowest two urban wealth quintile classes have been classified as 'poor' while the top three urban quintile classes are termed as 'non-poor' in urban India.

Figure 5.1: Percentage Share of Children Aged 6 to 17 Years as per Attendance Status in Schools, India, 2005-06 and 2015-16



Note: Figures include de facto as well as de jure children within respective age groups.
Children's age refers to their age at the start of the 2014-15 school year (assumed here to be April 2014) for the first phase and at the start of the 2015-16 school year (assumed here to be April 2015) for the second phase.
The survey was conducted in 2015-16. Therefore, the attendance status of children refers to their attendance in the 2014-15 school year (the previous academic school year).
The Ministry of Human Resource Development (MHRD) recommended the appropriate age for school education as 6-17 years.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

Figure 5.2: Age-specific Attendance Ratio (ASAR) Among Children Aged 6-17 Years by Social Groups and Gender in Urban India, 2005-06 and 2015-16



Note: STs: Scheduled Tribes; SCs: Scheduled Castes; OBCs: Other Backward Classes; Gen: General (Others)
Source: Computed from NFHS – 3, 2005-06 and NFHS-4, 2015-16

in urban India and their position in the social hierarchy. Children of Scheduled Tribes (STs) and Scheduled Castes (SCs) have been most deprived. However, over time (between 2005-06 and 2015-16), the Age-Specific Attendance Ratio (ASAR)[3] across all social groups has improved.

5.2.3 Status of attendance in selected cities

An analysis of children's attendance in school across cities would be beneficial in identifying cities with a higher share of children not attending school. A disaggregated analysis for slums and non-slums has been possible for only eight cities from NFHS-4 data (2015-16). These eight cities are Chennai, Delhi, Hyderabad, Indore, Kolkata, Meerut, Mumbai and Nagpur. A total of 88 per cent school-age children have attended school in these eight cities. The gap in status of attendance by residence between slums and non-slums is 8 per cent with deprivation among slum children. Among poor children, 81 per cent have attended school. Across gender, the share of children attending school has been higher among girls than boys, similar to the national scenario.

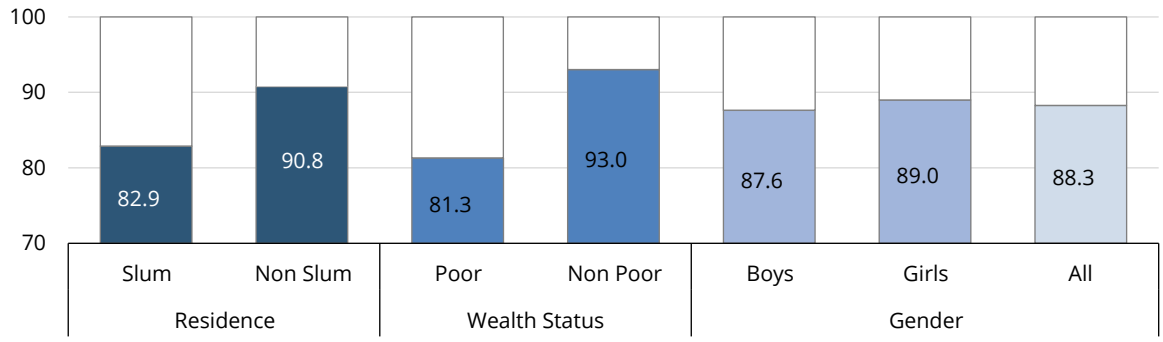
5.2.4 Age-specific attendance status

An analysis of age-specific school attendance is beneficial to identify age groups that are lagging. The overall school age (6 to 17 years) has been disaggregated into three age groups appropriate for the elementary, secondary, and higher secondary levels of education. With increase in age, there has been a decline in the share of children attending school, most considerably among poor households. More than half of urban poor[4] children in the age group of 16-17 years have not attended any school at any level. This figure is higher than the urban average. Children tend not to attend school particularly when they reach working age, which is 16-17 years. The rate of decline in the share of children not attending school with the increase in age has been higher among poor children than what is observed among all-urban children. More than half of poor children aged 16 to 17 years have not attended school in the 2014-15 academic year.

5.2.5 Age-specific attendance status across social groups

Since the development status of households is closely linked with hierarchies of social groups in India, it is necessary to look into the age-specific attendance status across social groups. Only 54.4 per cent ST

Figure 5.3: Age-specific Attendance Ratio (ASAR) Among Children Aged 6-17 Years in Eight Cities, 2015-16

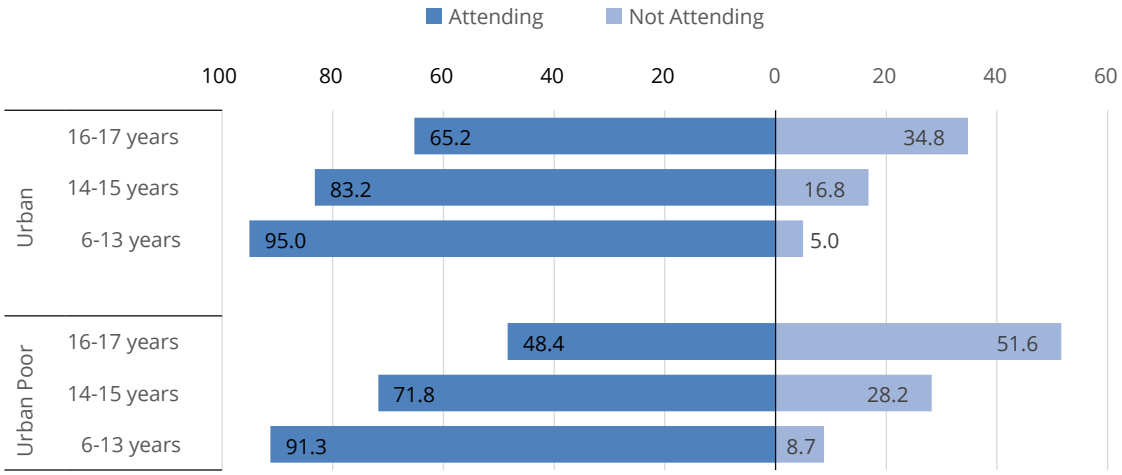


Note: Disaggregated data for only eight cities is available in NFHS-4. Hence, the figures mentioned above are based on the following eight cities: Chennai, Nagpur, Mumbai, Delhi, Kolkata, Hyderabad, Indore, Meerut.
Source: Computed from NFHS-4, 2015-16

3 Children of a specific age-group who are attending school, irrespective of the level of education, as a percentage of the population of the same age group. The calculation method is to divide the number of students of a specific age group who are attending school at all levels of education by the population of the same age group and multiply the result by 100.

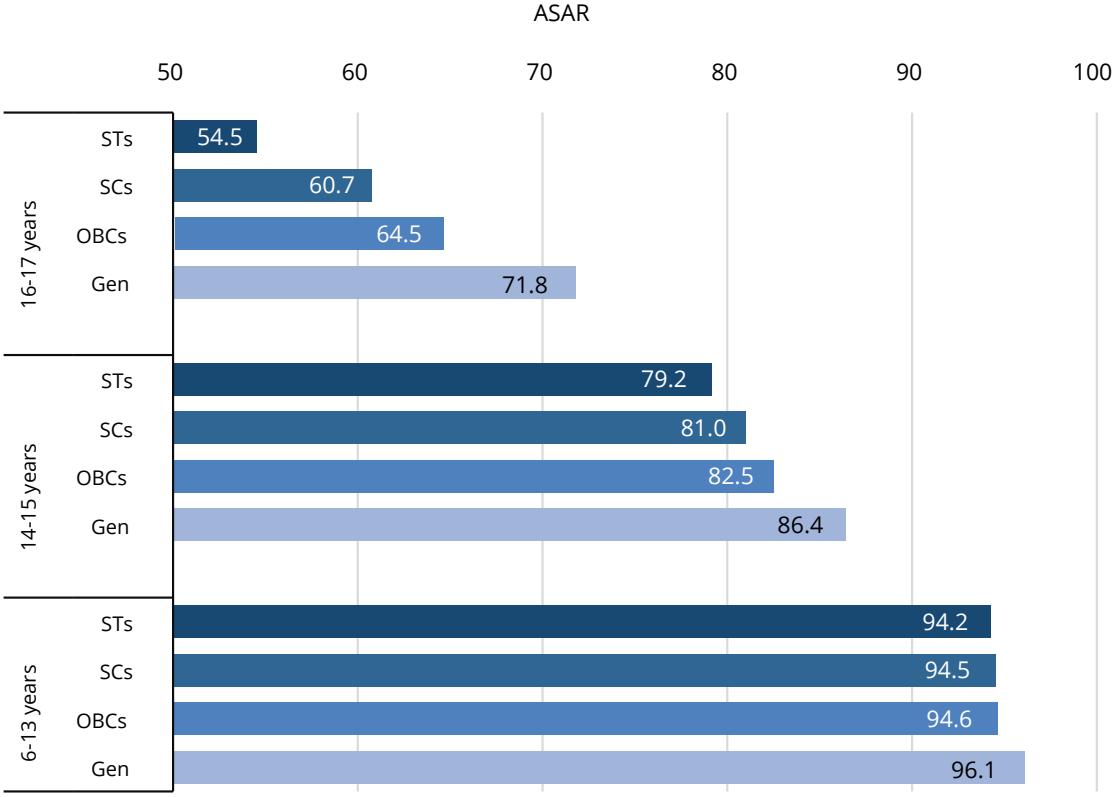
4 The lowest two quintile classes of the urban wealth index in both NFHS-3 (2005-06) and NFHS-4 (2015-16) database have been treated as 'poor' and the rest as 'non-poor' for urban India.

Figure 5.4: Percentage Share of Children as per Attendance Status in Schools by Age Groups, Urban India, 2015-16



Note: Reference levels of education for selected age groups are: 6-13 years: elementary; 14-15 years: secondary; 16-17 years: higher secondary.
Source: Computed from NFHS-4, 2015-16

Figure 5.5: Age-specific Attendance Ratio (ASAR) Among Children Across Social Groups in Urban India, 2015-16



Note: Reference levels of education for selected age groups are: 6-13 years: elementary; 14-15 years: secondary; 16-17 years: higher secondary.
Source: Computed from NFHS-4, 2015-16

children have attended school within the ages of 16 to 17 years, which is the lowest among all social groups. This figure is much lower than what is observed among children in the 'general' category.

5.2.6 Age-specific attendance status by residence in cities

A comparison of Age-Specific Attendance Ratio (ASAR) between slum and non-slum areas in selected eight cities shows that the gap of 4 per cent among 6 to 13 years aged children increases to 23 per cent among children aged 16-17 years. Only 51.8 per cent children aged 16-17 years in slums have attained school. Children in the working age 16-17 years, particularly in slum areas, are most likely to leave the schooling system.

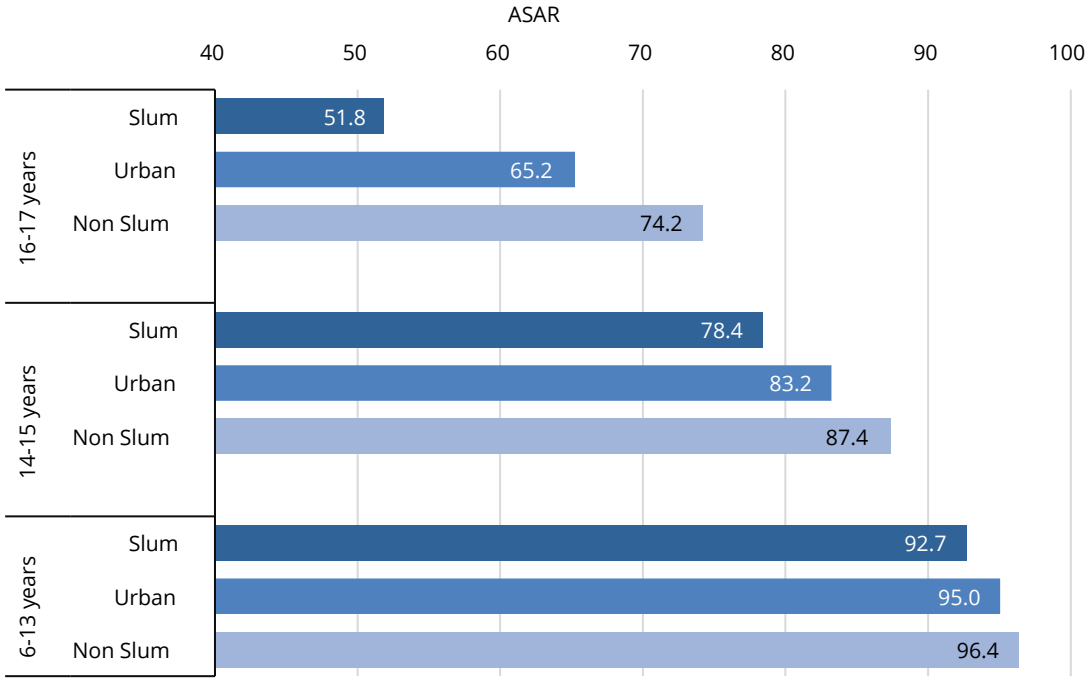
5.2.7 Gender parity in age-specific attendance status

The gap between boys and girls in the status of attendance in school has been low in urban India. Importantly, the overall share of girls who attended school has been higher than boys, which is the opposite of the gendered pattern in work participation. There have been differences in the gendered pattern of school attendance across age groups appropriate for different levels of school education. The attendance rate among girls aged 6 to 15 years has been higher than for boys in urban India. However, this pattern has changed in the 16 to 17 year age group where the share of boys' attendance has been more than that of girls. In this age group, girls left school due to marriage. There are preferences that girls stay in school till they attain the age for marriage, and boys leave school once they reach working age.

5.2.8 Attendance status across states

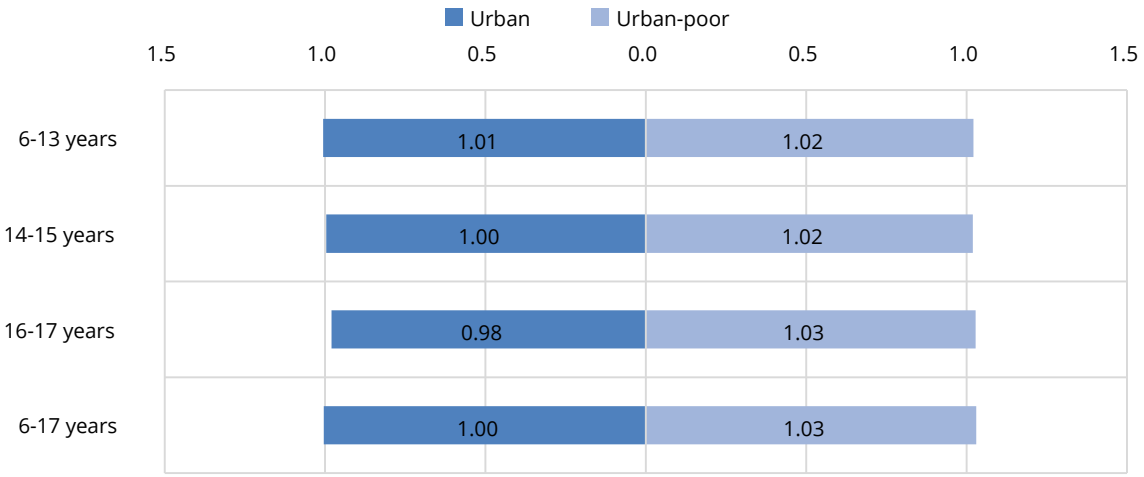
Across states, there were wide variations in the share of children attending school. While urban Kerala has appeared as the best performing state with 96.6 per cent of urban poor children attending school, Uttar

Figure 5.6: Age-specific Attendance Ratio (ASAR) in Slum and Non-slum Areas in Urban India, 2015-16



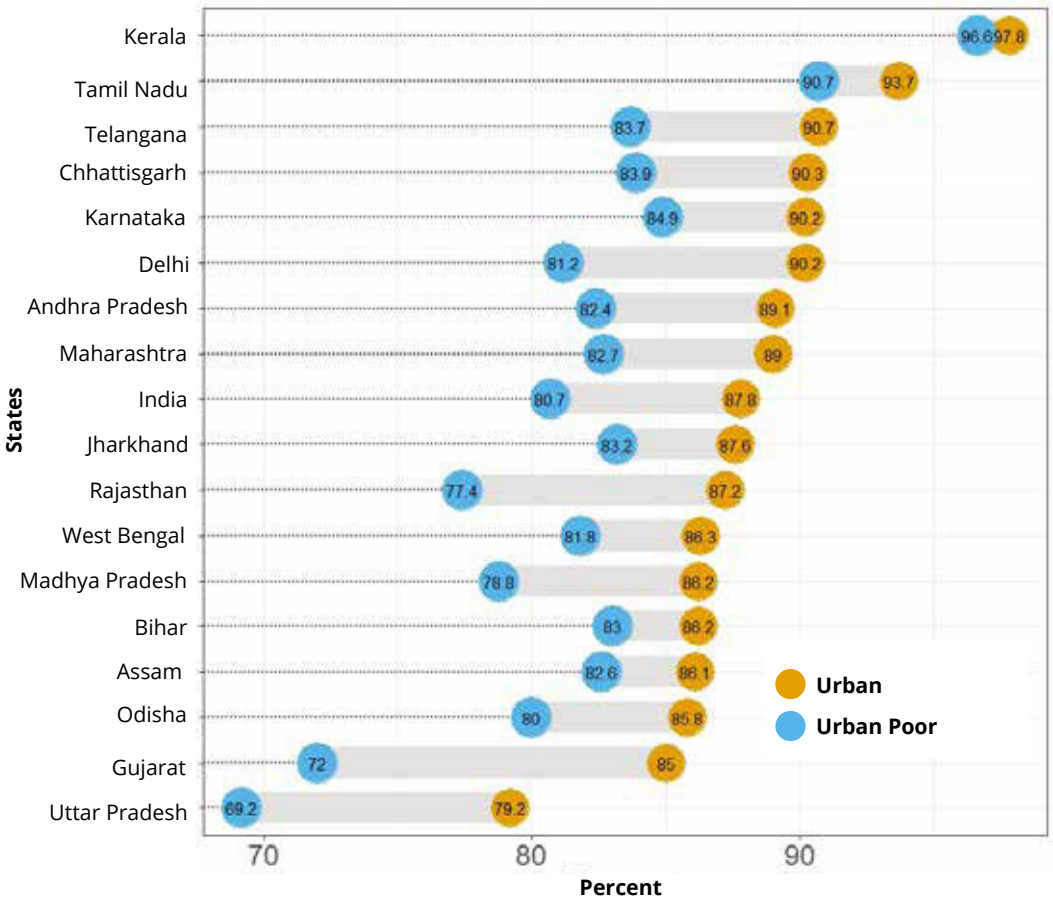
Note: Disaggregated data for only eight cities is available in NFHS-4. Hence, the figures mentioned above are based on the following eight cities: Chennai, Nagpur, Mumbai, Delhi, Kolkata, Hyderabad, Indore, Meerut.
Source: Computed from NFHS-4, 2015-16

Figure 5.7: Gender Parity Index (GPI) in Age-specific Attendance Ratio (ASAR) in Urban India, 2015-16



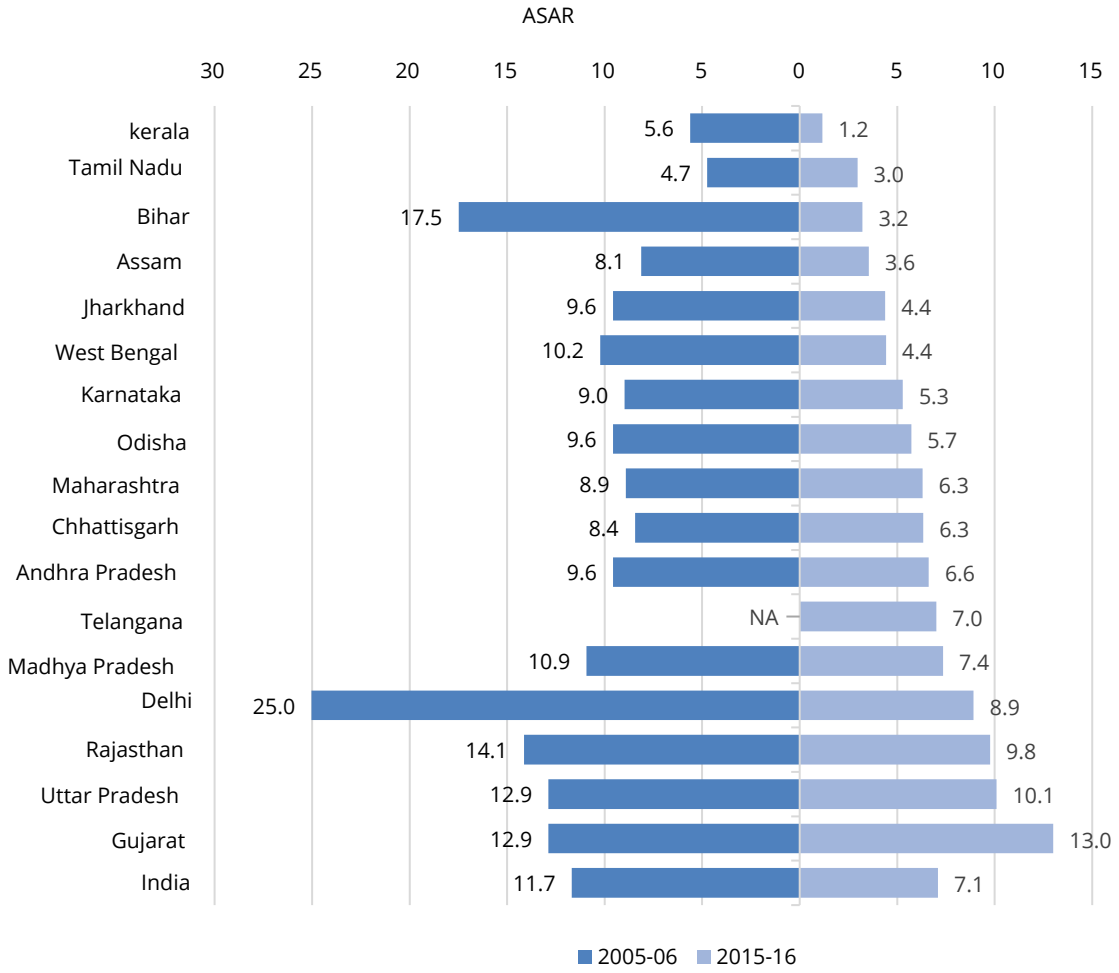
Note: Data from 16 states where UNICEF has a presence has been analysed in detail along with NCT of Delhi and India. Gender Parity Index (GPI): Divide the value for girls of an indicator by the value for boys of the same indicator. GPI equal to 1 indicates parity between girls and boys. A value less than 1 indicates a disparity in favour of boys, and a value greater than 1 indicates a disparity in favour of girls.
Source: Computed from NFHS-4, 2015-16

Figure 5.8: Age-specific Attendance Ratio (ASAR) among Children Aged 6-17 Years Across States in Urban India, 2015-16



Note: Data for 16 states where UNICEF has a presence along with Delhi and India has been visualised here.
Out of five national wealth quintiles for urban India, the bottom two are defined as 'poor'. These include 'poor' and 'poorest'.
Source: Computed from NFHS-4, 2015-16

Figure 5.9: Gap Between Poor and Non-poor in Age-specific Attendance Ratio (ASAR) among Children Aged 6 to 17 Years in Urban India, 2005-06 and 2015-16



Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

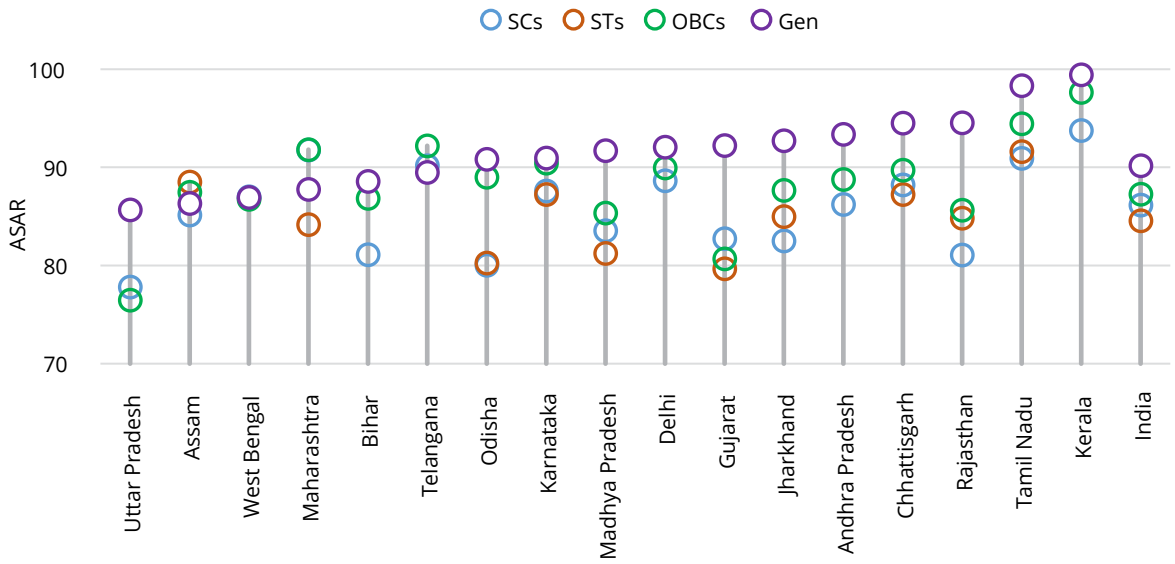
Pradesh is at the bottom (69.2%). The gap between poor and non-poor children has been lower in states such as Tamil Nadu, Karnataka, Assam, Bihar and West Bengal. According to the UNICEF categorisation, high burden states, namely Uttar Pradesh, Rajasthan, Madhya Pradesh and West Bengal, along with Gujarat and NCT of Delhi have a relatively higher level of gap between the poor and non-poor. Chhattisgarh, a predominantly tribal state, performed relatively well.

Besides looking into the actual status of the urban poor with reference to the urban average, there has been a need to look into the gap between poor and non-poor children in urban India. A comparison over time will shed light on the change in gap between poor and non-poor children. Bihar and NCT of Delhi have considerably reduced the gap between the urban poor and non-poor children as per age-specific attendance ratio. Other performing states in bringing down inequality are Kerala, Tamil Nadu, Assam, Jharkhand, West Bengal, Karnataka and Odisha. On the other side, there are several states which have failed to address the gap between poor and non-poor children in terms of attending school. These are Madhya Pradesh, Rajasthan, Uttar Pradesh and Gujarat.

5.2.9 Attendance status by social groups across states

Across all selected states except Assam, Maharashtra and Telangana, 'general' children have a better level of attendance than SCs, STs and OBCs. The gap in the share of children attending school across different social

Figure 5.10: Age-specific Attendance Ratio (ASAR) Among Children Aged 6-17 Years by Social Groups in Urban India, 2015-16



Note: States with adequate sample size for ST children in urban areas have been visualised here.
SCs: Scheduled Castes; STs: Scheduled Tribes; OBCs: Other Backward Classes; Gen: General (Others)
Source: Computed from NFHS-4, 2015-16

groups is relatively higher in the states of Uttar Pradesh, Madhya Pradesh, Gujarat, Jharkhand, Rajasthan and Tamil Nadu. Scheduled Tribes (STs) children are always lagging in every state except Assam. Except Odisha, the share of ST children who attended school has been relatively better in tribal dominated states, namely Jharkhand, Chhattisgarh and Assam. A comparatively better level of convergence in school attendance by social groups has been observed in the urban areas of Assam, West Bengal, Telangana, Karnataka and NCT of Delhi.

5.2.10 Attendance status in cities

On an average, 88.3 per cent children aged 6 to 17 years in selected eight cities[5] have attended school in the 2014-15 school academic year. This is marginally higher than the national urban average (87.8%). Among the selected eight cities, Chennai is the best performing city where 96.1 per cent school-age children have attended school while Meerut is the worst (67.5%). A gap of 20 per cent exists between the performance of Meerut and urban India. Meerut is located in the high burden state of Uttar Pradesh where 79 out of 100 urban school-age children have not attended any school.

5.2.11 Attendance status by residence in cities

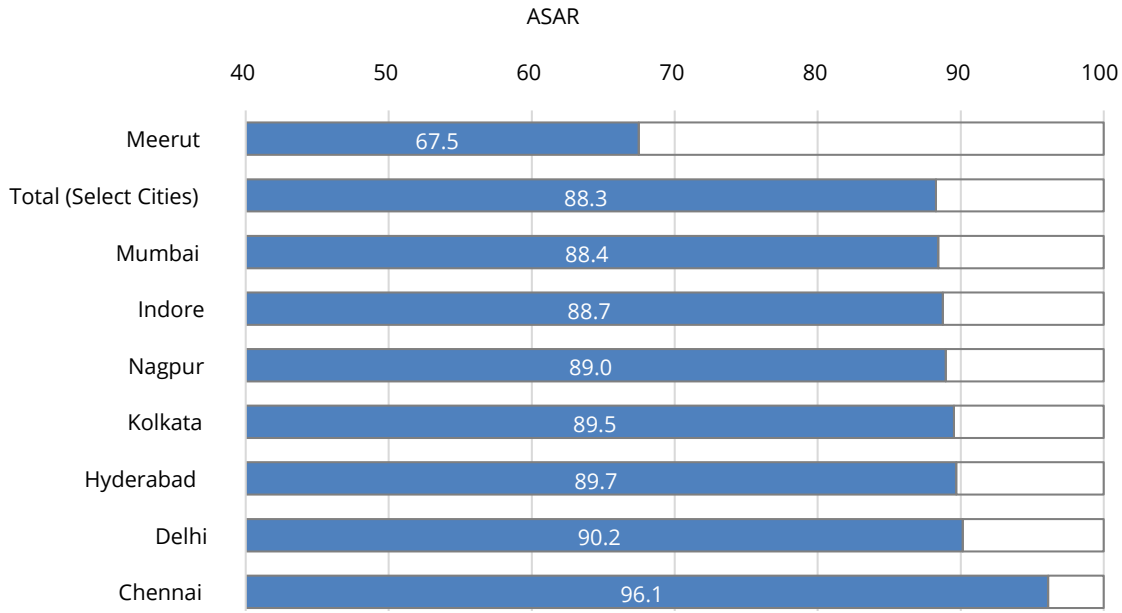
Two completely different worlds are in existence in cities—the slum and non-slum areas. While slums struggle to access basic amenities, non-slum areas are believed to be in a better situation. In all eight cities of Chennai, Hyderabad, Mumbai, Indore, Kolkata, Delhi, Nagpur and Meerut, except for Nagpur, slum children are left behind as per share of children who attended school. Surprisingly, the situation of school-age slum children has been better than the overall urban average in Nagpur. The gap between slum and non-slum children has been highest in Meerut and lowest in Chennai.

5.2.12 Gender parity in attendance across states

In this section, the gender parity in the share of children attending schools has been explored across states.

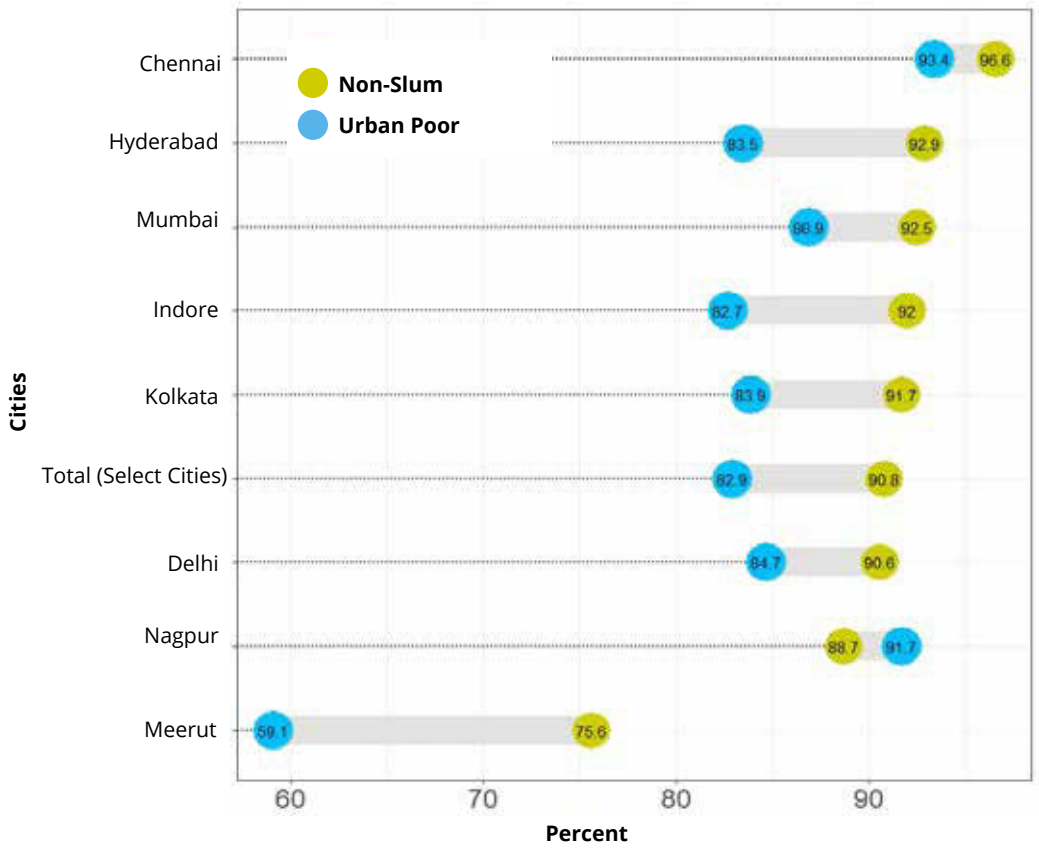
5 Meerut, Mumbai, Indore, Nagpur, Kolkata, Hyderabad, Delhi and Chennai.

Figure 5.11: Age-specific Attendance Ratio (ASAR) Among Children Aged 6-17 Years Attending School in Select Eight Cities in India, 2015-16



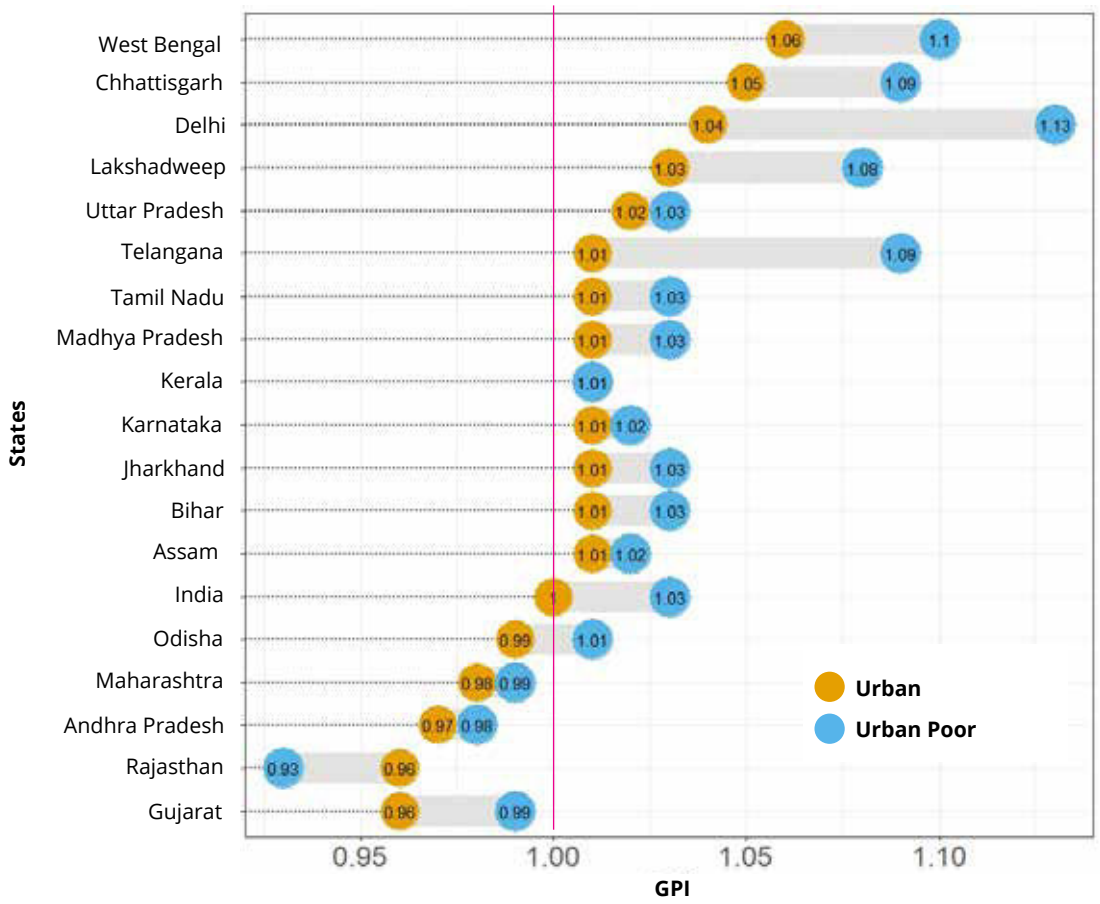
Source: Computed from NFHS-4, 2015-16

Figure 5.12: Age-specific Attendance Ratio (ASAR) Among Children (6-17 Years) Attending School in Select Cities in India, 2015-16



Note: Disaggregated data for Slum and Non-slum for only eight cities is available in NFHS-4 data. No significant gap has been found between the share of boy and girl children attending school. Hence, this is omitted from this analysis.
Source: Computed from NFHS-4, 2015-16

Figure 5.13: Gender Parity Index (GPI) in Age-specific Attendance Ratio (ASAR) among Children (6-17 years) in Urban India, 2015-16



Note: Data from 16 states where UNICEF has a presence has been analysed in detail along with NCT of Delhi and India.
Gender Parity Index (GPI): Divide the value for girls of an indicator by the value for boys of the same indicator. GPI equal to 1 indicates parity between girls and boys. A value less than 1 indicates a disparity in favour of boys and a value greater than 1 indicates a disparity in favour of girls.
Source: Computed from NFHS-4, 2015-16

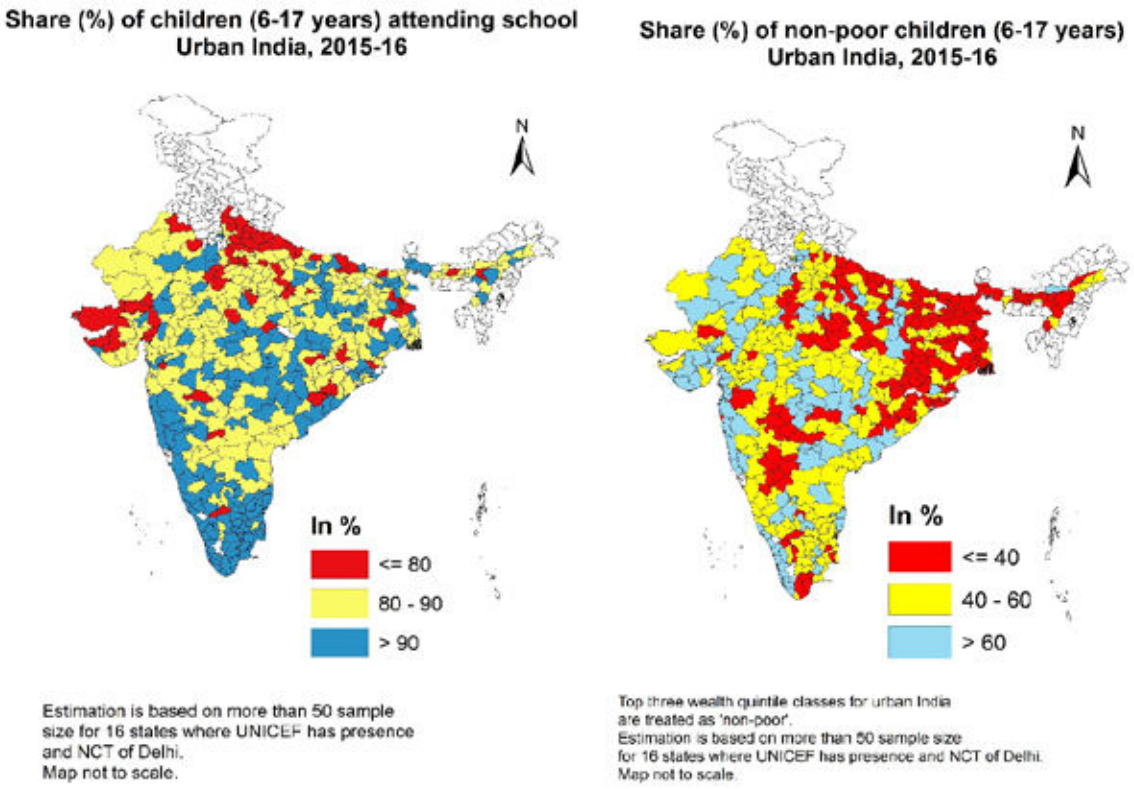
Girls perform marginally better than boys in urban India, which made the Gender Parity Index (GPI) almost equal to 1. It has been observed that a relatively higher share of girl children than boys have attended school in the 2014-15 academic year in urban areas of all states except Odisha, Maharashtra, Andhra Pradesh, Rajasthan and Gujarat. In these states, the disparity has been in favour of boys. Surprisingly, the disparity in favour of girls has been observed among urban poor children in all states except Rajasthan.

5.2.13 Distribution of children attending school across districts

The state-level distribution of children attending school presents a broad picture and is unable to capture pockets of deprivation. Therefore, an analysis at the district level of the share of children attending school in urban areas has been attempted here. Along with this, the spatial distribution of non-poor children has been attempted to see the association between attendance and spatial concentration of 'non-poor' children as per the wealth status of children's households. Across districts, the share of children not attending schools has been relatively lower in northern India, which also has a lower concentration of non-poor children. Urban areas of districts in south India have performed quite well with regard to attendance in school and have a relatively less concentration of poor children.

Overall, it has been observed that a considerable share of school-age children (6-17 years) in urban India, especially urban poor children, have not attended school in the academic year 2014-15. Also, with an increase in age of children, there has been an increase in the share of children not attending any school. The

Figure 5.14: Spatial Distribution of Age-specific Attendance Ratio (ASAR) for Children (6-17 Years) and Non-poor Children (6-17 Years) in Urban India, 2015-16



Note: Due to the small sample size, this analysis is not possible separately for 'poor' and 'non-poor'.
Children refers to all within school age 6 to 17 years.
Two positive indicators such as 'ASAR' and 'share of non-poor children' has been presented to keep parity.
Source: Computed from NFHS-4, 2015-16

universalisation of enrolment at the primary level does not guarantee that children attend school regularly. We find that a considerable number of children have dropped out from the school system. Therefore, the status of universalisation of primary education is in question. There is an urgent need to improve the socio-economic status of children so that they attend school for effective learning. At the age of secondary education level (14-17 years), almost half of urban poor children do not attend school since they need to work to support their family income. This situation is worse in low income and high burden states such as Assam, Bihar, Odisha, Madhya Pradesh and West Bengal. The economic prosperity of a state may not improve the status of children from poor and marginalised sections. For example, Gujarat, which is a relatively well-endowed state economically, has a very high gap between poor and non-poor, while Bihar, though not so well developed economically, has appeared as more inclusive. This finding asks for an effective redistributive mechanism and inclusive policy for the betterment of downtrodden sections of society.

5.3 Achievement in Learning Outcomes

According to the World Bank, 'the world is facing a learning crisis'.[6] Though many countries including India have increased the participation of children in school, there has been a severe prevalence of 'learning poverty'. Learning poverty means being unable to read and understand a simple text by age 10 years. UNICEF Education Strategy (2019-30) has taken up learning crisis as a top priority. According to the analysis, a total of 387 million primary school-age children and 230 million secondary school-age adolescents are not achieving minimum proficiency level in reading and mathematics. Currently, 53 per cent of children in low- and middle-

6 https://www.worldbank.org/en/news/immersive-story/2019/01/22/pass-or-fail-how-can-the-world-do-its-homework, as accessed on 26 October, 2019.

income countries cannot read and understand a simple story by the end of primary school. In poor countries, the level is as high as 80 per cent. Such high levels of illiteracy are an early warning sign that all global educational goals and other related sustainable development goals are in jeopardy.[7]

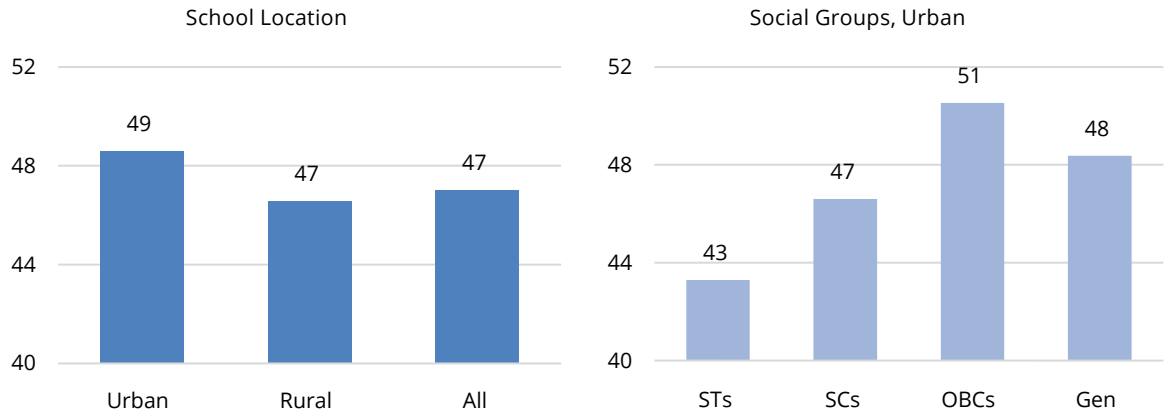
The draft report of the National Education Policy (2014) in India recognised the dismal state of learning outcomes in India. Imparting quality education will lead to better achievement in terms of learning outcomes. Measurement in learning outcomes reflects the health status of any education system. In this section, an in-depth analysis has been carried out on learning outcomes for two subjects, namely, language and mathematics among students studying in class V at government and government-aided schools in the academic year 2016-17 from the National Achievement Survey (2017).[8] These two subjects are internationally recognised as necessary to analyse learning outcomes. But due to unavailability of students' household characteristics in the public domain, it is not possible to explore any association between socio-economic characteristics and learning outcomes.

Student performance can be expressed as a percentage of students classified in each performance level, such as: below basic, basic, advanced, and proficient (NAS National Report, 2019). For this study, the share of students who achieved a basic or desired level of proficiency[9] has been taken as an indicator of achievement. This category of basic/desired levels includes an advanced and proficient level of proficiency in respective subjects.

5.3.1 Basic proficiency in language

In India, only 47 per cent students in class V attained a basic proficiency level in language, which reflects the dismal state of learning. The performance in urban India is marginally better than the national, with only

Figure 5.15: Percentage Share of Students who Attained Basic (Desired) Proficiency Level in Language at Class V in Government and Government-aided Schools, India, 2017



Note: STs: Scheduled Tribes; SCs: Scheduled Castes; OBCs: Other Backward Classes; Gen refers to others not classified in earlier categories.
Source: Computed from NAS, 2017

7 https://www.worldbank.org/en/topic/education/brief/learning-poverty, as accessed on 26 October, 2019.

8 National Achievement Survey (NAS) measures the learning outcomes in selected subjects since 2001 for elementary stages (class III, V, and VIII) and since 2015 for class X periodically. The latest NAS among students at government and government-aided schools for elementary and secondary levels has been conducted in 2017 and 2017-18 respectively. Learning outcomes have been assessed for language, mathematics, and environmental science at class III and V, and language, mathematics, science, and social science at class VIII, for a total of 2.2 million students from 1,10,000 schools across 701 districts in 36 states/UTs. NAS is the most extensive assessment survey of students' achievement in India, conducted by NCERT. The proficiency of individual students has been determined using internationally acclaimed Item Response Theory (IRT) and classified into: below basic, basic, advanced, and proficient categories.

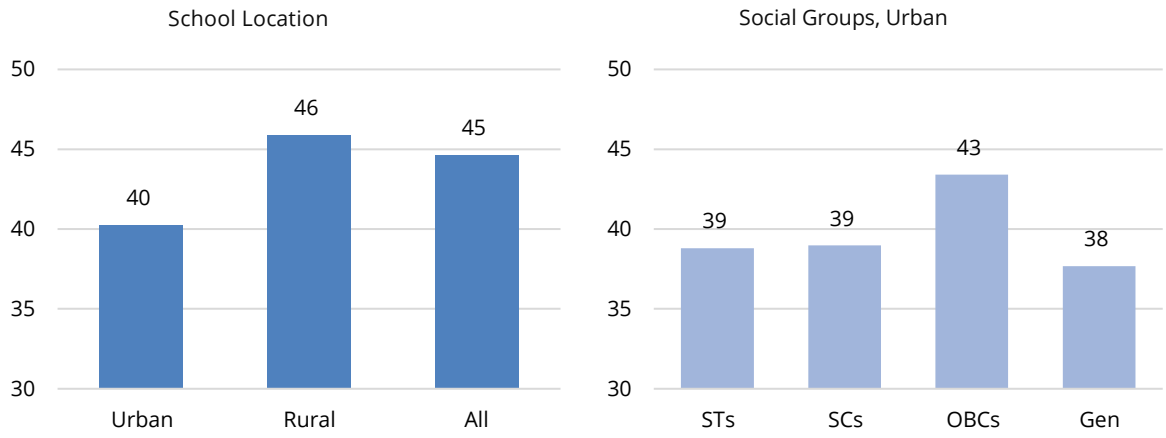
9 Learners at basic (desired) proficiency level have at least acquired most of the learning outcomes and skills required by the curriculum. They can work independently with minimum supervision.

49 per cent students in class V having achieved basic proficiency in language (2017). That means, 51 out of 100 students are lagging in acquiring the desired proficiency in language in urban India. Across social groups, Other Backward Classes (OBCs) have the highest share of students who have attained basic proficiency level in urban India.

5.3.2 Basic proficiency in mathematics

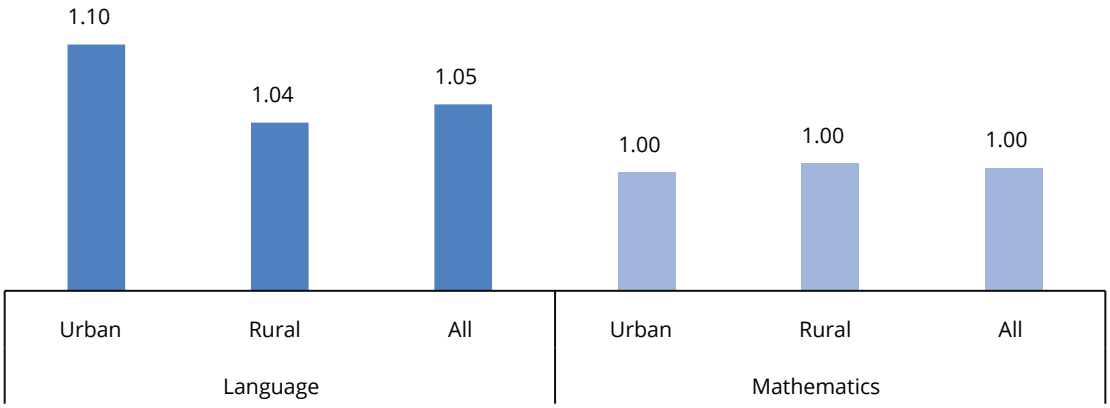
In mathematics, only 40 per cent students at class V acquired a basic proficiency level in urban areas, which is very much lower than its rural counterpart and national average. Across social groups, an equal share (39%) of STs and SCs have achieved basic proficiency level in mathematics. A similarity in the performance trend has been observed between language and mathematics across social groups.

Figure 5.16: Share (%) of Students Who Attained Basic (Desired) Proficiency Level in Mathematics at Class V in Government and Government-aided Schools, India, 2017



Note: STs: Scheduled Tribes; SCs: Scheduled Castes;, OBCs: Other Backward Classes; Gen refers to others not classified in earlier categories.
Source: Computed from NAS, 2017

Figure 5.17: Gender Parity Index (GPI) Among Students who Attained Basic Proficiency Level in Government and Government-aided Schools, India, 2017



Gender Parity Index (GPI): Divide the value for girls of an indicator by the value for boys of the same indicator. GPI equal to 1 indicates parity between girls and boys. A value less than 1 indicates a disparity in favour of boys and a value greater than 1 indicates a disparity in favour of girls.
Source: Computed from NAS, 2017

5.3.3 Gender parity in basic proficiency

Girl students have performed better than boys in achieving a basic proficiency level in language as a subject. Gender equality has been observed in learning outcomes in mathematics at class V. The highest gender disparity in favour of girls has been observed in achieving basic proficiency in language in urban areas. This type of gendered pattern is similar to what is observed in status of attendance in school among school-age children.

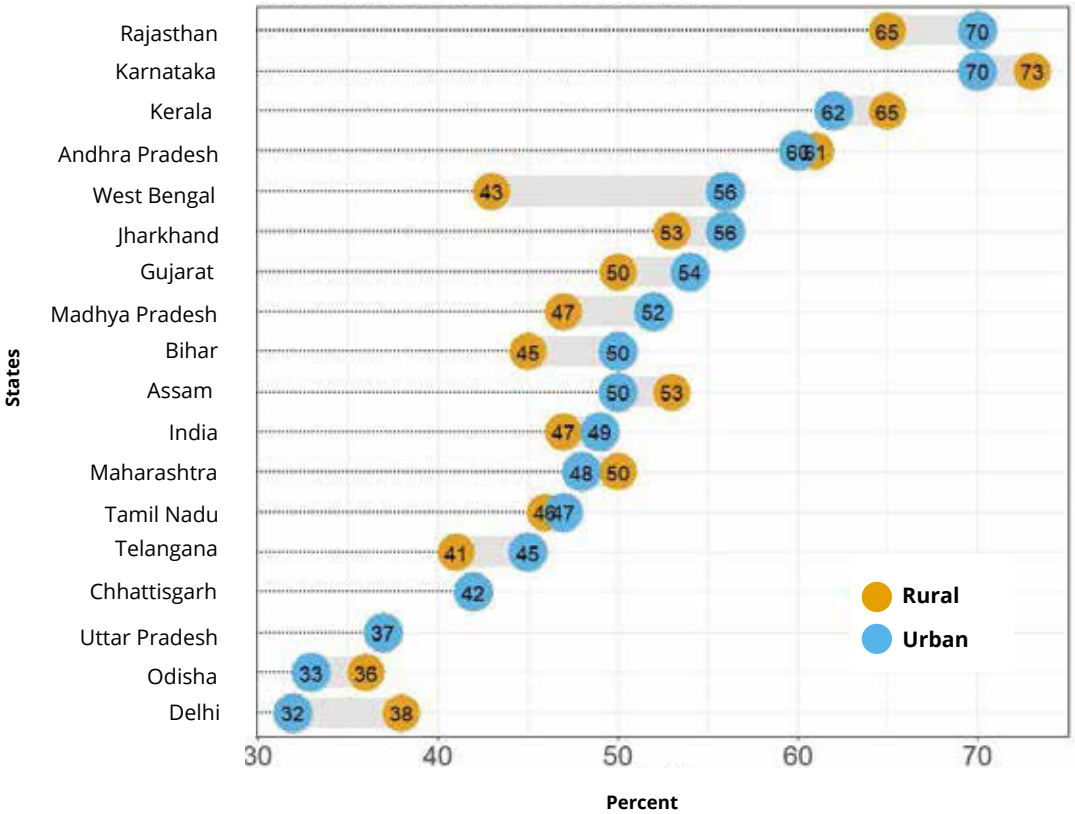
5.3.4 Learning outcomes in language across states

There have been wide variations across states in the share of students who attained basic proficiency level in language at class V in government and government-aided schools in both rural and urban areas. Rajasthan, Karnataka and Kerala have been the top three performing states while Delhi, Odisha and Uttar Pradesh have been the lowest three states. In the states of Karnataka, Kerala, Andhra Pradesh, Assam, Odisha and Delhi, achievement among urban students has been lower than the rural. The gap between urban and rural has been highest in West Bengal.

5.3.5 Gender parity in learning outcomes in language across states

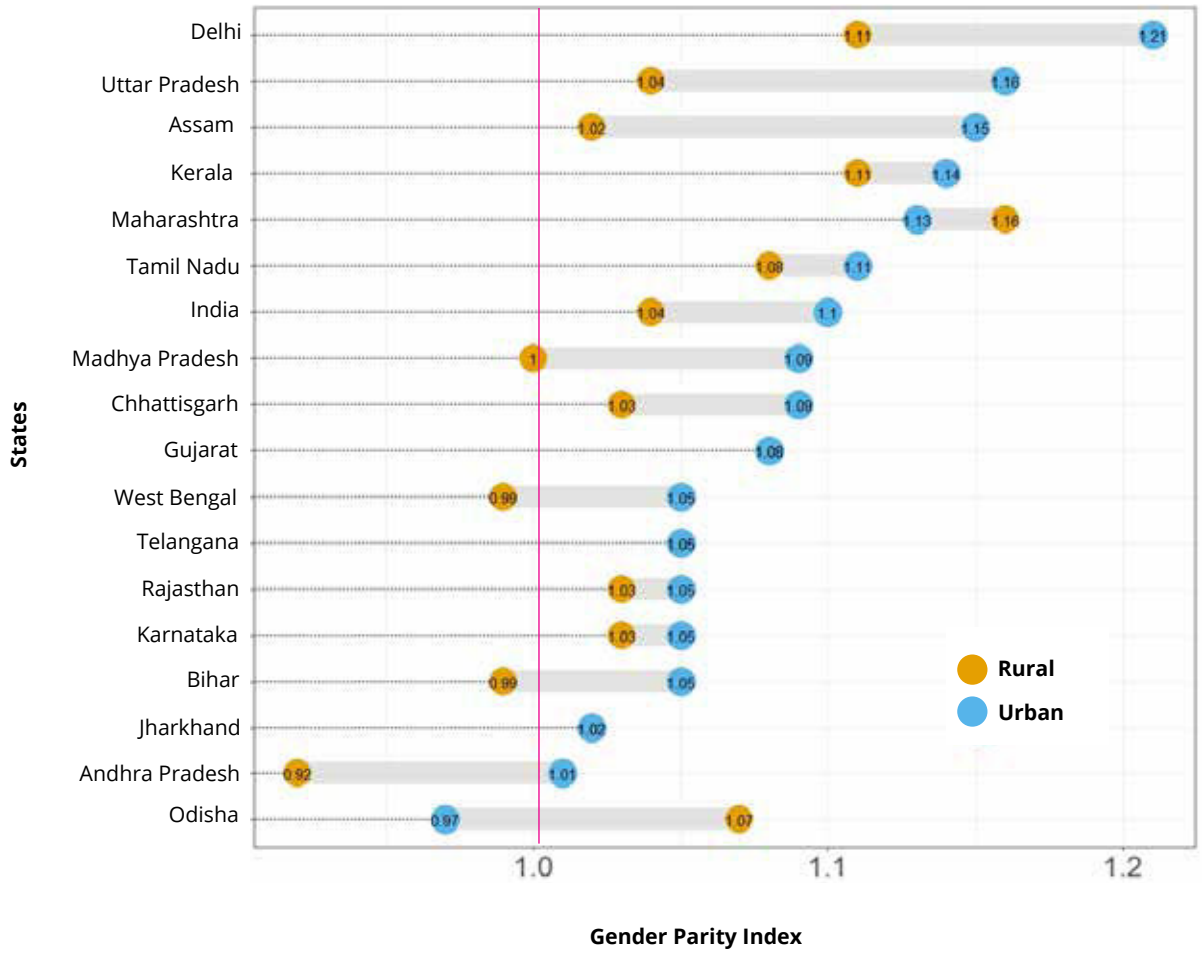
A high share of girl students attained a basic proficiency level in language in all states except Odisha in urban India. Also, the disparity in favour of girls has been higher in urban areas than in rural in all states except Maharashtra and Odisha. A high gap in gender disparity between rural and urban areas has been observed in Delhi, Uttar Pradesh, Assam, Madhya Pradesh, Chhattisgarh, West Bengal, Bihar, Andhra Pradesh and Odisha.

Figure 5.18: Percentage Share of Students who Attained Basic Proficiency Level in Language at Class V, India, 2017



Note: Learning outcomes have only been measured among students in government and government-aided schools. States where UNICEF has a presence along with NCT of Delhi and India have been visualised here.
Source: Computed from NAS, 2017

Figure 5.19: Gender Parity among Students who Attained Basic Proficiency Level in Language at Class V, India, 2017



Note: Learning outcomes have only been measured among students in government and government-aided schools. States where UNICEF has a presence along with NCT of Delhi and India have been analysed here.
Gender Parity Index (GPI): Divide the value for girls of an indicator by the value for boys of the same indicator. GPI equal to 1 indicates parity between girls and boys. A value less than 1 indicates a disparity in favour of boys and a value greater than 1 indicates a disparity in favour of girls.
Source: Computed from NAS, 2017

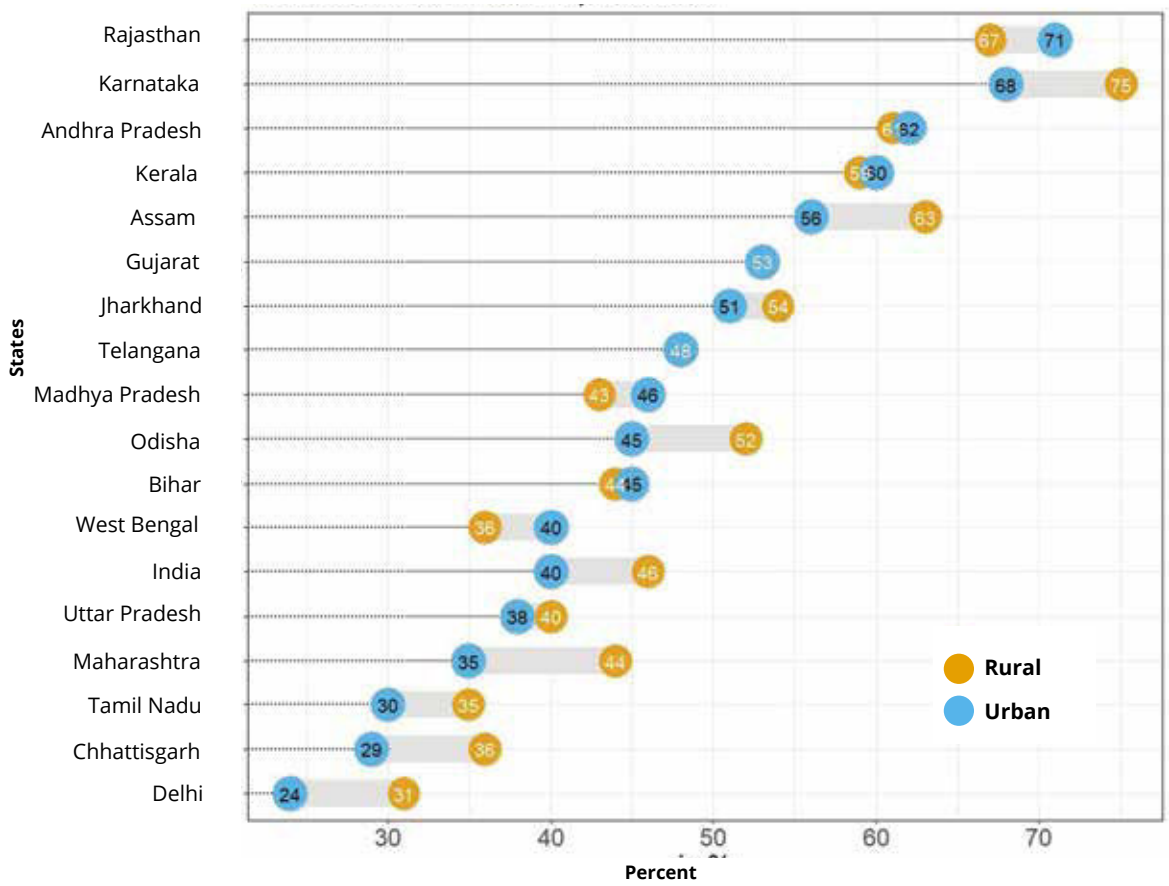
5.3.6 Learning outcomes in mathematics across states

The top three performing states as per share of students who attained basic proficiency level in mathematics at class V are Rajasthan, Karnataka and Andhra Pradesh, and the lowest three are Tamil Nadu, Chhattisgarh and Delhi. Only 24 out of 100 students at class V have acquired basic (desired) proficiency level in mathematics in urban Delhi, which is significantly lower than the national average (40%). Rural students outperform the urban in many states such as Karnataka, Assam, Odisha, Assam, Maharashtra and Chhattisgarh. The difference between the top and bottom states as per performance of students in achieving basic proficiency level in mathematics at class V has been very wide among both rural and urban students. While 71 out of 100 students in government and government-aided schools at class V have achieved basic proficiency in urban Rajasthan, only 24 out of 100 students have achieved the same in urban Delhi. Improving this situation in all these lagging states is the biggest challenge to eradicate poverty in mathematics in India.

5.3.7 Gender parity in learning outcomes in mathematics across states

In urban India, gender disparity in the share of students who attained a basic proficiency level in mathematics has been in favour of boys across all selected states except Maharashtra, Tamil Nadu, Chhattisgarh, West Bengal and Uttar Pradesh. The gap in gender disparity between rural and urban has also been relatively

Figure 5.20: Percentage Share of Students who Attained Basic Proficiency Level in Mathematics at Class V, India, 2017



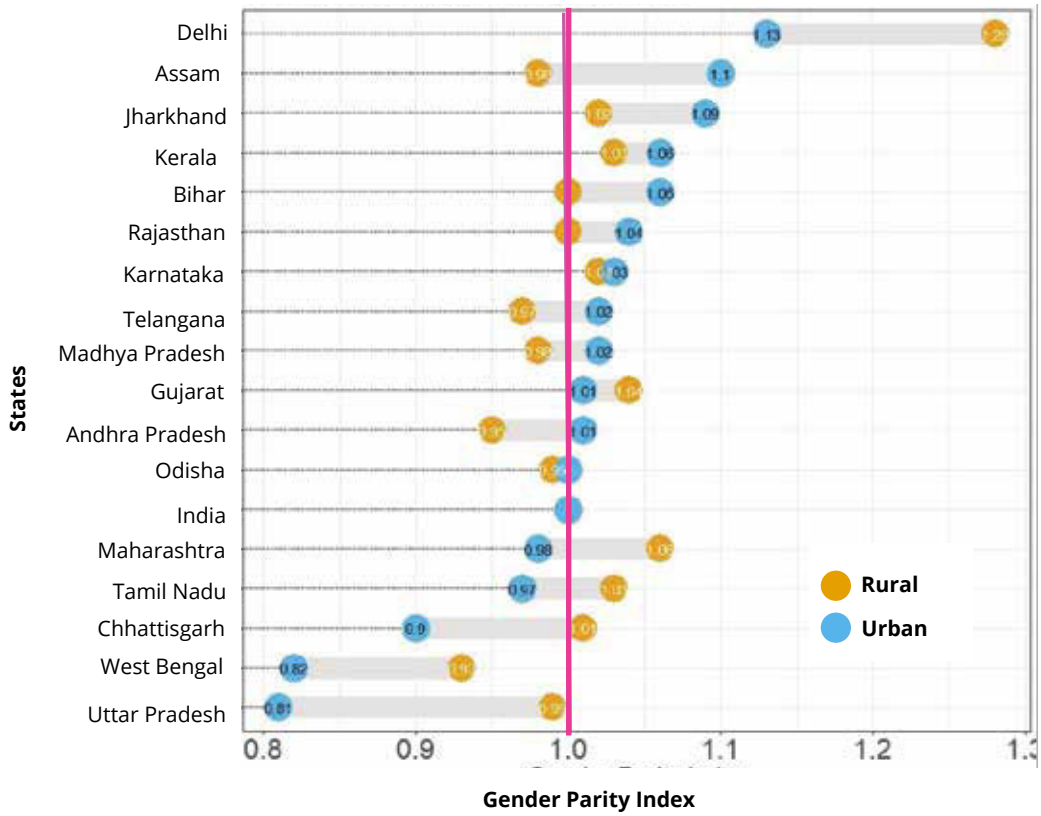
Note; Learning outcomes have only been measured among students in government and government-aided schools.
States where UNICEF has a presence along with NCT of Delhi and India havebeen visualised here.
Source: Computed from NAS, 2017

higher in these states. More than half of the states, namely Delhi, Assam, Jharkhand, Kerala, Bihar, Rajasthan, Karnataka, Telangana, Madhya Pradesh, Gujarat and Andhra Pradesh have disparity in favour of girls than boys in urban areas.

India is currently going through 'learning poverty' among students studying in government and government-aided schools. Half of the students in these two types of schools have not been able to acquire basic (desired) proficiency levels in language and mathematics subjects at class V, both in the rural and urban scenario. Even the performance of students in urban areas in many states is behind rural areas. Surprisingly, NCT of Delhi, which is the capital of India, has appeared as the capital of learning poverty where only one-third of students have attained a basic proficiency level in mathematics at class V. Across states, there has been a wide disparity in both language and mathematics subjects which brings out the dismal state of learning outcome in India.

More specifically, the lower level of achievement in government and government-aided schools questions the teaching quality in these schools and asks for immediate attention to improve the situation. Since state-sponsored schools are affordable to every section of society irrespective of economic status, poor students are able to attend these. Therefore, any learning deprivation in these schools will hamper their academic achievement as well as their future entry into the labour market.

Figure 5.21: Gender Parity among Students who Attained Basic Proficiency Level in Mathematics at Class V, India, 2017



Note: Learning outcomes have been measured among students in government and government-aided schools.
States where UNICEF has a presence along with NCT of Delhi and India have been visualised here.
Gender Parity Index (GPI): Divide the value for girls of an indicator by the value for boys of the same indicator. GPI equal to 1 indicates parity between girls and boys. A value less than 1 indicates a disparity in favour of boys and a value greater than 1 indicates a disparity in favour of girls.
Source: Computed from NAS, 2017

5.4 Transition

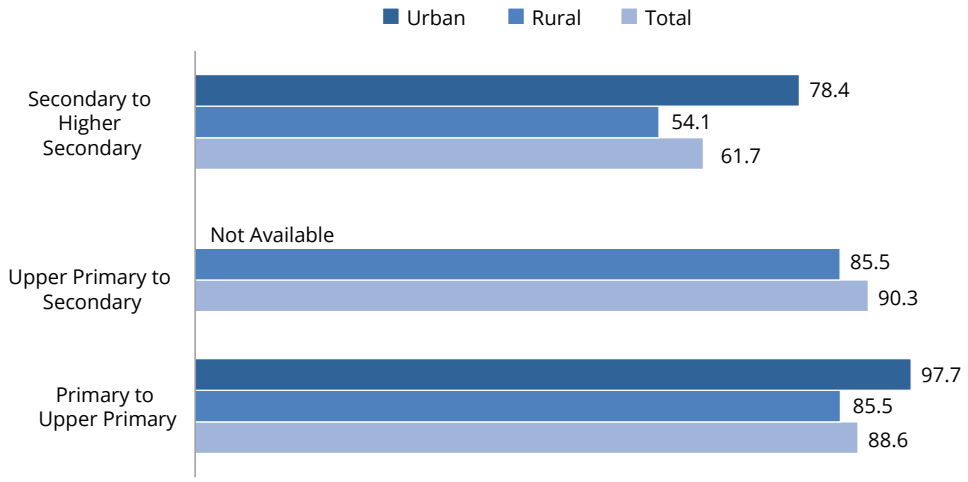
Formal school education in India is divided into the following stages, namely primary, upper primary, secondary and higher secondary. A maximum number of drop-outs are reported during the phase of transition from one stage to another. Therefore, the transition rate[7] between one stage to another is critical in tracing the upward movement of students. In this section, an analysis has been carried out of the transition rate across states at different phases using the Unified District Information System for Education (U-DISE) database. Since U-DISE does not capture students' household economic status, it is not possible to do any disaggregated analysis for 'poor' and 'non-poor'.

5.4.1 Transition rate

It has been observed that 97.7 per cent students have successfully transited from primary to upper primary level of education, with the highest share in urban India. With the increase in stages of education, namely primary to higher secondary, the transition rate declined, with a corresponding increase in repetition and drop-out rates. Only 78 per cent students in urban India successfully transited from secondary to higher secondary in 2016-17.

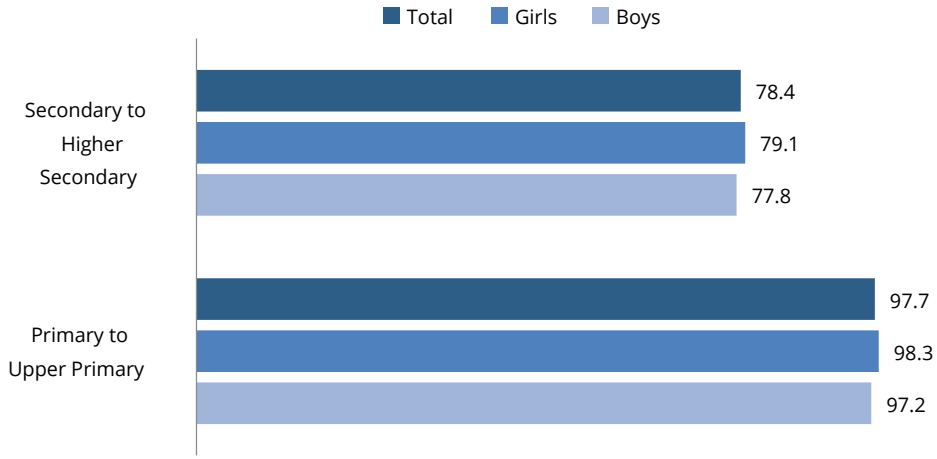
7 Transition rate from primary to upper primary is defined as percentage share of new entrants into class VI in year 't +1' to enrolment at class V in year 't'. Similarly, transition rate for upper primary to secondary and secondary to higher secondary can be computed. The transition rate thus computed is nothing but the promotion rate between the final grade of a stage and the first grade of the next stage.

Figure 5.22: Transition Rate (%) in India, 2016-17



Note: NA: Not available for upper primary to secondary in urban India.
Source: U-DISE School Report Module, 2016-17

Figure 5.23: Transition Rate (%) by Gender in Urban India, 2016-17



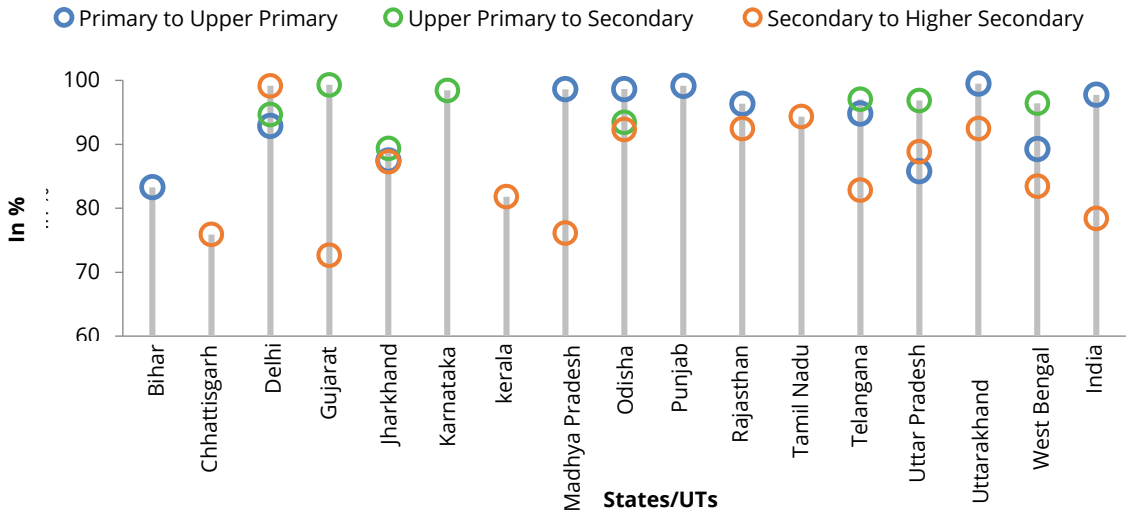
Note: Not available for upper primary to secondary level.
Source: U-DISE School Report Module, 2016-17

5.4.2 Transition rate across states

Among states in urban India, there have been vast differences in the transition rate in school education. In all states except NCT of Delhi, Uttar Pradesh and West Bengal, the transition rate has declined from lower to higher levels. Also, a relatively low transition rate from primary to upper primary has been observed in Bihar, Uttar Pradesh, West Bengal, Jharkhand and Rajasthan.

The instance of drop-out increases during transition from one stage of education to another when students need to change schools. It has been observed that the transition rate declines with the increase in levels of education. While 97.7 per cent students have transited successfully from primary to upper primary levels, this came down to 78 per cent in secondary to higher secondary levels in urban India. The secondary level of education has reported the lowest transition rate with a higher incidence of drop-outs. Across states, there have been wide variations in the transition of students between these levels. In all states except NCT of Delhi, Uttar Pradesh and West Bengal, the transition rate has declined from lower to higher levels. Also, a relatively low transition rate from primary to upper primary level has been observed in Bihar, Uttar Pradesh, West Bengal, Jharkhand and Rajasthan.

Figure 5.24: Transition Rate Across States in Urban India, 2016-17



Note: Data is not available for many states
Source: U-DISE, 2016-17

5.5 Completion of Education Levels

The entry into the school system and completion of education at an appropriate age with effective learning shows the improvement of the education system in urban India. Higher gaps between entry and completion indicate higher drop-outs, more repetition and less transition, which reveals wastage of efforts for children's schooling. The Gross Enrolment Ratio (GER) for primary schools in urban India has reached 103 with different policy interventions. However, the question is, do India's children complete appropriate education levels with age? Are children lagging behind in acquiring age-appropriate education? Removing over-age and under-age education from actual completion of different education levels helps to estimate the age-appropriate completion rate.

Table 5.1: Corresponding Age groups for various levels of school education

Level of Education	Corresponding Age	Age for Completion
Primary	6 – 10 years	11 years
Upper Primary	11 – 13 years	14 years
Secondary	14 – 15 years	16 years
Higher Secondary	16 – 17 years	18 years

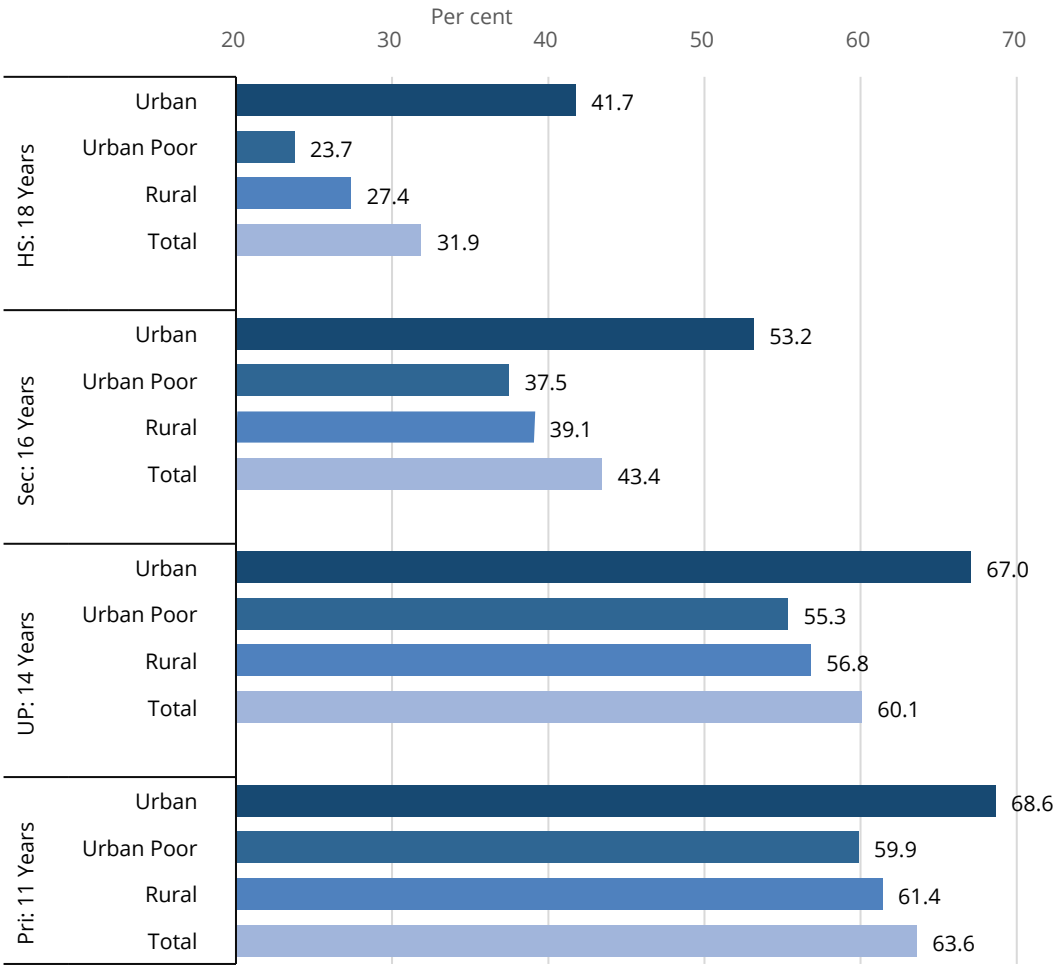
Source: 'Corresponding Age' from Education Statistics at a Glance (p.3), Statistics Division, Ministry of Human Resource Development (MHRD), Government of India

The Ministry of Human Resource Development (MHRD) has recognised an appropriate age for imparting different levels of education, such as 6 to 10 years and 11 to 13 years for primary and upper primary respectively (MHRD, 2018). In line with this, it is expected that children on completion of 11 years and 14 years of age would complete primary and upper primary levels of education respectively. In this section, an analysis has been carried out to explore the situation of age-appropriate completion of various school education levels from the National Family Health Survey (NFHS-4) data (2015-16).

5.5.1 Age-appropriate completion of education level

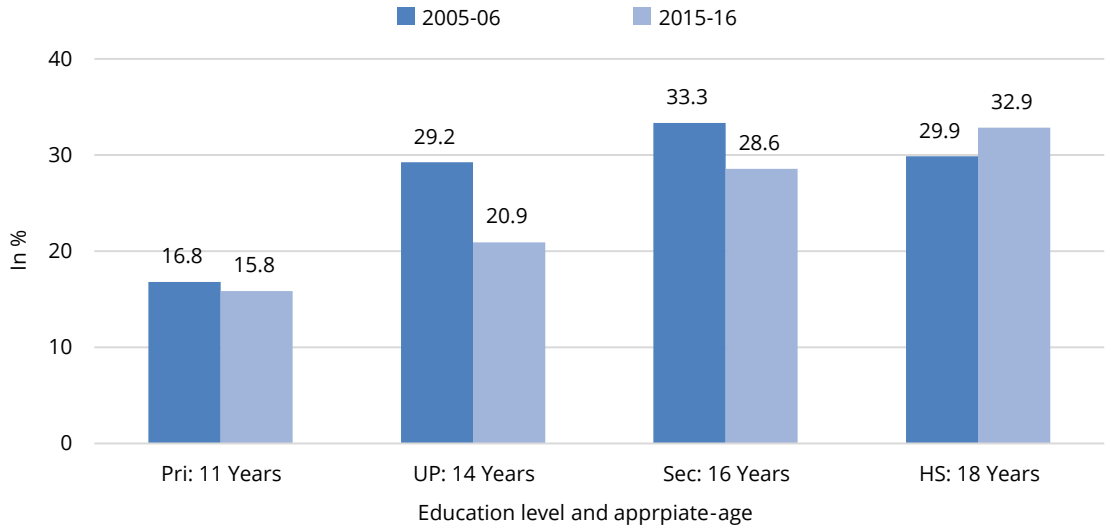
There has been a dismal pattern of age-appropriate completion in school education, which shows over-age school education most prevalent in India. At the national level, only 63.6 per cent children have successfully

Figure 5.25: Age-appropriate Completion Rate for Different Levels of School Education in India, 2015-16



Note: The reported age in NFHS-4 data has been used here.
'Pri' refers to Primary, 'UP' for Upper Primary, 'Sec' for Secondary, and 'HS' for Higher Secondary level of education.
Source: Computed from NFHS-4, 2015-16

Figure 5.26: Gap in Age-appropriate Completion Rate (%) Between Non-poor and Poor Children in Urban India, 2005-06 and 2015--16



Note: The reported age in NFHS-4 data has been used here.
'Pri' refers to Primary, 'UP' for Upper Primary, 'Sec' for Secondary, and 'HS' for Higher Secondary level of education.
Source: Computed from NFHS-3, 2005-06 and NFHS-4, 2015-16

acquired primary education on completion of 11 years of age. This figure has been marginally better in urban areas at 68.6 per cent. With the increase in education levels, there has been a steady decline in age-appropriate completion rate and also an increase in the gap between all-urban and urban poor children. Only 41 out of 100 children on completion of 18 years have completed the higher secondary level in all-urban India while this figure stands at 23 among urban poor children, portraying this poor performance.

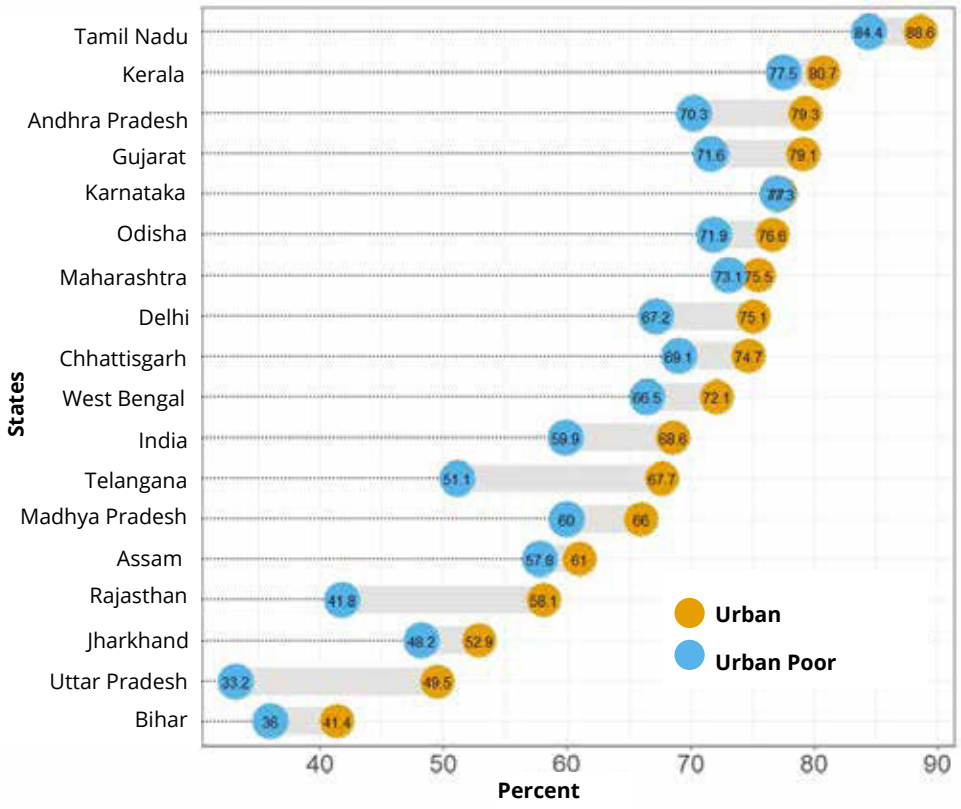
Besides explaining the present status with reference to age-appropriate education completion, a simple comparison of the gap between poor and non-poor children for urban areas over a period of time will be helpful to look into the issue of inequality. It has been observed that the gap between poor and non-poor in share of children as per age-appropriate education for every level of education except higher secondary has declined from 2005-06 to 2015-16. The highest decline has been observed at upper primary level on completion of 14 years. However, the gap between poor and non-poor has increased at the higher secondary level, which indicates an increased level of inequality between poor and non-poor children completing the higher secondary level of education at 18 years of age.

5.5.2 Age-appropriate primary completion across states

There are wide variations across states in age-appropriate completion of primary education in urban India. The top performing states are Tamil Nadu, Kerala, Andhra Pradesh, Gujarat and Karnataka, where more than 70 per cent children have completed primary education on completion of 11 years. These are also states with a higher share of children attending school. A close association has been found between share of attendance and completion at appropriate ages which reflects a lower drop-out, less repetition and higher transition.

At the state level, Bihar has the lowest performance (41% and 36% among all-urban and urban poor children respectively) in age-appropriate completion of the primary level. Other states such as Madhya Pradesh, Assam,

Figure 5.27: Percentage Share of Children Aged 11 Years who Completed Primary Level of Education in Urban India, 2015-16



Note: Due to small sample size, it is not possible to calculate Gender Parity Index (GPI) of completion rate.
Source: Computed from NFHS-4, 2015-16

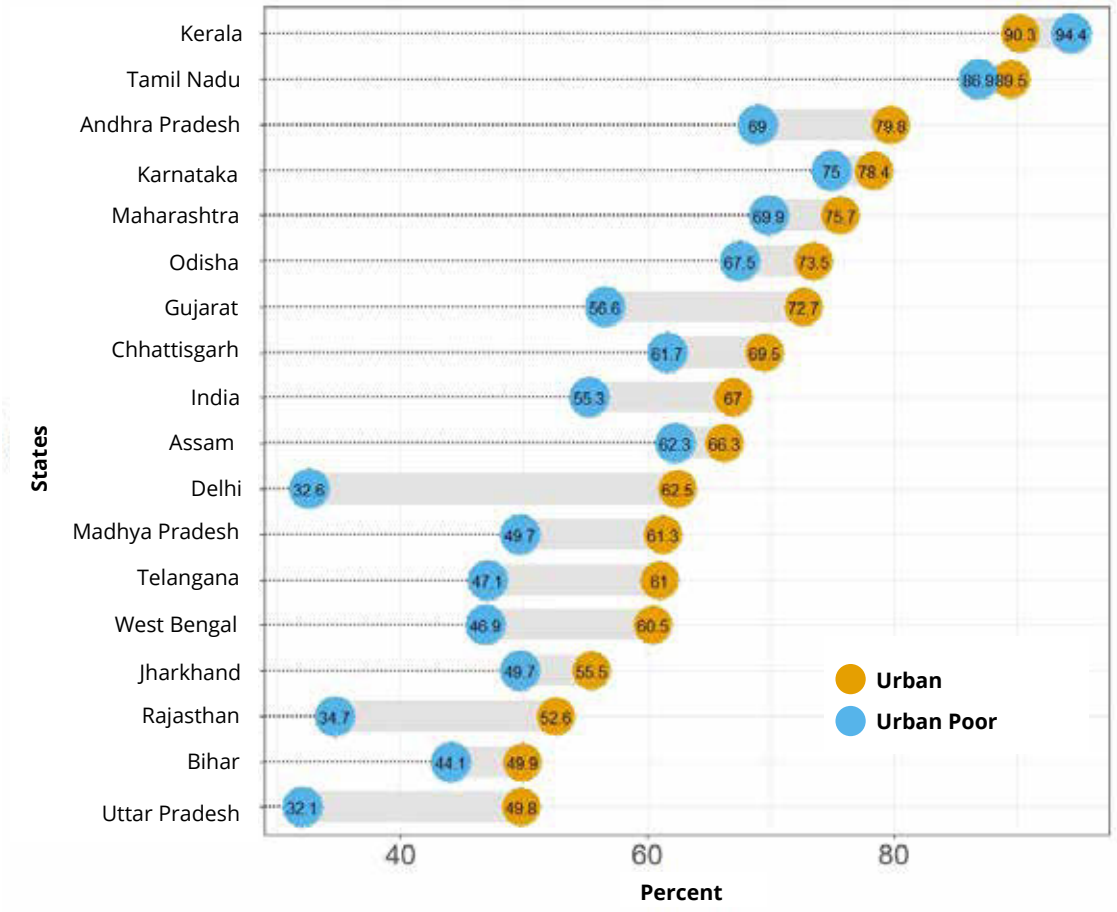
Rajasthan, Jharkhand and Uttar Pradesh are also lagging in their performance indicators. Urban poor children are always behind the urban average. A relatively higher gap between urban poor and all-urban has been found in the states of Telangana (16.6%), Rajasthan (16.3%), Uttar Pradesh (16.3%) and Andhra Pradesh (9%).

5.5.3 Age-appropriate upper primary completion across states

The level, as well as pattern of age-appropriate upper primary completion across states in urban India, has been almost similar to what is found in the case of primary completion. Southern states of Kerala, Tamil Nadu and Andhra Pradesh, along with Maharashtra and Odisha have been top performers, while West Bengal, Jharkhand, Rajasthan, Bihar and Uttar Pradesh are lagging behind. The gap between best and worst performing states has been as high as 40.5 per cent. Urban poor children have always lagged behind all-urban in every state except Kerala. The gap between urban and urban poor has been relatively higher in the states of Gujarat (16.1%), NCT of Delhi (29.9%), Rajasthan (17.9%) and Uttar Pradesh (17.7%). Though Bihar, Jharkhand and Assam have a lower level of age-appropriate completion rate, the gap between all-urban and urban poor has been marginal.

A considerable share of children in urban India and those among the urban poor have not completed school education at the appropriate age in 2014-15. The performance indicators worsened among urban poor children with increase in successive levels of education. The gap between all-urban and urban poor children has been highest at the higher secondary level. A total of 60 out of 100 poor children in urban India have

Figure 5.28: Percentage Share of Children Aged 14 Years who Completed Upper Primary Level of Education in Urban India, 2015-16



Note: Due to inadequate sample size, it is not possible to calculate Gender Parity Index (GPI) of completion rate. Because of similar reason, this has not been calculated for secondary and higher secondary level of education.
Source: Computed from NFHS-4, 2015-16

successfully acquired primary education on completion of 11 years of age, while only 24 have completed the higher secondary level on completion of 18 years of age. There is a need for urgent policy intervention across all levels and age groups, with more emphasis on the adolescent ages of 16 to 18 years for completion of age-appropriate secondary and higher secondary education. Due to the absence of student tracking data in the public domain, it is not possible to compare entry as well as exit (more specifically completion) in school education. An effort to build a robust system to track students upon their entry in the schooling system will be very helpful in identifying the specific areas of intervention.

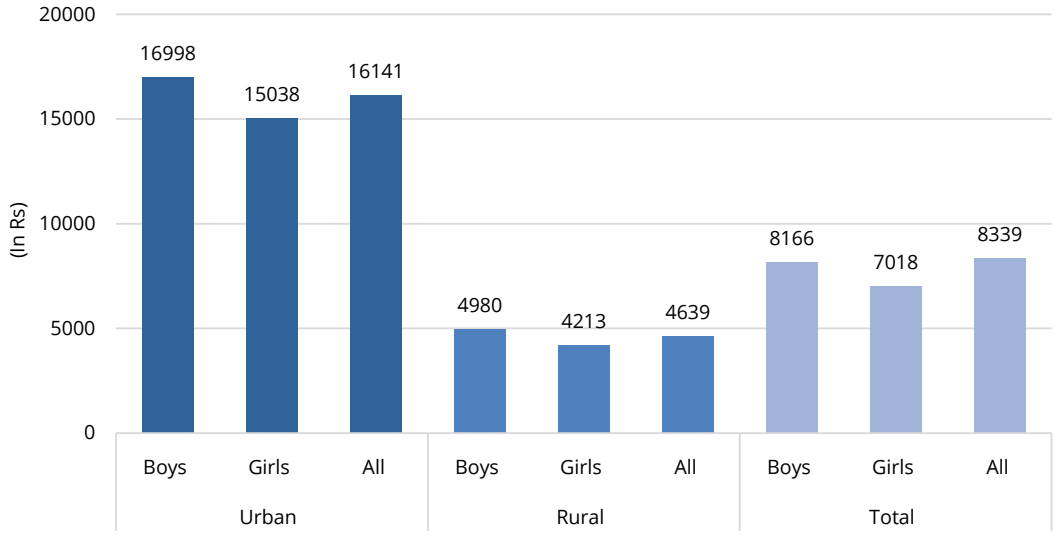
5.6 Expenditure by Households on Education

Though the Right of Children for Free and Compulsory Education Act, 2009 made elementary education completely free of cost, it still requires expenditure directly or indirectly. There are different estimates of expenditure incurred by households on education. For example, in school education, the public spending per student has been Rs. 13,974 (CBGA and CRY, 2016) in 2014-15 (revised estimates), while households have spent Rs. 8,339 per student in 2017-18 (NSO, 2017-18a). More specifically in urban India, household expenditure per student studying in a government school has been Rs. 4,633 (NSO, 2017-18a). Expenditure in education is an important aspect which deters the poor and disadvantaged sections to access quality education. Tilak (2002) has stated that, 'while public investment can provide educational facilities, only household investment will enable its utilisation. The two are so inter-related and inter-dependent that, in the absence of either of them, there is likely to be under-allocation of resources for education.' In this section, an analysis has been carried out on household (private) expenditure in school education in urban India using data from the 75th round of the National Sample Survey (NSS) on participation and expenditure in education.

5.6.1 Average per student household (private) expenditure

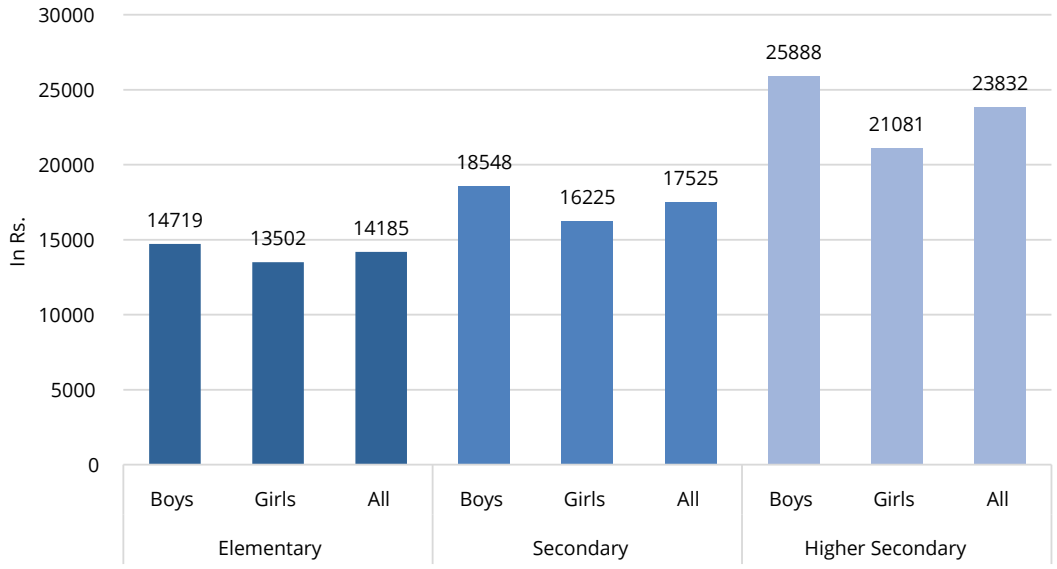
In urban India, households spent Rs. 16,141 per student in school education (classes I to XII) in 2017-18. This expenditure is three times higher than what is evident in rural areas. Though the share of girls attending school has been comparatively higher than that of boys, households tend to spend less on a girl's education. The per student annual expenditure per boy was Rs. 16,998 as compared to Rs. 15,038 for a girl student. This discriminatory practice in expenditure reveals that less importance is given to a girl's education in Indian society. Only an adequate amount of spending by the government on education, along with strategic intervention for mass awareness in society can eradicate gender discrimination against girls.

Figure 5.29: Average Household Expenditure (Rs.) Per Student Pursuing School Education in India, 2017-18



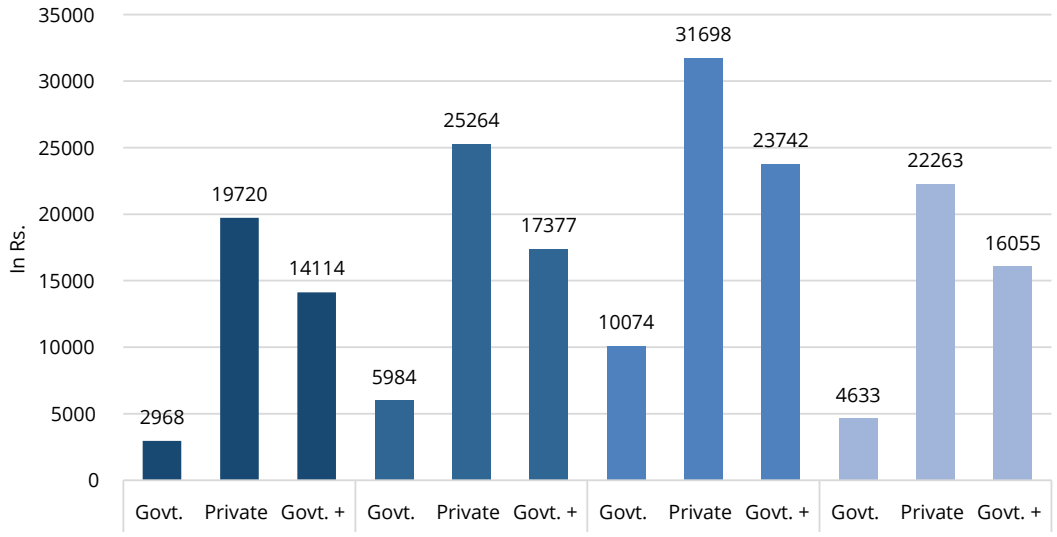
Note: This expenditure is only for general school education, which does not include any expenditure incurred on vocational or technical education at a secondary and higher secondary level of education.
Source: Computed from NSS 75th round, 2017-18

Figure 5.30: Average Household Expenditure (Rs.) Per Student by Gender on School Education in Urban India, 2017-18



Note: This expenditure is only for general school education, which does not include expenditure incurred on vocational or technical education at a secondary and higher secondary level of education.
Source: Computed from NSS 75th round, 2017-18

Figure 5.31: Average Household Expenditure (Rs.) Per Student by Level of Attendance and Type of Institutions in Urban India, 2017-18



Note: Government schools include both Department of Education as well as local body run schools while private schools include private aided as well as unaided schools.
Source: Computed from NSS 75th round, 2017-18

A disaggregated analysis for different levels in school education would help in working out the relevant costs incurred in urban India. There has been an increase in expenditure at higher levels of school education. Household expenditure per student at elementary level has been Rs. 14,185 in the academic year 2017-18, which became double at higher secondary level. Also, households spend more money on education for boys than girl students across all levels of school education, reflecting the increased importance given to a boy's rather than to a girl's education.

There are several types of schools in India with different cost structures. Based on management types, there are government schools and private schools. Households are free to choose schools for their children. A disaggregated analysis of expenditure by school management types would help in measuring household expenditure for students studying in government schools. Households spend almost four times higher on students' education in a private school than those run by the government. Though the RtE Act (2009) promotes free elementary education through government-run schools, households incurred education related expenditure of Rs. 2,968 per student studying in government schools in urban India in 2017-18. More than a four-fold increase in expenditure has been observed at higher secondary level in comparison to elementary level at government schools.

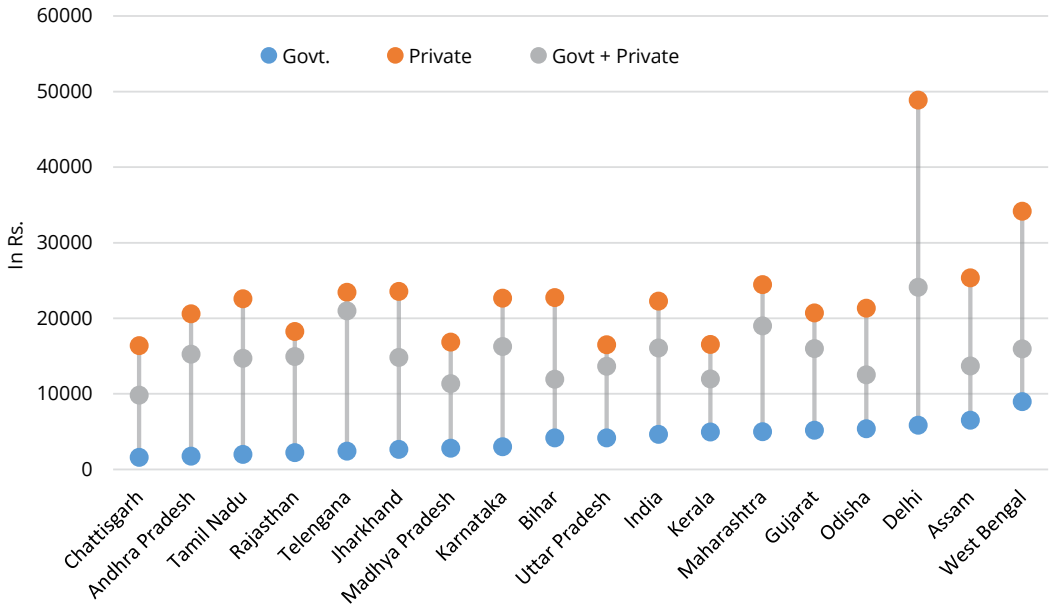
5.6.2 Average household expenditure per student across states

There have been wide variations across states in the household expenditure per student on education. As per NSS 75th round data (2017-18), urban West Bengal has the highest spending per student studying in government schools while it has been lowest in Andhra Pradesh. Education at government schools has been comparatively more affordable for poor and marginalised sections of society due to public investments. Strengthening government schools will be very effective in bringing children belonging to poor and marginalised sections of society into the ambit of education.

5.6.3 Average household expenditure per student among students from economically weaker households

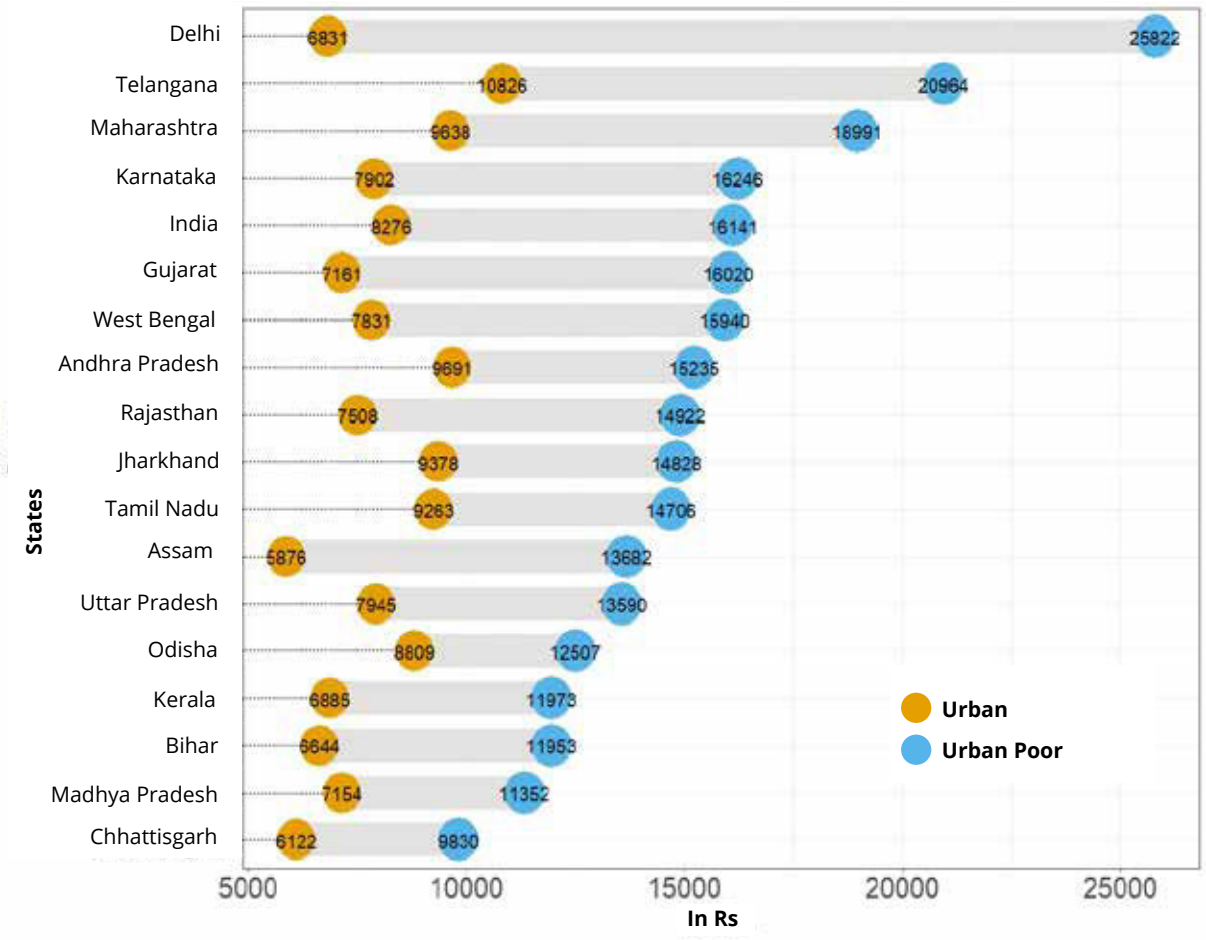
There have been wide gaps in household expenditure in education between the poor and all households across states in urban India. 'Poor students economically' are those who belong to two lowest quintile classes of Usual Monthly Per Capita Consumption Expenditure (UMPCE) in the 75th round of the National Sample Survey (2017-18). In NCT of Delhi, on an average, households have spent Rs. 25,822 per student (highest among all selected states) and economically poor families have spent Rs. 6,831 per student on school education in the academic year of 2017-18. Other states with a comparatively higher household expenditure have been Maharashtra, Telangana, Karnataka, Gujarat and Andhra Pradesh. Economically weaker states such as Chhattisgarh, Jharkhand and Bihar have low household expenditure in school education.

Figure 5.32: Average Expenditure (Rs.) Per Student Pursuing School Education by Type of Institutions in Urban India, 2017-18



Note: This expenditure is only for students studying general school education, excluding technical and vocational education at secondary and higher secondary levels.
Source: Computed from NSS 75th round, 2017-18

Figure 5.33: Average Household Expenditure Per Student in School Education by Economic Status in Urban India, 2017-18



Note: 'Urban poor' includes households in the bottom two quintile classes of usual monthly per capita expenditure (UMPCE) at the national urban level.
Source: Computed from NSS 75th round, 2017-18

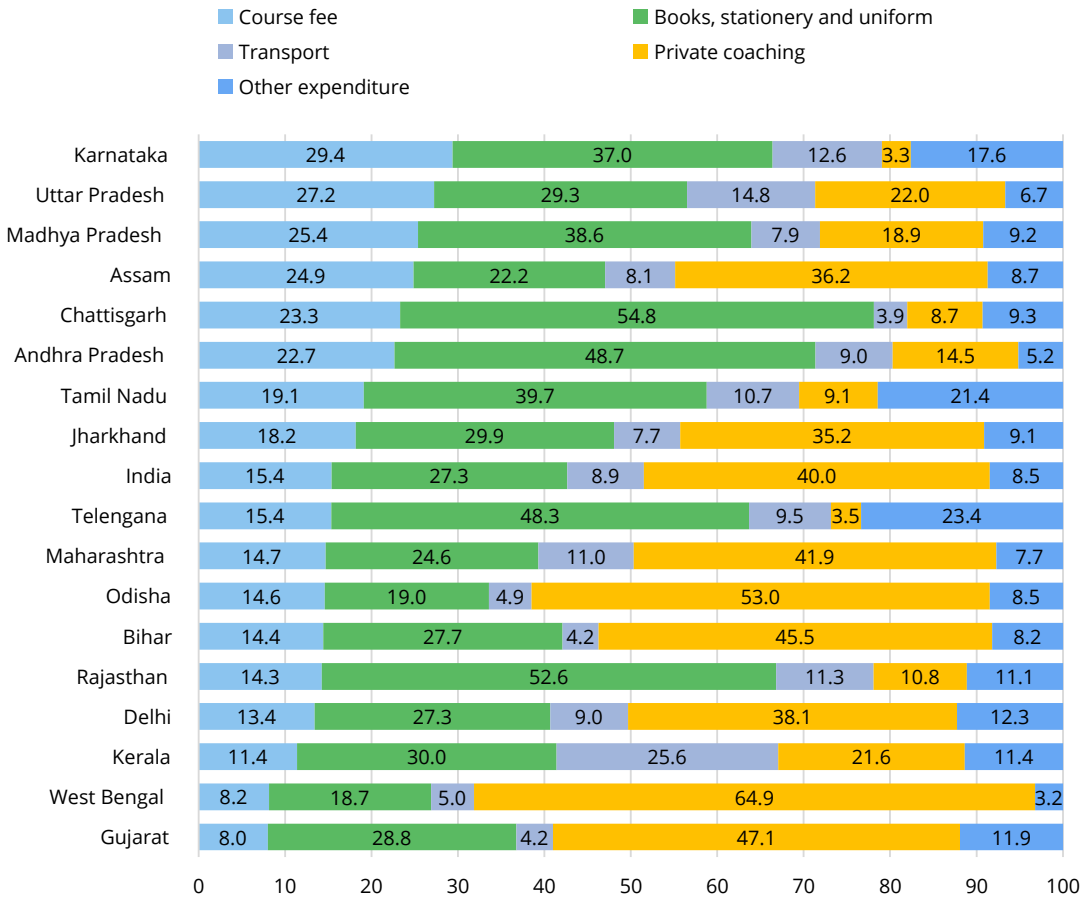
5.6.4 Composition in expenditure for students studying at government schools

There are different expenditure heads such as course fees, transport, books, stationery and uniform, private coaching fees etc. in school education. A compositional analysis by different expenditure heads in total household expenditure for students studying in government schools has been carried out in this section.

In urban India, the largest share (40%) of total expenditure has been on private coaching while expenditure incurred on course fees at the institution has been only 15.4 per cent on an average for students studying in government schools. Books, stationery and uniform are the second highest expenditure heads with a share of 27.3 per cent. At the state level, the share of course fees has been relatively higher in Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Karnataka, Assam and Rajasthan. On the other hand, share of expenditure on private coaching has been higher in West Bengal, Odisha, Bihar, Gujarat and Maharashtra. The share of expenditure on private coaching (shadow education) has been considerable in all states except Tamil Nadu.

Although the expenditure in elementary education in government schools is supposed to be completely free of cost, households are still spending a considerable amount of their income directly on children's education. And with the increase in the level of education, there has been an increase in expenditure. Economically 'poor' households are always behind 'non-poor' households in spending on education. 'Non-poor' households spend more on private coaching, books, stationery and transport. Therefore, the gap in education is a reflection of economic deprivation. Most importantly, a discriminatory practice against spending on girls' education is

Figure 5.34: Composition (%) by Different Expenditure Heads in Out-of-pocket Annual Average Expenditure at Government Schools in Urban India, 2017-18



Source: Computed from NSS 75th round, 2017-18

evident from the analysis. Systematic upgradation of the government school system with more support to poor households through remedial classes and timely availability of materials required for education is the way forward. Also, adequate attention should be given to bring about gender parity.

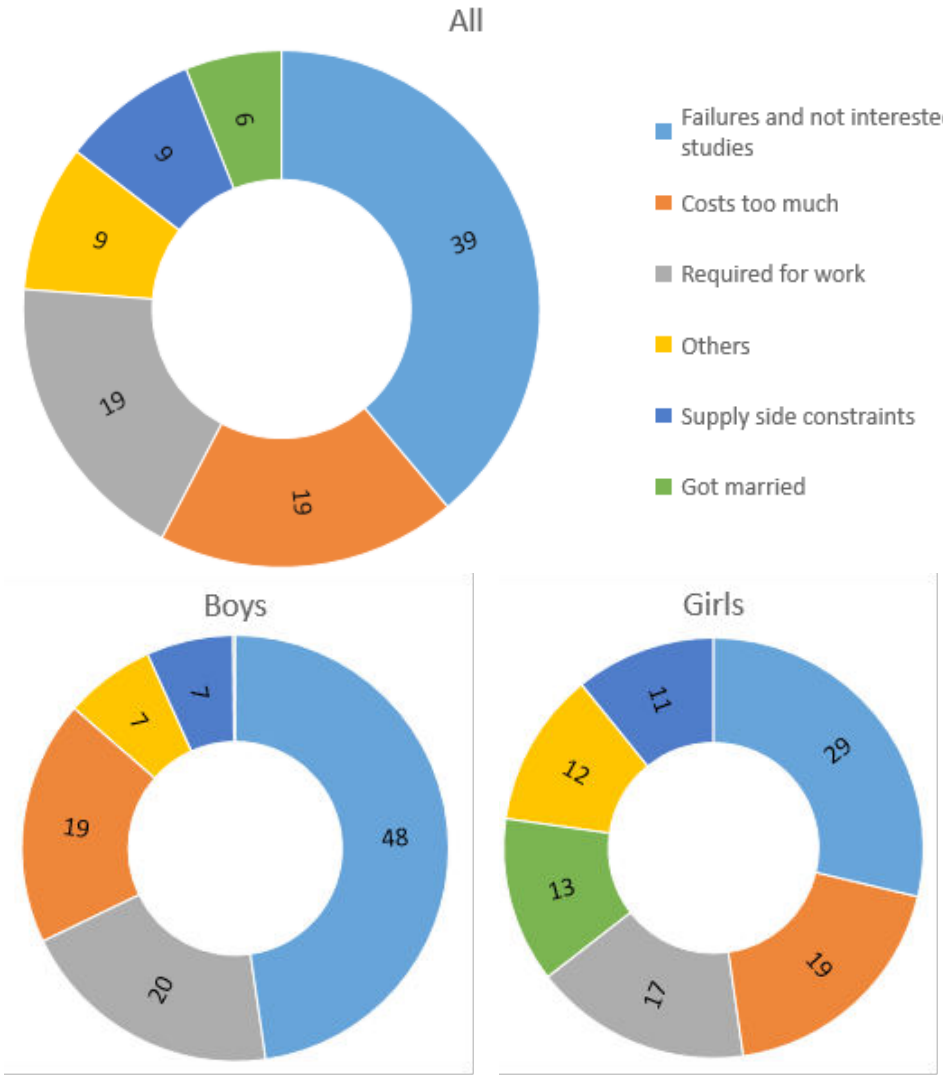
5.7 Reasons for Not Attending School

A considerable share of children (12.2% in urban areas and 19.3% among the urban poor) aged 6 to 17 years have not attended school in the academic year 2014-15. With increase in age, the share of children not attending school increases. This raises the question of why children are not attending school at higher ages. In this section, an attempt has been made to explore reasons as well as distribution of children not attending school by household economic status in urban India using the National Family Health Survey (NFHS-4) data (2015-16).

5.7.1 Distribution of children not attending school

'Failures and lack of interest in studies' has been the most frequently reported reasons (39%) for not attending school in urban India. The prevalence of this reason has been comparatively higher among boys than girls. The second most important reason has been 'costly education' (19%). Though course fees are minimal and even no course fees are payable in the elementary level in government schools, there are several other associated expenditures such as private coaching fees, cost for books and stationery etc. Children have also been required to work to support households economically or to look after their families while parents are away for work. Overall, 19 out of 100 children aged 6 to 17 years have been 'child workers' and have been out

Figure 5.35: Reasons for Not Attending School among Children Aged 6-17 Years in Urban India, 2015-16



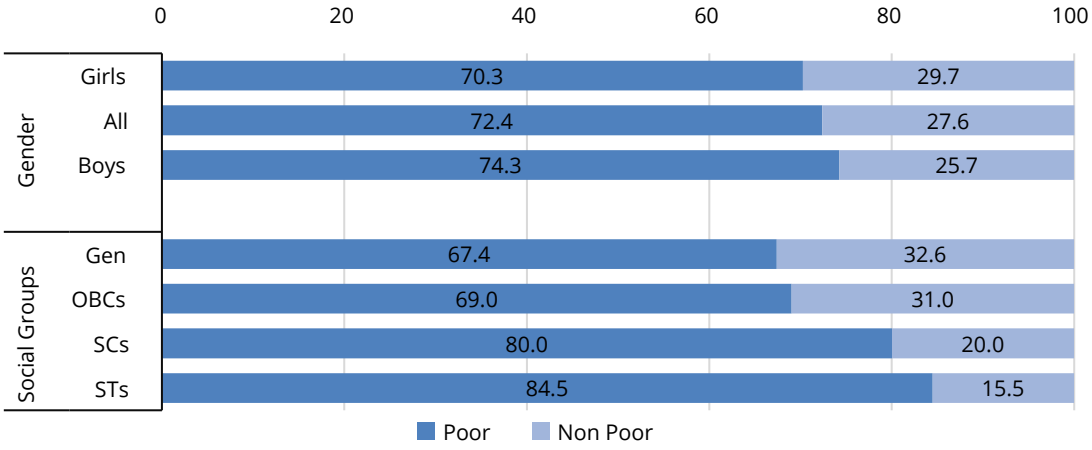
Note: 'Supply side problem' includes 'school too far away', 'transport problem', 'no proper schooling facilities for girls', 'no female teacher', 'did not get admission'; 'required for work' includes 'household work', 'work on farm/family business', 'work for payment', 'care of siblings'; 'others' includes 'further education not considered necessary', 'not safe to send girls (only applicable to girls)', 'others', 'don't know' etc.
Source: Computed from NFHS-4, 2015-16

of the ambit of schooling. Under-age marriage has appeared as a prominent cause for not attending school among girls. A total of 13 out of 100 girls have been married before they completed 17 years due to which they have not attended school. Therefore, 'child work' and 'child marriage' emerge as two important hurdles in the overall development of children.

5.7.2 Economic status of children not attending school

It has been observed that children belonging to economically poor households are more vulnerable. A considerable share of children has not attended school as they found the education costly or they have been required to work to support their families. In this section, an analysis has been done to see the distribution of children not attending school as per their family's economic status in urban India. Overall, 72.4 per cent of children not attending school are from poor households. Therefore, to bring them into the ambit of the schooling system, there is a need to improve their household economic status. There has been a marginal difference between girls and boys in school attendance. Across social groups, 84.5 per cent ST children not attending school belong to poor households, which is the highest among all social groups.

Figure 5.36: Percentage Distribution of Children (6-17 years) Not Attending School as Per Household's Wealth Status in Urban India, 2015-16



Note: Categorisation of wealth status is based on the wealth quintile of the total population in urban India.
Source: Estimated from NFHS-4, 2015-16

With the increase in age as well as levels of education, the share of children not attending schools has also increased. Several reasons have been reported regarding the question of why children are not attending school. The most often reported reasons have been 'failure and lack of interest in studies', followed by 'costly education', 'engagement in work' to support households economically or 'to look after their families while their parents are away for work'. Overall, 19 out of 100 children aged 6 to 17 years have been 'child workers' and have been out of the ambit of schooling. Also, under-age marriage has appeared as a prominent cause for not attending school among girls. A total of 13 out of 100 girls have been married before they completed 17 years of age due to which they have not attended school. 'Child work' and 'child marriage' emerged as two important hurdles in the overall development of children. A majority of them who have not attended school belong to economically poor households who found education costly and were required to work to support their families.

5.8 Household Expenditure and Achievement in Learning

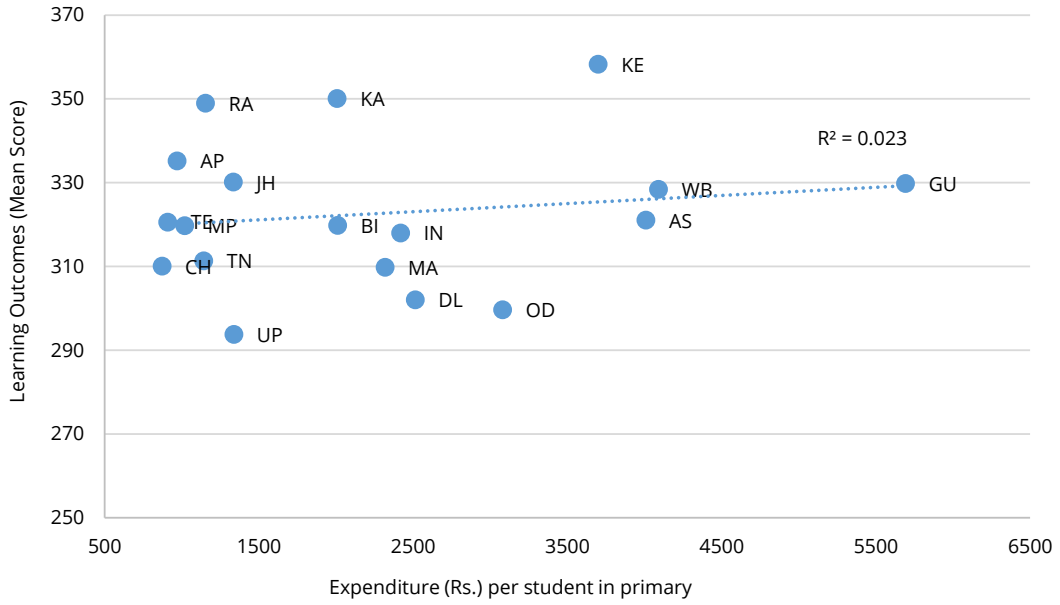
It has been observed that households are spending a considerable amount of money on a student's education along with investment by the government. The aggregate per student public (government) expenditure (revised estimates) in school education has been Rs. 13,974 in India in 2014-15 (CRY and CGBA, 2016). On the other side, it has been observed that many households also invest a considerable amount of money in school education. In this regard, it would be important to analyse whether this investment has been able to fetch results in terms of learning outcomes. In this section, a relational analysis has been attempted between household (private) expenditure for students in primary education (class I to V) and learning outcomes in language and mathematics subjects at class V among students in government schools.

The association between learning outcomes in language and mathematics and household expenditure in government schools shows three patterns. Rajasthan, Karnataka and Andhra Pradesh have been observed as having comparatively better performance than other states with household investment of less than Rs. 2,500 per student in an academic year. The situation in Kerala has been totally different. With less investment, Kerala's students in government schools have exhibited considerably higher performance than what is actually observed in West Bengal, Assam and Gujarat. Except for these five states, other states are cluttered together.

A considerable share of resources has been devoted to school education, be it public expenditure by government or private expenditure by households. It is important to analyse whether this investment has been

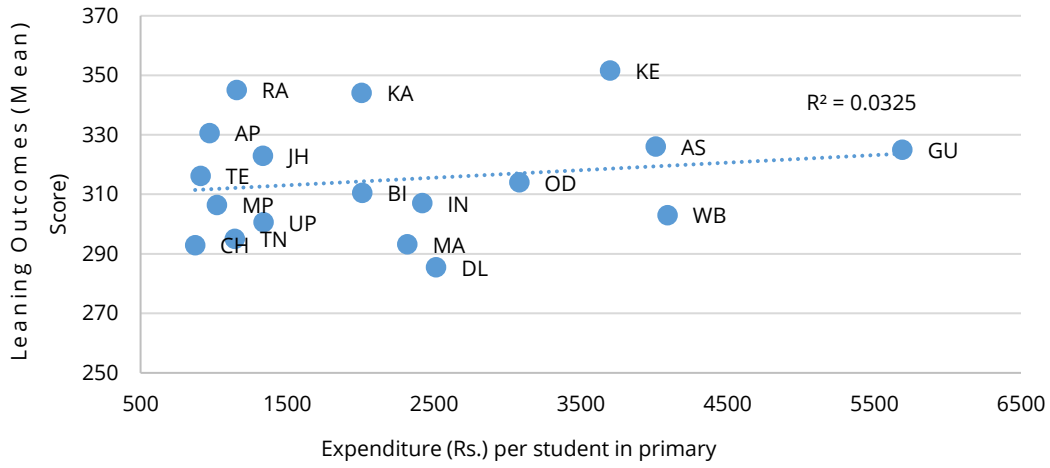
able to fetch results in terms of learning outcomes. The type of associations between household expenditure and learning outcomes in government schools across selected states reveals that Rajasthan, Karnataka and Andhra Pradesh have achieved comparatively better performance scores than others with household investment of less than Rs. 2,500 per student in an academic year. On the other hand, the situation in Kerala has been totally different. With less investment in school education from households, Kerala's students in government schools have however a considerably higher performance rate than what is actually observed in West Bengal, Assam and Gujarat.

Figure 5.37: Association Between Household Expenditure and Learning Outcomes in Language Subject at Government Schools, Class V, Urban India, 2017



Note: Due to the small sample size, the estimation of expenditure could not be done for small states.
Source: Household expenditure in education from NSS 75th round, 2017-18, and learning outcomes from NAS, 2017

Figure 5.38: Association Between Household Expenditure and Learning Outcomes in Mathematics Subject at Government Schools, Class V, Urban India



Note: Due to the small sample size, estimation of expenditure could not be done for small states.
Source: Household expenditure in education from NSS 75th round, 2017-18 and learning outcomes from NAS, 2017.

5.9 Ability to Use Information and Communication Technology (ICT) Tools

The Sustainable Development Goal (SDG) 4.4 aims to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship. In connection with this goal, the proportion of adolescents with the ability to use the tools of information and communication technology (ICT) has been explored using the 75th round of the National Sample Survey (NSS) data (2017-18).

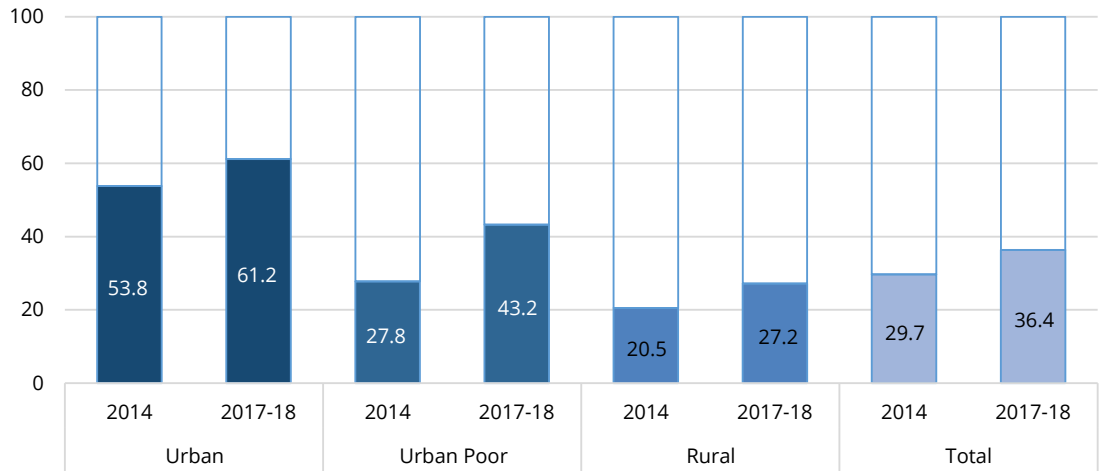
In urban India, a total of 53.8 per cent adolescents aged 15 to 19 years had the ability[8] to use ICT gadgets such as desktop, laptop, palmtop, notebook, smartphone, and tables etc. in 2017-18. Only 27.8 per cent adolescents belonging to poor households were able to use the aforementioned ICT gadgets in 2014, which increased to 43.2 per cent in 2017-18. The disparity in access has been in favour of boys. Across social groups, adolescents belonging to Scheduled Castes (SCs) were lagging in using ICT gadgets in urban India.

Across states, there have been wide differences in access to ICT tools. In urban Kerala, 95.4 per cent adolescents had accessed ICT gadgets with a marginal gap between poor and non-poor in 2017-18. Tamil Nadu, Gujarat, Karnataka, Maharashtra and Andhra Pradesh were a few of the better performing states. States such as Odisha, Chhattisgarh and Uttar Pradesh were lagging in access to ICT tools. An increase in access to ICT tools among adolescents led to disparity in favour of females.

There has been a gap between poor and non-poor adolescents in access to ICT tools in many states such as Kerala, Gujarat, Karnataka, Maharashtra and Andhra Pradesh from 2014 to 2017-18. A significant gap still persists in many states such as Assam, Uttar Pradesh, Jharkhand, Bihar and West Bengal. In Jharkhand, the gap between poor and non-poor adolescents has surprisingly increased between 2014 and 2017-18.

Overall, it shows that urban India has lagged far behind in universalising access to ICT tools among adolescents. The status of access among urban poor adolescents has been almost half of what is prevalent among all adolescents in urban India. Notably, states performing better (relatively) in share of attendance have also been performing better in access to ICT tools. These states are Kerala, Tamil Nadu, Gujarat, Karnataka and Maharashtra. Therefore, improvement in schooling has also been closely linked to access to ICT tools.

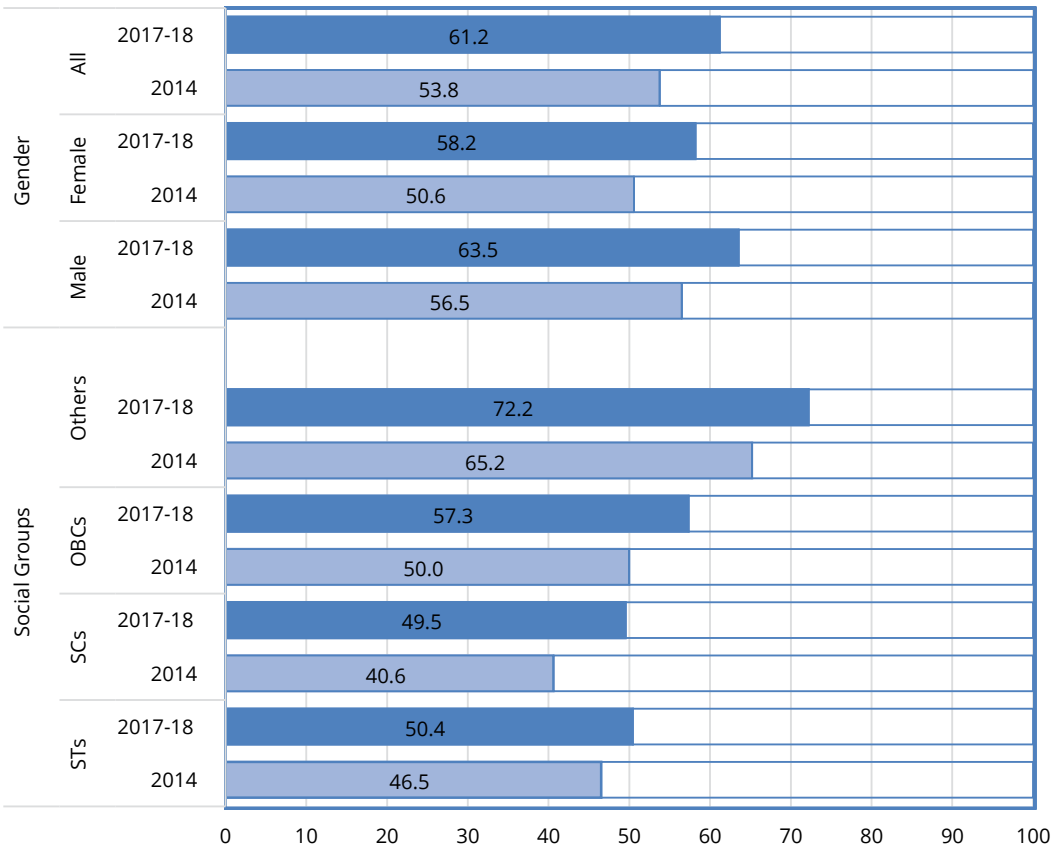
Figure 5.39: Percentage Share of Adolescents Aged 15-19 Years Able to Operate Computers, 2014 and 2017-18



Note: Computer includes desktop, laptop, palmtop, notebook, netbook, smartphone, tablets etc.
Source: Computed from 71st round NSS, 2014 and 75th round NSS, 2017-18

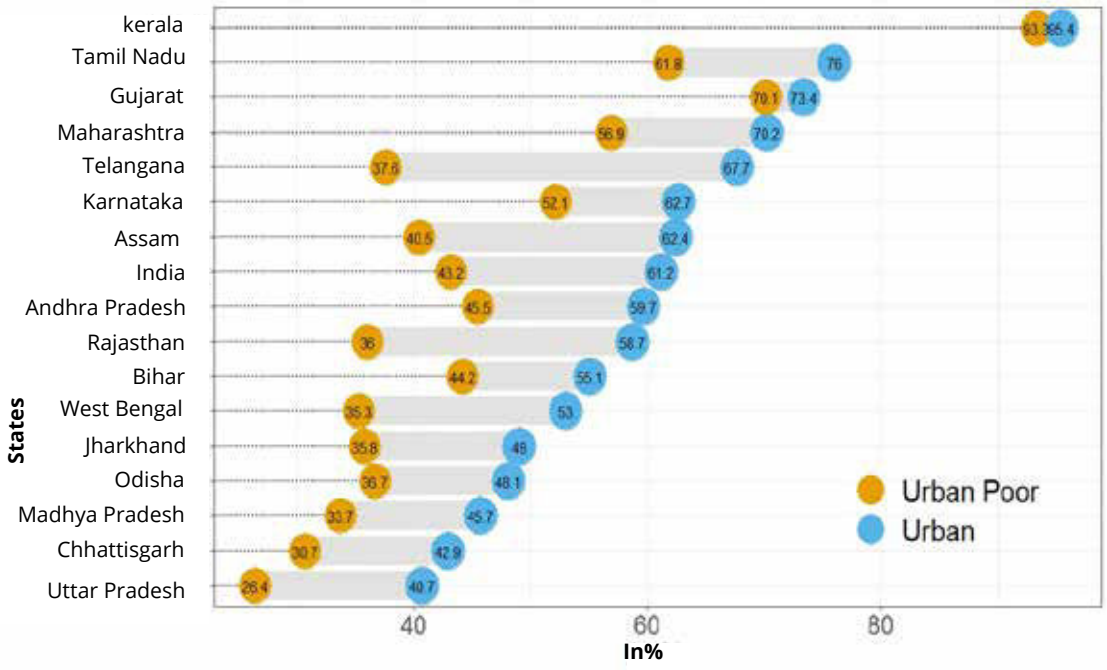
8 Ability to operate a computer refers to carrying out any of the tasks, such as copying or moving a file or folder; using copy and paste tools to duplicate or move information within a document; sending e-mails with attached files (e.g. document, picture, and video); using basic arithmetic formulae in a spreadsheet; connecting and installing new devices (e.g. modem, camera, printer), finding, downloading, installing and configuring software; creating electronic presentations with presentation software (including text, images, sound, video or charts); transferring files between a computer and other devices; writing a computer programme using a specialised programming language.

Figure 5.40: Percentage Share of Adolescents (15-19 Years) Able to Operate Computers by Social Groups and Gender in Urban India, 2014 and 2017-18



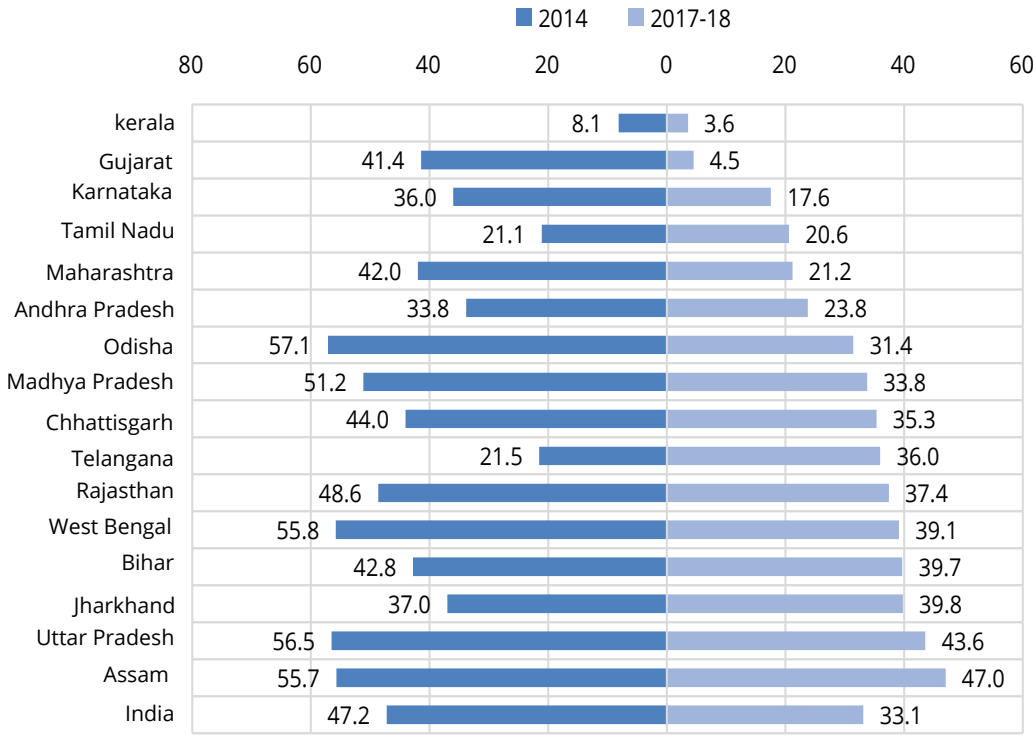
Source: Computed from 71st round NSS, 2014 and 75th round NSS, 2017-18

Figure 5.41: Percentage Share of Adolescents Aged 15 to 19 Years Able to Operate Computer in Urban India, 2017-18



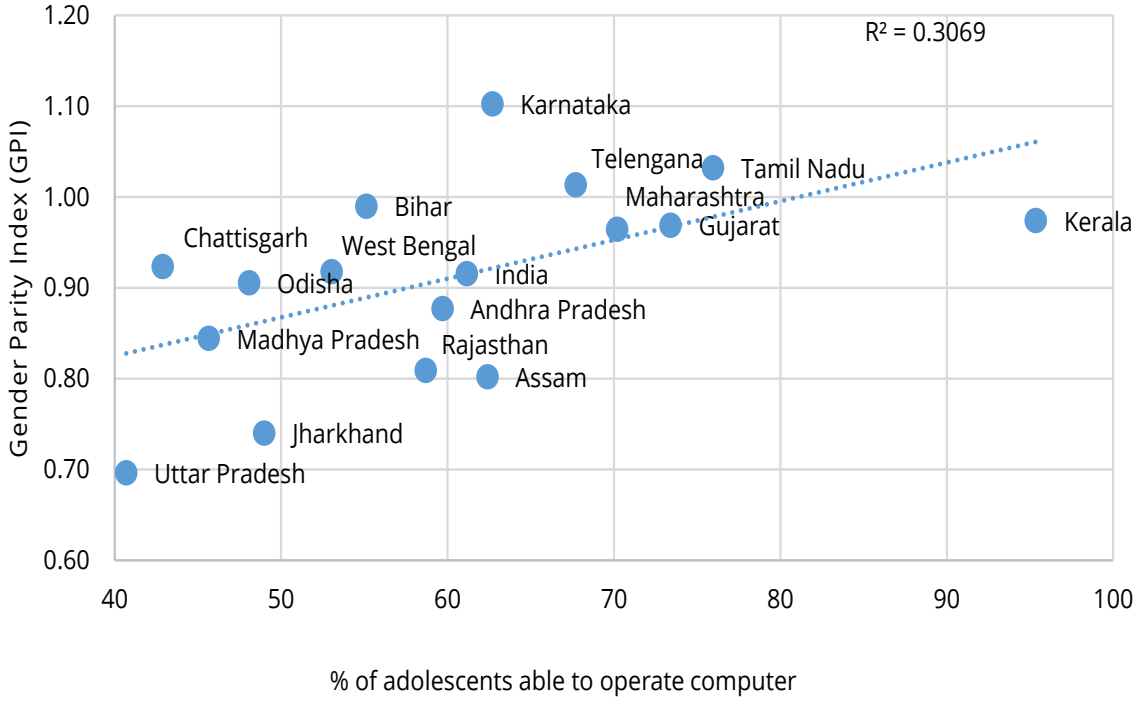
Note: Households in the lowest two UMPCE quintile classes for urban India have been treated as 'poor' households in all states. Delhi has been excluded for a small sample size.
Source: Estimated from 75th round NSS, 2017-18

Figure 5.42: Gap (%) Between Non-poor and Poor in Share of Adolescents (15-19 years) Able to Operate Computer in Urban India, 2014 and 2017-18



Note: Households in the lowest two UMPCE quintile classes for urban India have been treated as 'poor' households in all states. Delhi has been excluded because of the small sample size.
Source: Computed from the 71st round NSS, 2014 and 75th round NSS, 2017-18

Figure 5.43: Association Between the Share of Adolescents Aged 15 to 19 Years Able to Operate Computer and Gender Parity Index (GPI) in Urban India, 2017-18



Note: GPI: Gender Parity Index. Divide value for girls of an indicator by the value for boys of the same indicator. GPI equal to 1 indicates parity between girls and boys. A value less than 1 indicates a disparity in favour of boys and a value greater than 1 indicates a disparity in favour of girls.
Source: Computed from 75th round NSS, 2017-18

Recently, there has been a push to use Information and Communication Technology (ICT) tools such as computer, laptop, tablet and smart phones in the delivery of education and also internet for information. But urban India has been far behind in universalising access to ICT tools among adolescents. The status of access among urban poor adolescents has been almost half of what is prevalent among all adolescents in urban India. Notably, states performing better (relatively) in share of attendance have also been performing better in access to ICT tools. These states are Kerala, Tamil Nadu, Gujarat, Karnataka and Maharashtra. Therefore, improvement in schooling has been closely linked to access to ICT tools.

5.10 Data Gaps and Limitations

Over the decades, India has improved information systems for education. The Unified District Information System for Education (U-DISE), National Sample Survey (NSS), National Family Health Survey (NFHS), National Achievement Survey (NAS) and Population Census of India have been proved to be good sources of information on education. However, there has been a lack of appropriate data sources to access educational deprivation with special reference to poor and marginalised sections of society. Also, these aforementioned surveys have been conducted at different points of time which makes it difficult to carry out any comprehensive analysis.

The absence of student tracking data over the years to trace child/student progress makes it difficult to analyse actual situations. Student tracking data along with household characteristics (specifically economic situation) on a yearly basis in line with U-DISE data will be helpful in identifying gaps as well as areas of concern. This will assist in figuring out various educational statistics such as transition, promotion and drop-out (actual) rates in specific areas.

The National Achievement Survey (NAS) is a well recognised data source for learning outcomes. However, data collected in NAS on students' household characteristics is not available in the public domain till date though the survey was conducted in 2017. Timely release of this data will be helpful in specifying interventions to improve learning outcomes.

The National Family Health Survey (NFHS) data collected information on selected household characteristics along with individual characteristics including education. However, it is not possible to compute educational deprivation among migrants and floating population from NFHS data. Also, NFHS does not provide disaggregated data for slums across all cities in India. This excludes a large section of the deprived population in urban India. Also, there is a need to increase sample size for district level analysis.

It is also necessary to strengthen the present management information system of U-DISE. In a few cases, exaggerated information has been reported which may not be accurate. Also, an age specific population count or projection is needed to estimate the various educational statistics such as Gross and Net Enrolment Ratio from U-DISE.

Accurate school mapping with information on infrastructural provision will be helpful in strengthening the educational opportunities in areas with a spatial concentration of marginalised communities. Though India has started to map all schools, the accuracy of data regarding the location of schools is somewhat doubtful.

Over all, a comprehensive child-tracking database to collect individual and household characteristics of children will be helpful in a comprehensive analysis on progress and in identifying areas of concern.

5.11 Conclusion

The Sustainable Development Goal (SDG-4) on quality eductaion aims to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' and has fixed ten targets. Most importantly, the target 4.1 asked to ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning by 2030. Subsequently, the UNICEF Education Strategy 2019-2030 has strongly asserted that 'every child has the right to learn'. Against this backdrop, this study has focused on a situational analysis of the educational status of school-age children (6-17 years) with special reference to economically poor and disadvantaged groups in urban India. It gives detailed insights into attendance, achievement, transition, completion, household expenditure on education, reasons for not

attending school, association of household expenditure with learning outcomes and ability to use information and communication technology (ICT).

Over the years, India has been able to increase the Gross Enrolment Ratio. However, when we look into the status of children's attendance at school, a considerable share of school-age children (6-17 years) in urban India, especially urban children from economically poor households, are not attending school. Shifting the policy focus from 'enrolment' to 'attendance' should be of utmost importance. The share of children who are not attending schools has increased with the increase of children's age. Among several reasons for a child not attending school, the most often reported reason has been 'failure and lack of interest in studies', followed by 'costly education', 'engagement in work' to support households economically or 'to look after their families while their parents are away for work'. A majority of children who have not attended school belong to economically poor households who found education costly and were required to work to support their families. Both household and government investments in education are related, either substituting or complementing each other (Tilak, 2002). Therefore, higher public investment may not reduce private (household) spending on education, but it will definitely encourage more people to opt for educating their children. A new set of policy interventions is the need of the hour focusing on the urban poor where universalisation of attendance will be the motto. Extension of the RtE Act, 2009 to cover secondary and higher secondary education should be an area of policy focus.

The instance of drop-out increases during transition from one stage of education to another when students need to change schools. The secondary level of education has reported the lowest transition rate with a higher incidence of drop-outs. Besides that, over-age education has been most prevalent in the states of Bihar, Uttar Pradesh, Jharkhand, Rajasthan and Assam. An effort to build a robust system to track students upon their entry in the schooling system will be very helpful in identifying the specific areas of intervention. Strengthening of the teaching-learning process for effective learning leading to higher transition and less repetition may increase the age-appropriate completion rate.

The lower level of learning achievement in government and government-aided schools questions the teaching quality in these schools and asks for immediate attention. Since state-sponsored schools are affordable to every section of society irrespective of economic status, poor students are able to attend these. Therefore, any learning deprivation in these schools will hamper their academic achievement as well as their future entry into the labour market. Failure and lack of interest in studies have been reported as the most prominent reasons for not attending school. Systematic upgradation of the government school system with more support to poor households through remedial classes and timely availability of materials required for education is the way forward. There is a need to shift the focus from expanding the schooling system (since only nine out of 100 children have reported supply-side constraints as a reason for not attending school in NFHS-4, 2015-16) to improve quality in learning. It is most important to build teaching capacity for socio-emotional learning, deploy teachers as per the strength of students, establish a transparent and robust system for teacher recruitment and remedial classes for needy students after regular class hours. There is also need to increase the access to information and communication technology (ICT) among adolescents to achieve SDG target 4.4 which aims to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship. Since education for every child is a joint effort of the school, household and society, each of the stakeholders must contribute in this direction.

5.12 Policy Concerns and Recommendations

The UNICEF Education Strategy 2019-2030 has strongly asserted that 'every child has the right to learn'. The strategy adopts three goals:

- Equitable access to learning opportunities
- Improved learning and skills for all
- Improved learning in emergencies and fragile contexts.

The strategy outlines the shift towards a greater focus on improving learning outcomes, including supporting the development of skills that allow young people to become agile, adaptive learners and responsible citizens, equipped to navigate personal, social, academic, economic and environmental challenges.

In response to this vision, various interventions are needed to improve the current situation of education among school-age children in urban India. An urgent need to shift the focus from 'enrolment' to 'attendance' is of utmost importance. Over time, India has implemented various schemes such as securing basic education as a fundamental right with the implementation of the RtE Act, 2009, establishing new schools under Sarva Shiksha Abhiyan (SSA), nutrition support through the Mid-Day Meal (MDM) scheme, Rashtriya Shiksha Abhiyan, and the latest Integrated Scheme of Education (2018) which resulted in an increase in enrolment in school education. The draft report of the National Education Policy (2019) has also recognised significant progress in enrolment. However, there are still various challenging issues concerning the educational development of children and adolescents in urban India, more specifically for those from poor and marginalised communities. Wide disparities across states in education emerge as a major concern for future policy framing.

Increasing Attendance: The increased availability of schools has led to an increasing level of opportunities for children to be educated. However, this achievement in the education sector has been neutralised by poor attendance in schools and weak learning outcomes. A considerable number of students are not attending schools regularly, which brings down the learning outcomes. For example, 19.3 per cent urban poor school-age children (6 to 17 years) are not attending school, and this figure is as high as 51.6 per cent among urban poor children aged 16 to 17 years. Inter-state variations have been quite high since economically weaker as well as a few well-endowed states, namely Uttar Pradesh, Gujarat, Odisha, Assam, Bihar and Madhya Pradesh are struggling to improve children's attendance in schools in urban India. A new set of policy interventions is the need of the hour focusing on the urban poor where universalisation of attendance will be the motto. Extension of the RtE Act, 2009 to cover secondary and higher secondary education should be an area of policy focus.

Eradicating 'learning poverty': The school system also needs to be revamped with a focus on eradicating 'learning poverty'. Only half of the students in government and government-aided schools in urban India have been able to acquire basic (desired) proficiency in learning in many states such as NCT of Delhi, Odisha, Uttar Pradesh, Chhattisgarh, Telangana and Tamil Nadu. There is a lack of focus on improvement in learning outcomes. Failure and lack of interest in studies have been reported as the most prominent reasons for not attending school. An improvement in the teaching-learning process may lead to an enhancement in learning outcomes in government schools. This will attract students to attend schools and also ensure a higher retention rate. At present, except for recommendations for an improved teacher-student ratio under the RtE Act (2009) and occasional capacity building for teachers, there are no specific schemes to improve the learning outcomes in schools. A strategic intervention is the need of the hour to improve the teaching-learning process in government and government-aided schools.

Reducing Associated Expenditure: Though India has made elementary education free of cost for children aged 6 to 14 years along with significant reduction in school fees in the secondary and higher secondary levels, households still spend a considerable amount of money for education directly. Importantly, 19 out of 100 out-of-school children do not attend school due to higher costs. One-time scholarships through various schemes are not sufficient to overcome the direct expenditure associated with education.

Two types of arguments are present in academia. Households with low income make low levels of investment in education mainly because of low affordability, lower importance and lack of awareness towards education of children. On the other hand, scholars also opined that if the government spends adequately on good quality education, poor households feel enthusiastic and would willingly contribute to their children's education and thus supplement government efforts. In short, household and government investments in education are related, either substituting or complementing each other (Tilak, 2002). Therefore, higher public investment may not reduce private spending on education, but it will definitely encourage more people to opt for educating their children.

Arranging remedial teaching: Households spend a considerable share out of their total expenditure on schools. The highest share in urban West Bengal (65%) in private coaching, indicates severe concerns regarding the quality of learning in government schools. Since poor students generally attend government and government aided schools, and are unable to spend as highly as the non-poor on private coaching, any deterioration in learning quality in these schools would hamper the interest to attend school regularly. Therefore, there is a need to shift the focus from expanding the schooling system (since only nine out of 100 children have reported supply-side constraints as a reason for not attending school in NFHS-4, 2015-16) to improve quality in learning. It is most important to build teaching capacity for socio-emotional learning, deploy teachers as

per the strength of students, establish a transparent and robust system for teacher recruitment, and remedial classes for needy students after regular class hours.

Mass awareness for age-appropriate education: Along with the above, the completion of different education levels at appropriate ages is a major area of concern in India. Over-age and under-age education hampers the normative development of children and increases the burden on the education system with chances of repetition and drop-outs. Most strikingly, only 36 poor children out of 100 in urban Bihar have been able to complete primary education on completion of 11 years of age. Over-age education has been most prevalent in the states of Bihar, Uttar Pradesh, Jharkhand, Rajasthan and Assam. Therefore, there is a need to promote a mass awareness campaign for age-appropriate entry of children into the schooling system. Strengthening of the teaching-learning process for effective learning leading to higher transition and less repetition may increase the age-appropriate completion rate. Since education for every child is a joint effort of the school, household and society, each of the stakeholders must contribute in this direction.

6

Employment and Migration

6.1 Introduction

The practice of child labour and engaging children in various hazardous tasks is widely practised across the world and particularly in the Global South. In 2016, there were 218 million working children worldwide (ILO, 2017). Among them, 152 million were classified as child labour (see Box 6.1), and 73 million among them were employed in various kinds of hazardous works. The practice of child labour and engaging children as unpaid family labour is widespread in Asia. It is worth mentioning that Asia and the Pacific region alone had 62 million child labour (ILO, 2017). According to Khan and Lyon (2015), there are 16.7 million child labour only in South Asia, belonging to the age group of 5-17 years. In India, there are 5.7 million children classified in this age group (see Box 6.2). Many of these children work as bonded labour or in such conditions that have severe impacts on their physical and mental health (Khan and Lyon, 2015).

Therefore, the elimination of all kinds of child labour and their participation in hazardous work have become one of the main agendas of the Sustainable Development Goals (SDG-8) of the United Nations. This goal is mainly focused on the elimination of all kinds of forced labour, modern forms of slavery engaging children, and any employment of children in hazardous work by 2025. It also focuses on generating decent employment opportunities among the age group of 15-24 years, primarily by increasing their employability. All the member countries are taking action towards these goals to ensure a better life for every child. India being a member country of the United Nations, is also committed to eliminating all forms of child labour. In this context, the present chapter aims to understand the present situation regarding working children and adolescents in urban India with a focus on urban poor children and adolescents.

6.1.1. Participation in the workforce and being 'nowhere': a theoretical background

The practice of working among children, which affects their health, well-being, and educational attainment, is to be eradicated under the framework of SDG-8.7. The practice is widespread in South Asia, mainly because of poverty, income inequality, and credit shortage (Herath, 2007). Besides these factors, parental ignorance and lack of access to education have been bottlenecks to eliminating this problem. Working children are not only denied their right to education, but this situation has the potential to harm their physical and mental well-being (Khan and Lyon, 2015). The issue of working in children hampers the human resources of a country as most working children eventually become unskilled labour in the future.

Widespread poverty and a high fertility rate among the poor also deprive many children from going to school among countries of South Asia. These out-of-school children mostly work in the family fields or enterprises, as unpaid family labourers. Also, there are many children who have been categorised as 'nowhere' (Khan and Lyon, 2015), 'idle' (Biggeri et al., 2003), or those who are neither in the workforce nor attending educational

institutions. These 'nowhere' children and adolescents are extremely vulnerable as they are often engaged in various kinds of 'hidden work' such as domestic duties, including the collection of water and fuelwood. Notably, girls have a higher propensity to become inactive after a certain age compared to boys (Burra, 2005; Samantroy et al., 2016). However, no statistical database and household survey have information regarding the intensity of the workload or nature of activities of these invisible children and adolescents. Also, many of these 'inactive' children and adolescents are engaged in activities like begging and prostitution, which have been identified as the worst forms of child labour at international platforms (Khan and Lyon, 2015).

Furthermore, migrant children from weak socio-economic strata are incredibly vulnerable. The majority of the seasonal and circular migrant children accompanying their parents are forced to join the workforce at specific destinations (Srivastava, 2012). These children often have to leave school in the middle of an academic session. Also, migrant children comprise a large section of workers in various hazardous industries (PwC and Save the Children, 2015).

Child and adolescent labour in Indian and other South Asian contexts are mainly considered as rural phenomena as the majority of the working children and adolescents are engaged in agriculture. Therefore, the major policy focus so far is on rural areas (Khan and Lyon, 2015; Samantroy et al., 2016). Considering the growing challenges of urbanisation in India, including the increased quantum of child workers in the past decade[1] (2001-11), understanding the status of vulnerability of urban children and adolescents ty in terms of their participation in work is crucial for any policy intervention.

In light of the above, the present chapter focuses on understanding the extent and nature of working in urban children and adolescents. Due to the lack of clarity of definition of child and adolescent labour, the present study has included all the children (5-14 years), young adolescents (14-17 years) and older adolescents (18-19 years) who are engaged in economically gainful activities and calls them as 'working children and adolescents'. The present chapter is further divided into five sections. Following the introductory section, the second one attempts to understand the extent of working in children and adolescents. It also tries to identify the quantum of 'nowhere' children and adolescents. The third section analyses the nature and condition of working urban children and adolescents with reference to their participation in hazardous work and the informal sector and informal employment. The fourth section works out the quantum of migrant children and adolescents and their participation in the workforce. The fifth section discusses policy challenges and recommends policy interventions, followed by the conclusion.

Box 6.1: Defining Children and Adolescents

According to the legal framework of the Child Labour (Prohibition and Regulation) Act, 1986 and its Amendment Act, 2016, children have been defined as those who have completed their fourteenth year or such age as may be specified in the Right of Children to Free and Compulsory Education Act, 2009, whichever is more. The Right to Education Act (RtE), 2009, covers the age group 5-14 years, defined as children in this context.

On the other hand, according to the Child Labour (Prohibition and Regulation) Amendment Act, 2016, working in any hazardous processes has also been prohibited for adolescents. The Act defines adolescents as those who have completed their fourteenth year but are below 18 years of age. Therefore, 14-17 years of age is categorised as adolescents (The Gazette of India Extraordinary, 2016). As the study has included 14 years of age as children, adolescents have been defined as 15-17 years, whereas the ILO convention No. 182 defines 15-17 years as older children. In contrast with the international definition of children (5-17 years), the study disaggregates the age group into two categories: 1) children (5-14 years), and 2) young adolescents (15-17 years). On the other hand, the aggregate age group 5-17 years is termed as 'children and adolescents covered by legislative protection'.

Adolescents in the age group of 18-19 years are also important from the policy perspective. Therefore, this age group is also included in the study, which is described as 'older adolescents'. This group comprises the most vulnerable group due to the absence of any legal framework covering them.

Therefore, the study has three age groups as such:

5-14 years (children)
15-17 years (young adolescents) } 5-17 years (children and adolescents covered by legislative protection)
18-19 years (older adolescents)

1 This as per the figures provided in the Population Census of India 2001 and 2011.

Box 6.2: Defining Activity Status

Working children and adolescents

Working children and adolescents are those who were employed for more than 30 days during a reference period of 365 days before the date of the survey. NSSO defines the reference period as the usual status and further classifies it into two categories: 1) usual principal status, and 2) usual subsidiary status. The first is defined as a worker by usual principal status if he/she worked for a relatively longer period (using time criteria) within the reference period. On the other hand, the second is defined as a worker by subsidiary status if he/she was economically active for not less than 30 days in a reference period.

Studying only

Children and adolescents are categorised as 'studying only' if they reported that they are attending educational institutions as their principal activity status, that is, they have spent maximum time attending educational institutes within the reference period. Therefore, this category excludes those who are attending educational institutions as their principal status, while being economically active by subsidiary status.

'Nowhere' children and adolescents

Children and adolescents who are neither attending educational institutes nor engaged in any economically gainful activities by principal status and not engaged in any economically gainful activities by subsidiary status during the reference period of 365 days preceding the date of the survey are categorised as 'nowhere'. This category includes those who are engaged in domestic duties on an unpaid basis, beggars, rentiers, and those engaged in commercial prostitution.

6.2 Activity Status: Being in the Workforce, Pursuing Education and Being 'Nowhere'

6.2.1 Composition of children and adolescents based on their usual activity status

Children and adolescents have been classified into three categories based on the major activity in which they have spent their maximum time during the reference period of 365 days preceding the date of the survey (combining principal and subsidiary status). All children and adolescents have been classified into three broad categories: 1) working (usual status), 2) studying, 3) neither studying nor working. For this analysis, unit-level data of the National Sample Survey (NSS) 68th round on 'Employment and Unemployment' (2011-12) and the Periodic Labour Force Survey (2017-18) have been used. All urban households have been categorised based on their monthly per capita consumer expenditure (MPCE) quintiles. The lowest two quintiles have been categorised as 'poor,' and the remaining three quintiles are categorised as 'non-poor'.[2]

In 2017-18, there were 1.1 million and 4.5 million economically active children (5-14 years) and young adolescents (15-17 years), which comprises 0.5 per cent and 7.1 per cent of the respective age groups. Understandably, the practice of working in young adolescents was much higher compared to children (PLFS, 2017-18). However, it is often noticed that the incidence of working in children of age group 5-14 years remains under-reported due to the existing labour laws.[3] This results in a sudden rise in the number of working children in the age group of 15-17 years as many respondents over-report the age of working children to avoid legal complications. As working among older adolescents (18-19 years) is protected by a legal framework, work participation among this age group was significantly higher (18.1%) compared to children and young adolescents in 2017-18.

2 This definition of urban poor and non-poor has been adopted for the entire chapter in line with other chapters.

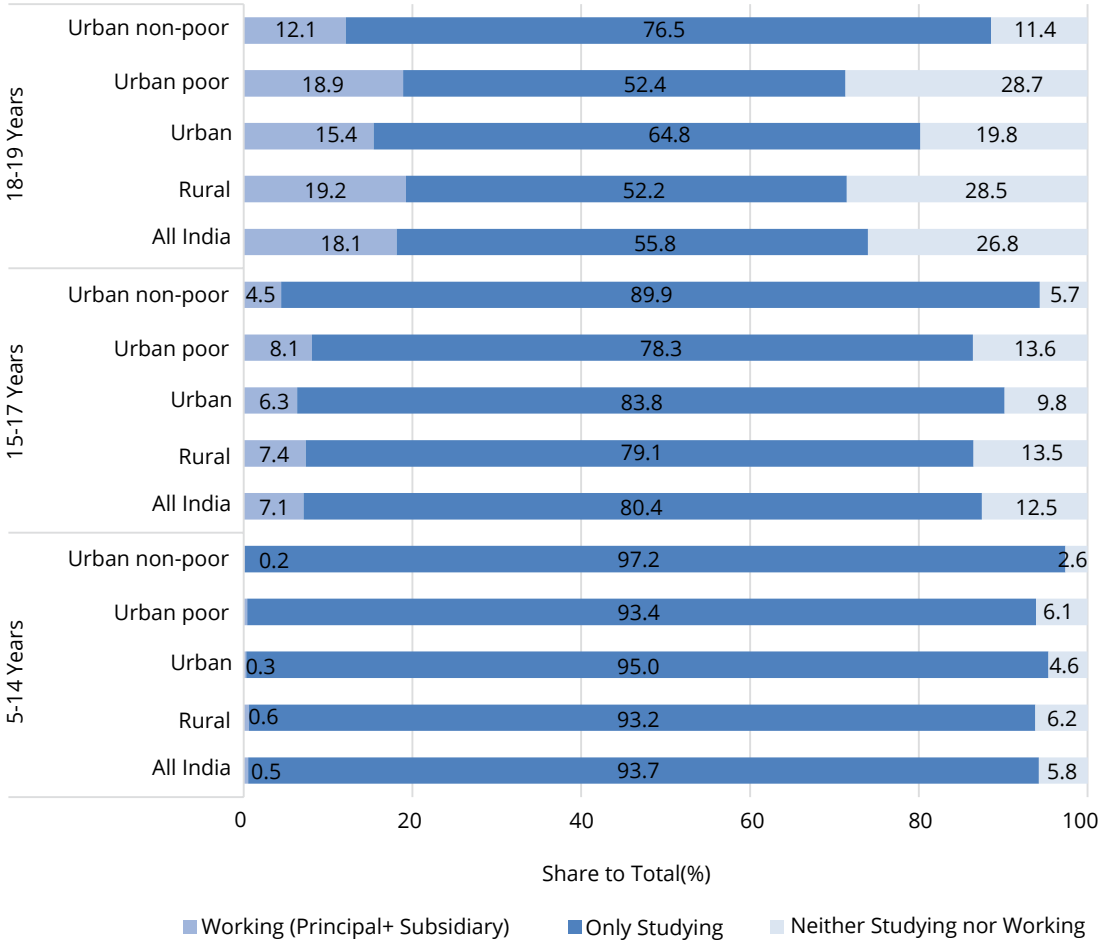
3 According to the Child Labour (Prohibition and Regulation) Act 1986 and the Child Labour (Prohibition and Regulation) Amendment Act 2016, employing any children (5-14 years) is a punishable offence which includes monetary punishment as well as imprisonment (Samantroy et al., 2016).

It is to be noted that the percentage share of working in children, young and older adolescents was higher in the rural areas compared to the urban in 2017-18. Children and adolescents working in the family fields is a very common practice in rural India, which is responsible for the higher work participation among these age groups in this area. Within urban areas, the share of urban poor children, young and older adolescents involved in working, was higher than that of the urban non-poor (Figure 6.1). Notably, 75 per cent of the economically active children and adolescents in urban areas belong to poor households, mostly due to their larger family size and higher cost of living in the cities. In many cases, these children and adolescents belong to poor migrant households and are, thereby, forced to enter the labour market at a very early age (Srivastava, 2012).

At the national level, 93.7 per cent of children in the age group of 5-14 years attend schools as compared to 80.4 per cent young adolescents (15-17 years) and 55.8 per cent older adolescents (18-19 years). The high participation of children in schools reflects the positive impact of the Right to Education Act, 2009, and Sarva Shiksha Abhiyan, which is promoting universalisation of elementary education. Unfortunately, there are nearly 20 per cent of young adolescents (15-17 years) who are found to be not in school, which indicates the urgent need for free and compulsory secondary education. Notably, the share of children and young adolescents (5-17 years) attending educational institutes is higher in urban areas compared to rural areas, mostly due to the better educational infrastructure available in the former. Therefore, access to school is the main problem faced by the urban poor children and young adolescents, which demands an inclusive education policy.

Unfortunately, 6.3 per cent of children and 12.5 per cent of young adolescents were found to be 'neither studying nor working'. However, it is to be mentioned that 7.8 per cent of children and 13.6 per cent of young

Figure 6.1: Usual Activity Status of Children (5-14 years), Young Adolescents (15-17 years) and Older Adolescents (18-19 years) in India, 2017-18



Note: 'Urban poor' is defined as the lowest two urban MPCE quintiles and 'urban non-poor' are the remaining three MPCE quintiles.
Source: Periodic Labour Force Survey, 2017-18.

adolescents of the urban poor were inactive in 2017-18, compared to only 3.5 per cent and 5.7 per cent, respectively, from urban non-poor households. It is also worth mentioning that among urban poor the share of 'nowhere' adolescents (18-19 years) was much higher (28.7%) compared to 'nowhere' children and young adolescents because of a higher drop-out rate in the secondary or higher secondary levels, which indicates the need for expansion of inclusive, free and compulsory education up to the higher secondary level.

The activity status of children and adolescents reveals the presence of urban advantages over rural areas in terms of access to education. However, the higher participation of urban poor children and adolescents in economic activities and their likelihood of remaining out of school compared to the non-poor children and adolescents indicates the vulnerability of the former, which needs more inclusive policy approaches.

6.2.2 Pursuing work

Work participation rate (WPR): national level

According to the estimates based on NSS 68th round (2011-12), a total of 12.9 million children and young adolescents in the 5-17 years age group were economically active, which comes under the legislation of the Child Labour (Prohibition and Regulation) Amendment Act, 2016. According to the latest PLFS estimates (2017-18), the figure fell to 5.6 million children and young adolescents. The decline in the quantum of children and adolescent workers was very sharp, from 10.2 million to 4.4 million in rural areas, compared to a decline from 2.7 million to 1.2 million in urban areas. The figures estimated from NSS 68th round (2011-12) and PLFS (2017-18) also indicate a sharp decline in the WPR in this age group, which fell from 4.3 to 2.2 during the mentioned period. The decline was sharper in rural areas and among the urban poor in urban areas.

In both periods, the WPR among rural children was higher than in urban areas. However, in 2011-12, the WPR among urban poor children was marginally higher than that of rural children, which had declined sharply during the period. Also, in both periods, the WPR was higher among boys compared to girls in the urban areas, as the latter experienced a sharp decline during this period (Figure 6.2).

Disaggregated analysis for children and young adolescents

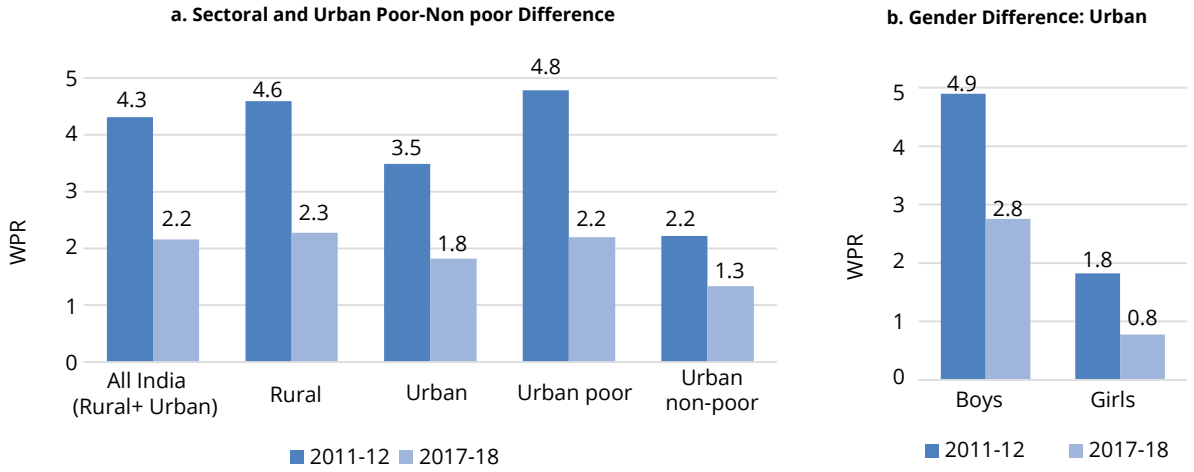
This section will try to do an age-disaggregated analysis, separately for children and young adolescents as the different legislative framework and policy initiatives have affected these age groups in a very different manner.

In 2011-12, there were 3.2 million working children (5-14 years), which became 1 million in 2017-18, with a decline of WPR from 1.4 per cent to 0.5 per cent. In 2017-18, there were 0.9 million child workers located in rural areas and 0.16 million in urban areas. The WPR among children is almost double (0.6%) in rural areas compared to urban areas (0.3%), with a comparably higher rate among urban poor (0.4%). Between 2011-12 and 2017-18, the decline in WPR among children was sharper in urban areas (1.2% to 0.3%), especially among children of the urban poor (1.8% to 0.4%), mostly due to an inclusive education policy along with strict monitoring to regulate working among children. Among urban children, the WPR was higher among boys (0.5%) compared to girls (0.1%) in 2017-18. Also, the decline in WPR in boys was much sharper compared to girls between the period of 2011-12 and 2017-18. On the other hand, the lower participation of girls in the workforce is due to their invisible engagement in unpaid domestic chores and care-works (Burra, 2005).

In fact, the actual number of working children may be much higher, and the sharp decline in its quantum and share is mostly due to under-reporting. Also, many children are engaged in extended System of National Accounts (SNA) activities like unpaid domestic chores and activities like begging and prostitution. Therefore, Samantroy et al. (2016) advocated a definitional expansion to capture the wide spectrum of child work in the Indian context.

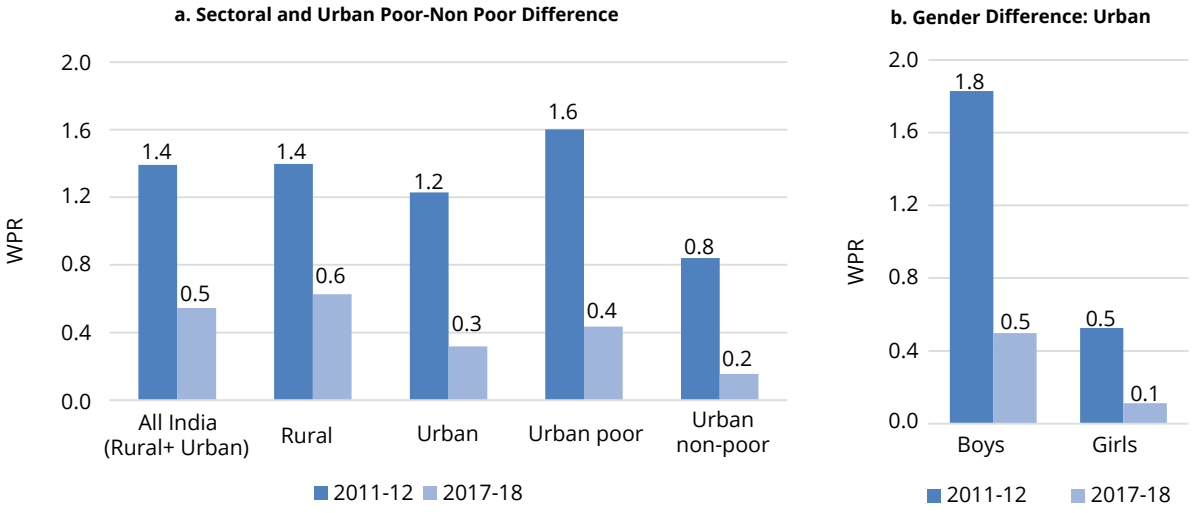
In 2017-18, there were 4.5 million young adolescents economically active, three times the quantum of working children. Among these working young adolescents, 3.5 million were in rural areas, and 1.1 million were in urban areas. The WPR among this age group was also higher than the former. In 2017-18, the WPR among this age group was 7.1 per cent. It was 7.4 per cent in rural areas, higher than the figure of 6.3 per

Figure 6.2: Change in Work Participation (Usual Status) Among Children and Young Adolescents (5-17 years) in India, 2011-12 to 2017-18



Note: As the sample design of NSS 68th round (2011-12) and Periodic Labour Force Survey (2017-18) are not precisely comparable, change in percentage points cannot be calculated. However, they are broadly comparable.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18.

Figure 6.3: Change in Work Participation (Usual Status) Among Children (5-14 years) in India, 2011-12 to 2017-18



Note: As the sample design of NSS 68th round (2011-12) and Periodic Labour Force Survey (2017-18) are not precisely comparable, change in percentage points cannot be calculated. However, they are broadly comparable.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

cent in urban areas, with a strikingly high WPR among the urban poor (8.1%). The higher living cost in cities along with adult unemployment and under-employment often force these adolescents to seek employment. Understandably, the WPR among urban young adolescent boys was very high (9.6%) compared to girls (2.7%). A higher rate of employment-related migration among boys of this age group can be a probable reason behind high WPR in boys of this age group.

Similar to the rate for children, the WPR among this age group (young adolescents) has also declined from 14.7 per cent to 7.1 per cent between 2011-12 and 2017-18. The decline was much sharper in rural than in urban areas. In the urban areas, the decline was sharper among the urban poor compared to the urban non-poor. Notably, the declining gap between the urban poor and non-poor in terms of work participation is an indication of the inclusive and free secondary education among urban poor, which led to the decline in their work participation.

In contrast to the former two age groups, the older adolescents (18-19 years) do not come under the protection of any legislative framework. Therefore, WPR among older adolescents is generally high, estimated to be 31.5 in 2011-12. It declined to 18.1 in 2017-18, which should be a major policy concern as employment creation among young adults (15-24 years) has been major SDG goals (8.5 and 8.6).[4] Notably, the decline in the WPR among adolescents was more pronounced in the rural areas compared to urban areas, mostly due to the decline in job prospects in the agricultural sector and lack of alternative employment opportunities there. In the urban areas, WPR among older adolescents of poor households faced a sharper decline compared to the adolescents of non-poor households. Greater access to higher education among the rural and the urban poor sections may have played an important role in the decline in WPR in this age group. However, the decline in WPR among urban poor adolescents, and urban boys of the age group 18-19 years is not only a consequence of their pursuance of higher education but indicates an alarming situation of joblessness in urban areas. Notably, the low WPR in adolescent girls is also a concern, which indicates that the labour market is not gender-inclusive, and girls of this age group are mostly engaged in unpaid domestic chores (Figure 6.5).

Work participation among children and adolescents: a state-level pattern

Apart from the change in WPR between 2011-12 and 2017-18, there is a wide variation among states. Chhattisgarh (3.9%) had the highest WPR among urban children and young adolescents (5-17 years) in 2017-18, followed by Madhya Pradesh, Uttar Pradesh, Gujarat and West Bengal. In terms of absolute numbers, Uttar Pradesh alone had 3 lakh working children in urban areas, followed by Gujarat (1.3 lakh), Madhya Pradesh (1.2 lakh), and West Bengal (1.2 lakh). Uttar Pradesh has a vast quantum of children working in industries like carpet and silk weaving, lock making, footwear, and glass industries in urban centres of the western part of the state (Samantroy et al., 2016). Also, states like Chhattisgarh, Uttar Pradesh, and Gujarat had a higher WPR among the urban poor than the state average. Interestingly, in states like Madhya Pradesh, Tamil Nadu and Assam, the WPR is lower among the urban poor compared to the urban average (Figure 6.6).

The WPR among older adolescents was also highest in Chhattisgarh (29%), followed by West Bengal, Uttar Pradesh and Madhya Pradesh in 2017-18. However, in most of the states, the WPR among the urban poor was marginally higher than the urban average figure, except in Delhi and Gujarat, where the WPR among urban poor adolescents was lower than the average. In Delhi, where WPR among urban poor adolescents was abnormally low, a higher unemployment rate prevails in this section, which indicates the lack of unskilled jobs in the market (Figure 6.7).

The decline in WPR among children and adolescents has raised two very contrasting scenarios. On the one hand, the country has made progress towards the elimination of working in children and young adolescents (5-17 years). The sharper decline among urban poor children and adolescents was mostly due to the extensive coverage of education under the RtE Act 2009. On the other hand, declining work participation among adolescents (18-19 years) should be taken as a warning for future crises and indicates a need for the expansion of universal secondary and higher secondary education in order to regulate working among young adolescents and create a skilled workforce for the future. A major focus should also be given to states like Uttar Pradesh, Madhya Pradesh and Chhattisgarh, where the WPR is high among urban children and young adolescents.

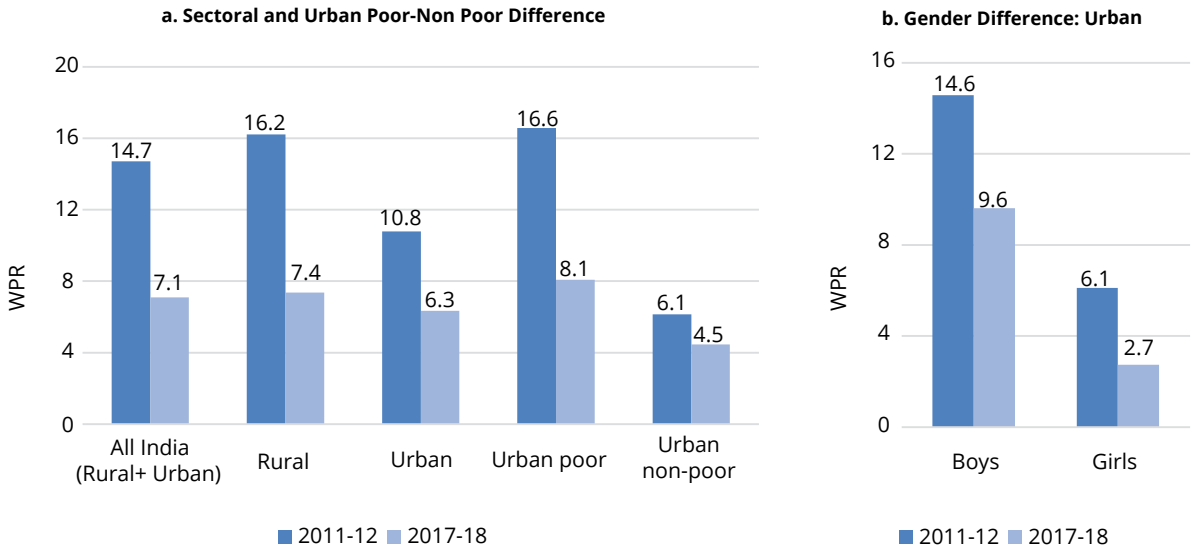
6.2.3 Inactivity among children and adolescents: being 'nowhere'

Neither studying nor working

Besides working children and adolescents, inactive, 'idle' or 'nowhere' children and adolescents are highly vulnerable, particularly those in the 5-17 years age group. 'Nowhere' children and adolescents are those who are neither studying nor engaged in any economic activity (see Box 6.2). According to Khan and Lyon (2015), the share of inactive children is high in countries of South Asia. In the majority of cases, older girls are kept inactive in order to perform household chores and caregiving of younger siblings so that the adult female

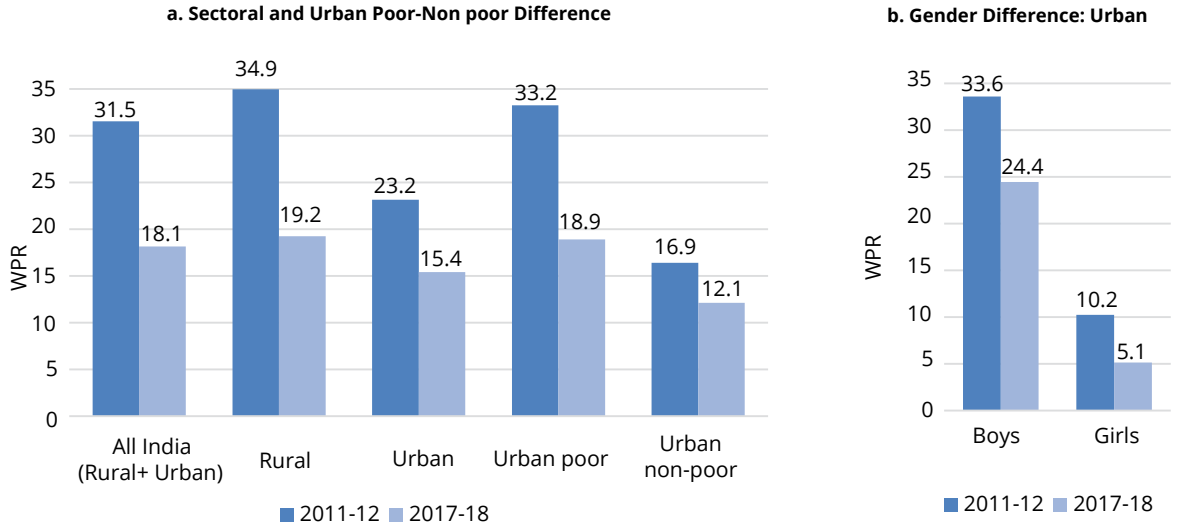
4 SDG-8.5 proposes full and productive employment and decent work opportunities among young adults whereas SDG-8.6 focuses on the reduction of inactivity and unemployment among young adults.

Figure 6.4: Change in Work Participation (Usual Status) Among Young Adolescents (15-17 years) in India, 2011-12 to 2017-18



Note: As the sample design of NSS 68th round (2011-12) and Periodic Labour Force Survey (2017-18) are not precisely comparable, the change in percentage points cannot be calculated. However, they are broadly comparable.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18.

Figure 6.5: Change in Work Participation (Usual Status) Among Older Adolescents (18-19 years) in India, 2011-12 to 2017-18

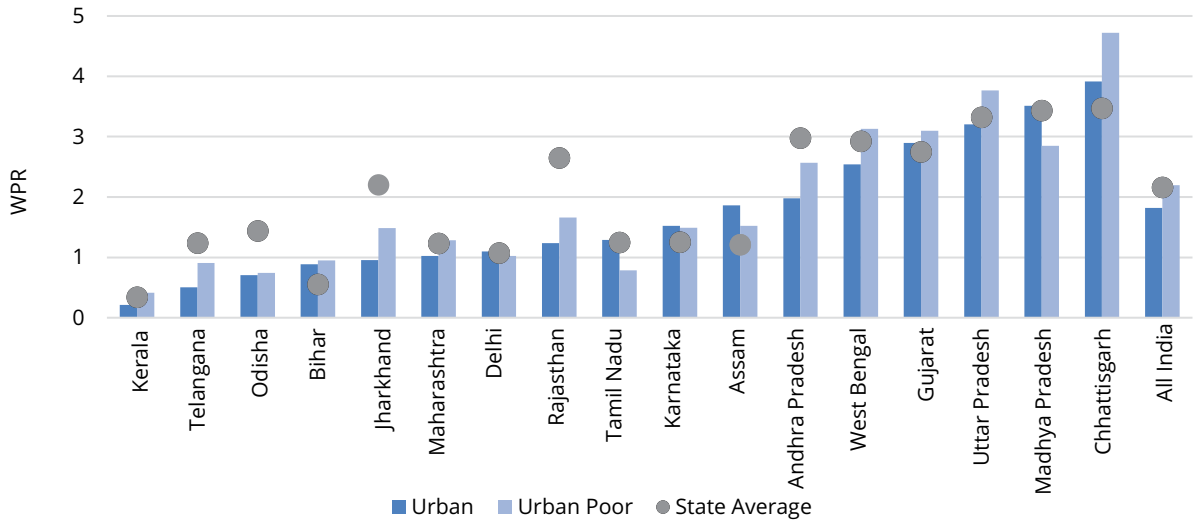


Note: Usual Status is defined with regard to a reference period of 365 days preceding the date of the survey. Usual Status combines both Usual Principal Status and Usual Subsidiary Status.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

member of the family can be economically active. In other cases, these children also work in their family enterprises, which remain unreported (Burra, 2005).

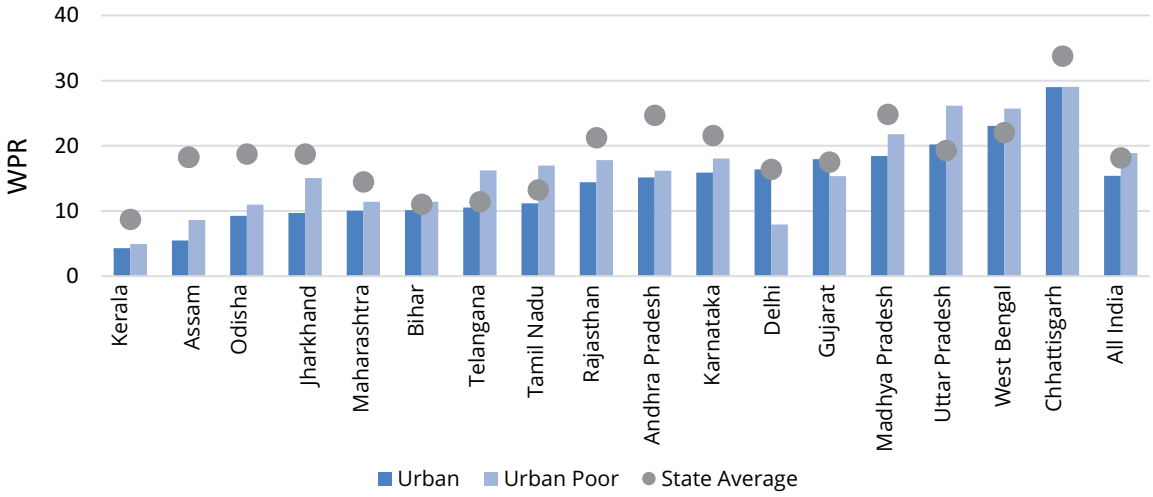
In 2017-18, there were 19.4 million children and young adolescents identified as inactive, among whom 9.1 million were engaged in unpaid domestic duties, and 6.7 million were classified as 'others', which include activities like begging and prostitution. In the urban area, there were 4 million inactive children and adolescents, among whom 1.8 million were engaged in domestic duties, and 1.4 million were categorised as 'others'.

Figure 6.6: Work Participation (Usual Status) Among Urban Children and Young Adolescents (5-17 years), State-level Pattern, 2017-18



Note: Only 17 states with UNICEF intervention have been covered here along with national average.
Due to the small sample size, age-disaggregated analysis for children (5-14 years) and young adolescents (15-17 years) could not be performed.
Source: Periodic Labour Force Survey, 2017-18

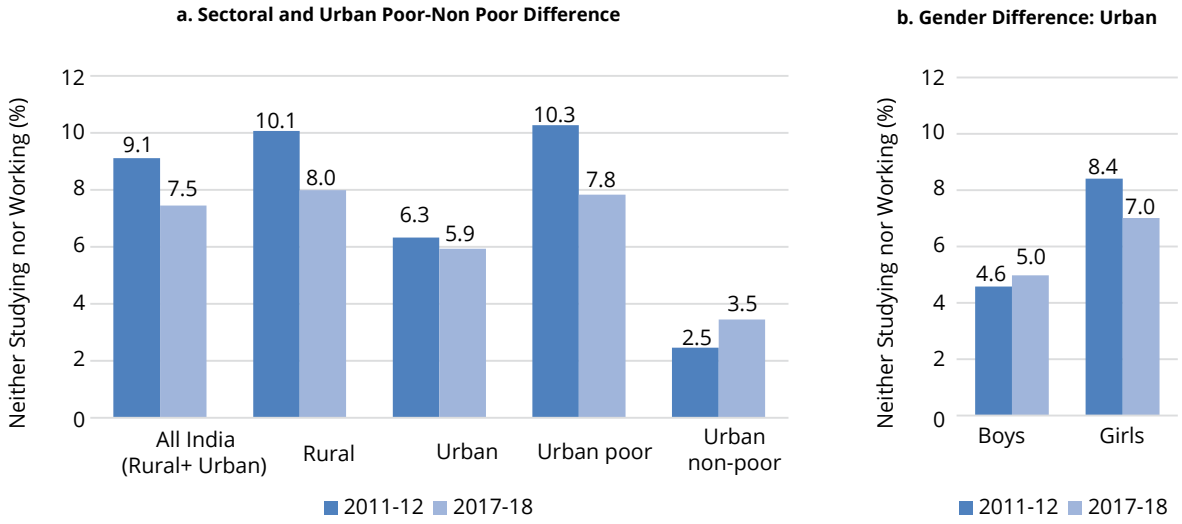
Figure 6.7: Work Participation (Usual Status) Among Urban Older Adolescents (18-19 years), State-level Pattern, 2017-18



Note: Only 17 states with UNICEF intervention have been covered here along with the national average.
Source: Periodic Labour Force Survey, 2017-18

The share of inactive children and young adolescents has declined from 9.1 per cent to 7.5 per cent between 2011-12 and 2017-18, owing to the rising incidence of formal schooling among this age group. Similar to the previous trend, its share among children and young adolescents was much lower in urban areas (5.9%) compared to rural areas (8%). Understandably, the urban poor of this age group had a high level of inactivity (7.8%). Conspicuously, the decline in the share was notable in rural areas and among the urban poor, owing to the impact of the inclusion of marginalised sections into formal schooling. Surprisingly, the share of 'nowhere' children and young adolescents had increased among the urban non-poor and all urban boys during the same period. Due to the rise in the cost of living among the non-poor households on the verge of poverty, children and young adolescents, especially boys, are forced to leave education. Also, the share of inactivity is much higher among urban girls (7%) of this age group, because of their higher burden of household chores (Figure

Figure 6.8: Change in the Share of 'Nowhere' (Usual Status) Children and Young Adolescents (5-17 years) in India, 2011-12 to 2017-18



Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

6.8). In this context, Samantroy et al. (2016) advocated for a gender-sensitive definition of child labour with the inclusion of the extended SNA activities[5] into the existing definition.

Disaggregated analysis for children and young adolescents

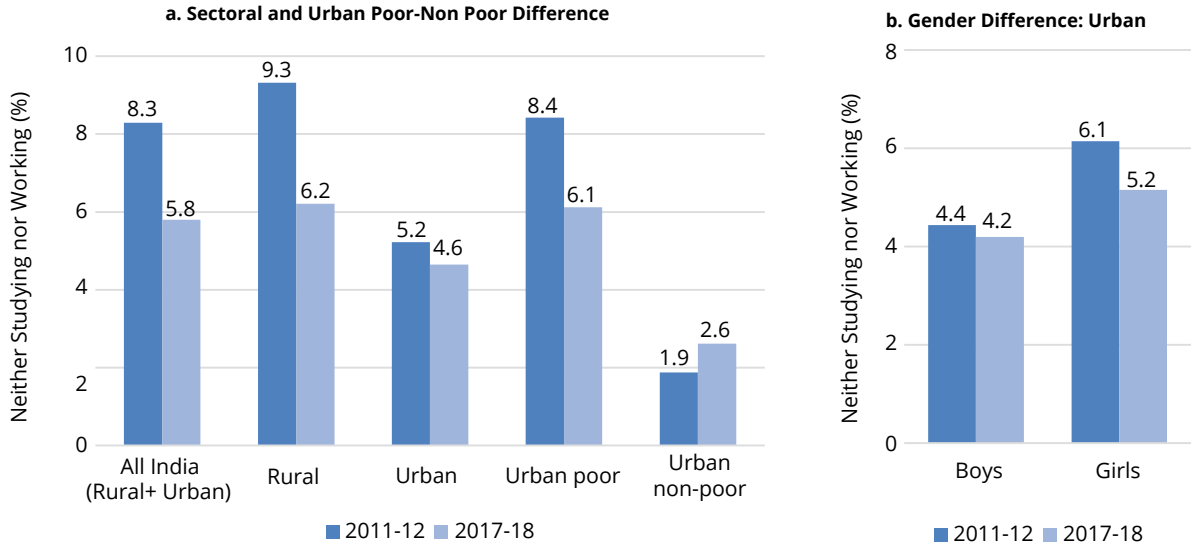
In 2017-18, there were 11.3 million children (5-14 years) neither working nor studying, comprising 5.8 per cent of this age group. Fortunately, this figure has declined from 8.3 per cent to 5.8 per cent between 2011-12 and 2017-18. In 2017-18, 2.3 million children in urban areas were identified as 'nowhere', which comprised 4.6 per cent of the age group, which is much lower than 6.2 per cent in rural areas. Among urban children, inactivity was strikingly higher among the urban poor (6.1%). This has majorly declined for rural and urban poor children over the same period. In contrast, the inactive section has increased among the children of the urban non-poor, which is worrisome because of the spillage of disadvantage among the non-poor section. Also, inactivity is higher among girls compared to boys (Figure 6.9b), which also needs to be addressed through a gender-inclusive education policy.

In contrast to the declining trend among children, the share of 'nowhere' young adolescents increased marginally from 12.1 per cent to 12.5 per cent between 2011-12 and 2017-18. Notably, there were 8 million such young adolescents in 2017-18, among whom 1.6 million were in urban areas. In contrast to the increasing share of inactive young adolescents in rural areas, the share of inactive urban adolescents has marginally declined from 9.9 per cent to 9.8 per cent in urban areas during the same period. However, this share was very high among young adolescents from urban poor households (13.6%) in 2017-18, even higher than the rural average. It was also higher among young adolescent girls (12.6%) compared to boys of the same age group (7.3%) (Figure 6.10). Not surprisingly, the share has increased among the urban non-poor and boys. Due to increasing casualisation and declining wage rates in the market, the income of the non-poor households (those in the margin) has declined substantially, which has forced many young adolescents to leave education and actively search for employment. This indicates a need for compulsory and free high school and higher education, which will increase the employability of the future generation.

As in the case of young adolescents, the share of 'nowhere' older adolescents (18-19 years) has also increased over time, which is a worrying sign as India has failed to reduce inactivity among this age group. In 2011-12, 22.5 per cent of adolescents were inactive, which has increased to 26 per cent in 2017-18 (Figure 6.11a). The figure has increased both in rural and urban areas. In the urban areas, the share of 'nowhere'

5 Extended SNA activities includes unpaid domestic chores (free collection of fuelwood, etc.).

Figure 6.9: Change in the Share of 'Nowhere' (Usual Status) Children (5-14 years) in India, 2011-12 to 2017-18



Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

adolescents increased for the urban poor, which is primarily due to the jobless situation in the economy with increased demand for skilled and semi-skilled labour. On the other hand, it has decreased for urban non-poor adolescents, in contrast to the increasing trend noted in the case of children and young adolescents from this section. A large number of older adolescents from upper class and upper middle-class households are pursuing higher education, especially professional courses, which may have resulted in the rise in the share of inactivity in this section. Surprisingly, the share of inactive adolescent girls declined compared to the increasing trend in boys, but the figure is still significantly higher than that for boys (Figure 6.11b).

Rising unemployment among adolescents may be a major cause behind the rise in inactivity among this age group; in 2011-12, unemployment was 4.2 per cent, which further increased to 9.8 per cent in 2017--18. Notably, the rise of unemployment was much higher in rural areas compared to urban, and among boys compared to girls, which explains the present situation of inactivity among this age group.

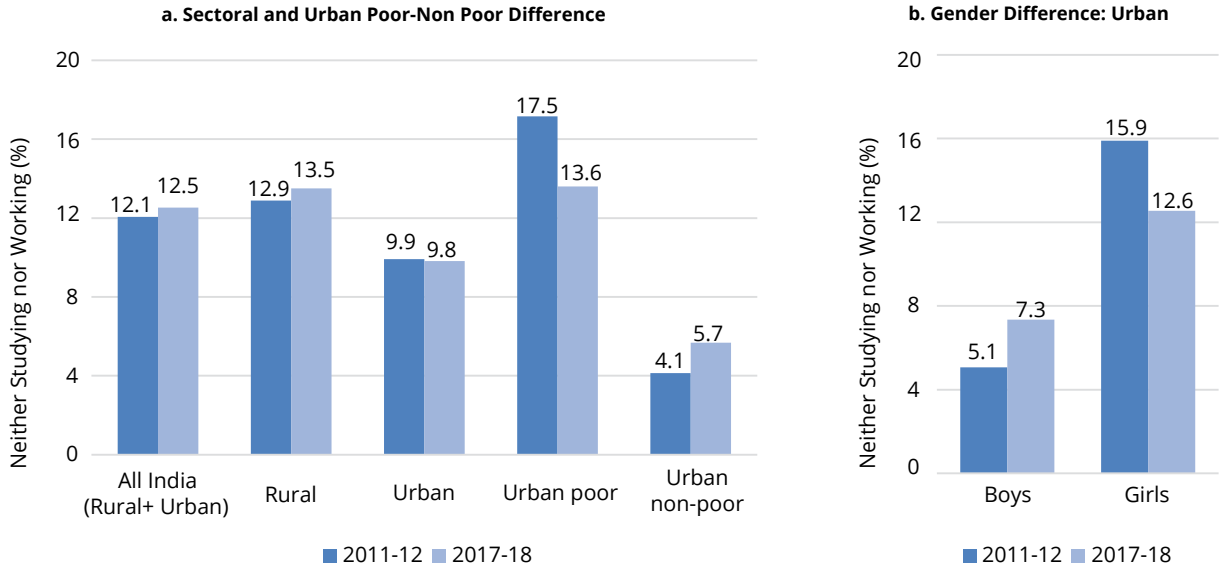
'Nowhere' children and adolescents in urban India: a state-level pattern

In 2017-18, states like Uttar Pradesh (11.9%) and Bihar (8.5%) had a very high share of urban 'nowhere' children and young adolescents (5-17 years). In states like Uttar Pradesh, Chhattisgarh, Jharkhand, Gujarat and Maharashtra the share of 'nowhere' children was much higher among the urban poor compared to the urban and state averages (Figure 6.12). Apart from Gujarat and Maharashtra, all these states belong to the low-income category with a poor education system. On the other hand, in states like Gujarat and Maharashtra, the majority of inactive children and young adolescents were migrants, mostly girls who are engaged in unpaid domestic chores (Samantroy et al., 2016).

In 2017-18, states like Delhi, followed by Uttar Pradesh, had a higher share in 'nowhere' older adolescents in urban areas. Notably, states like Delhi, Assam and Gujarat had a higher share of inactive adolescents from urban poor households (Figure 6.13), owing to a high unemployment rate among this age group (PLFS 2017-18). The unemployment rate among Delhi's (10.2%) and Assam's (14.6%) urban poor was very high, which is a situation that warrants concern and needs to be addressed.

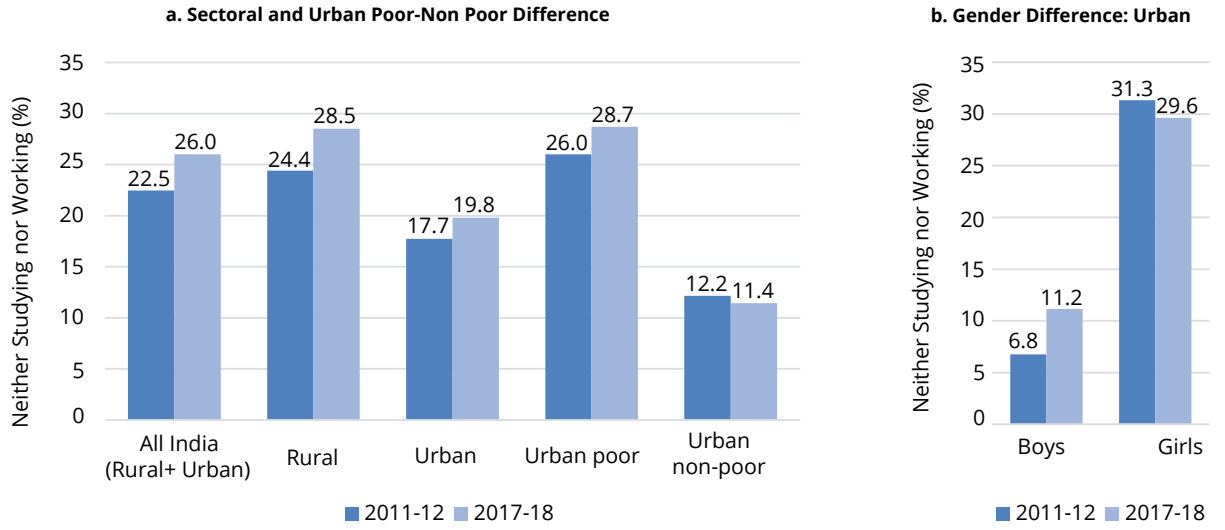
Therefore, it can be summed up that inactivity in children declined while it increased among young and older adolescents between 2011-12 and 2017-18. This pattern indicates a need to expand the coverage of universal and free education beyond the elementary level in order to reduce inactivity among the older age group. Also, rising inactivity among older adolescents of urban poor households seems to be a concern, indicating the exclusionary nature of the urban labour market where unskilled poor urban adolescents get

Figure 6.10: Change in the Share of 'Nowhere' (Usual Status) Young Adolescents (15-17 years) in India, 2011-12 to 2017-18



Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

Figure 6.11: Change in the Share of 'Nowhere' (Usual Status) Older Adolescents (18-19 years) in India, 2011-12 to 2017-18



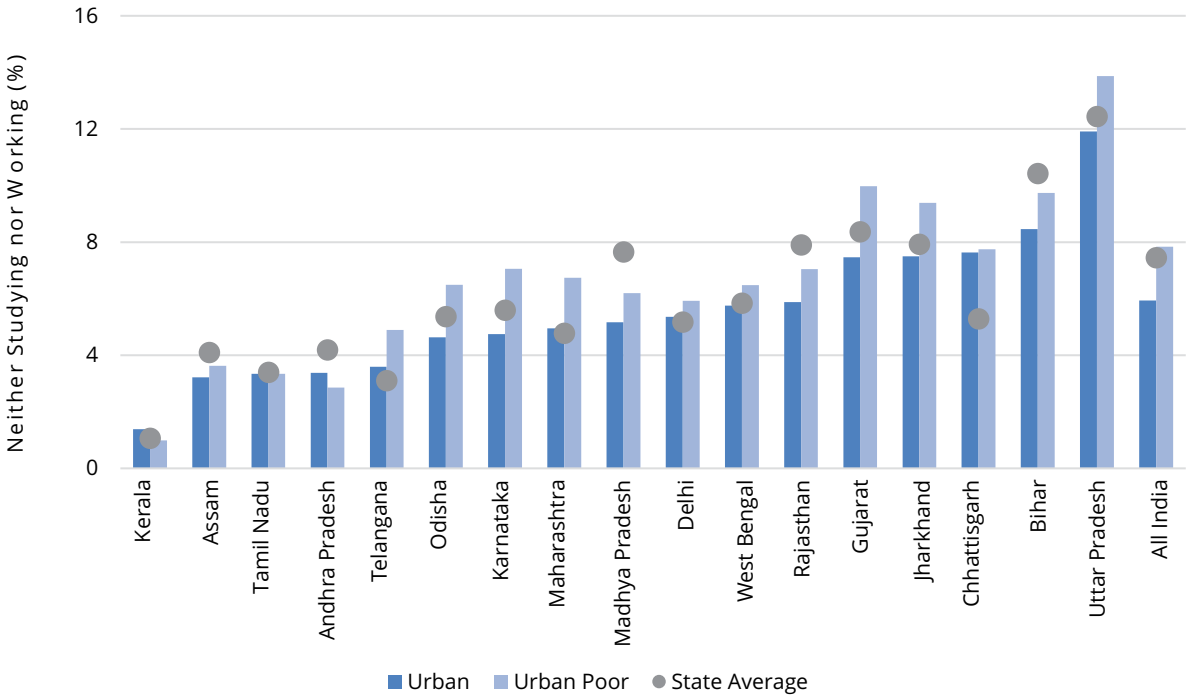
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18.

limited opportunities. Special focus should be given to states like Uttar Pradesh, Bihar, Delhi and Gujarat, where inactivity is very high among children and adolescents.

6.2.4 Identifying states based on the share of vulnerable children (5-17 years) and adolescents (18-19 years)

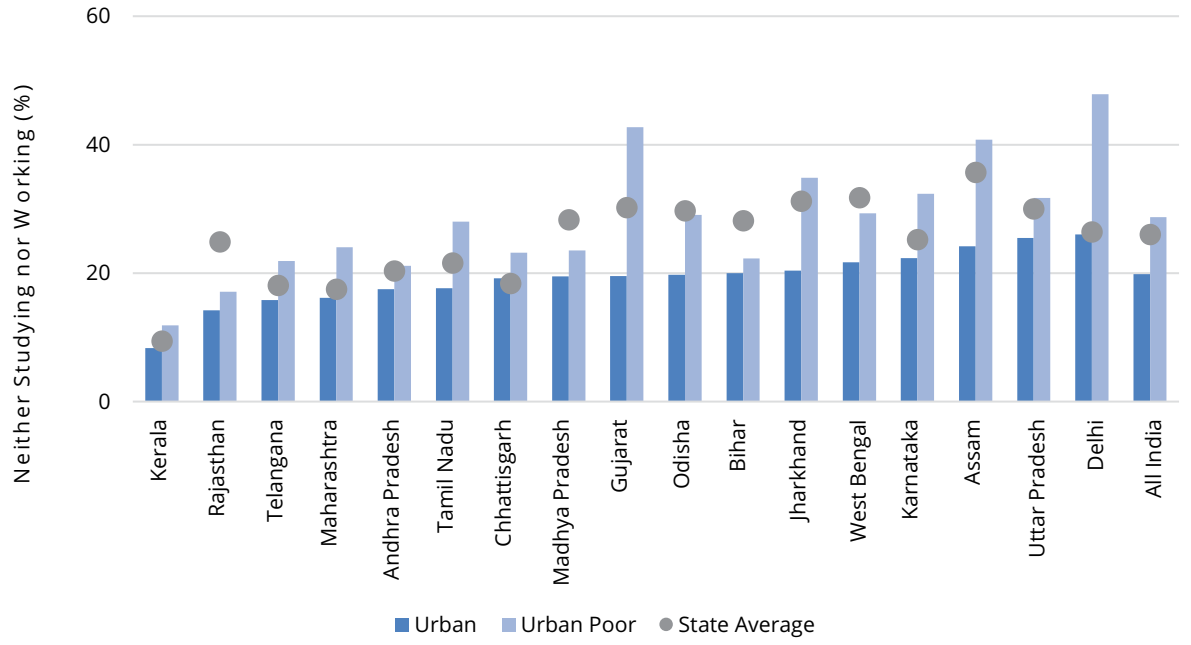
Both economically active and 'nowhere' children and adolescents constitute the vulnerable section, as they are mostly out of school and are denied their right to education and safe childhood and adolescence. States have been plotted based on their share of working and 'nowhere' urban children and adolescents in 2017-18 (Figures 6.14 and 6.15). It is noted that there are few states such as Uttar Pradesh and Gujarat which had higher work participation and inactivity among children and young adolescents (5-17 years). In absolute terms,

Figure 6.12: Share of 'Nowhere' Children and Young Adolescents (5-17 years) in Urban India, State-level Pattern, 2017-18



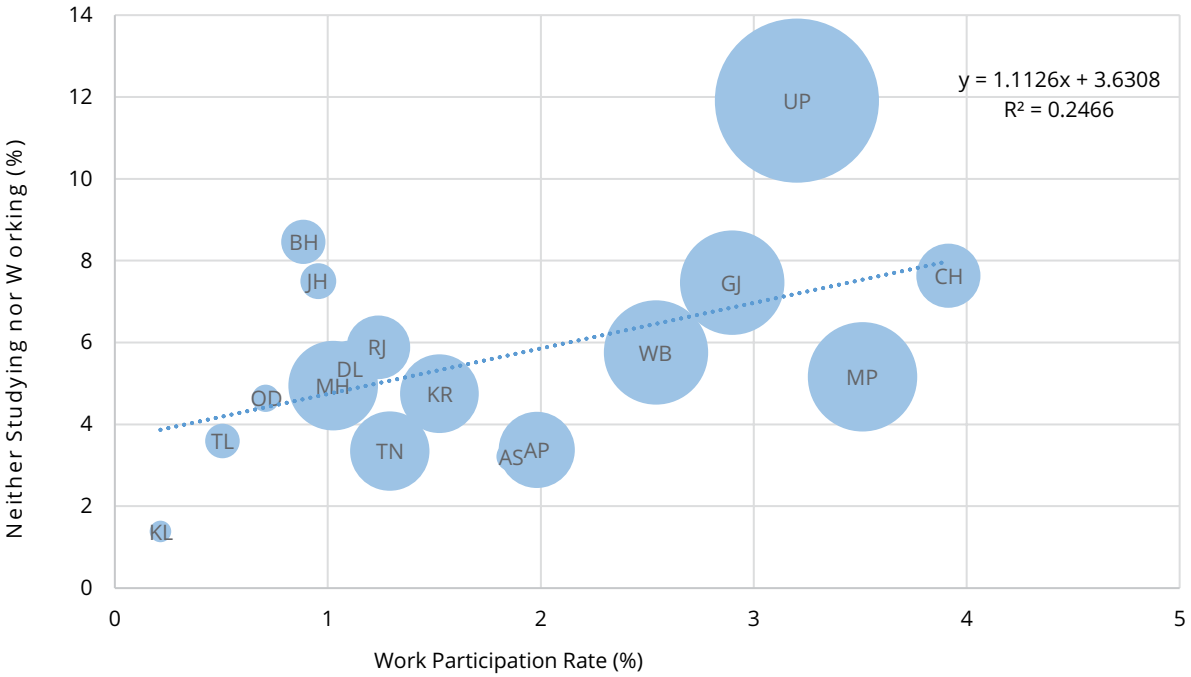
Note: Only 17 states with UNICEF intervention have been covered here, along with national average.
Source: Periodic Labour Force Survey (2017-18)

Figure 6.13: Share of 'Nowhere' Older Adolescents (18-19 years) in Urban India, State-level Pattern, 2017-18



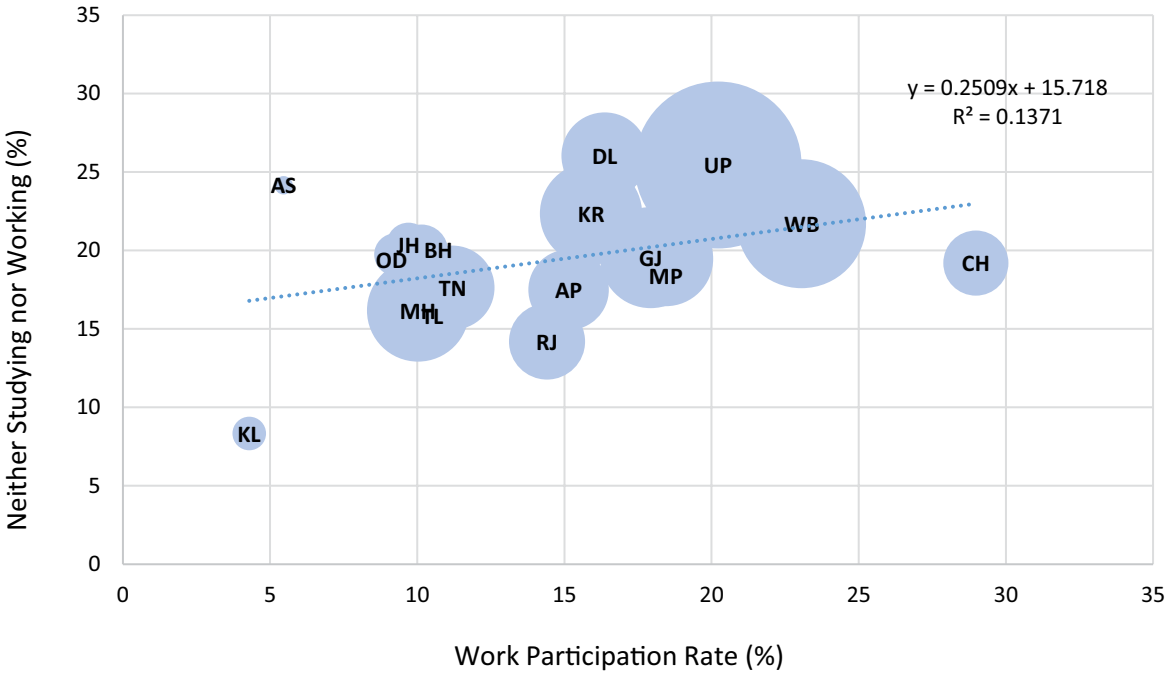
Note: Only 17 states with UNICEF intervention have been covered here, along with the national average.
Source: Periodic Labour Force Survey, 2017-18

Figure 6.14: Working and 'Nowhere' Children and Young Adolescents (5-17 years) in Urban India, State-level Pattern, 2017-18



Note: AP- Andhra Pradesh; AS- Assam; BH- Bihar; CH- Chhattisgarh; DL- Delhi; GJ- Gujarat; JH- Jharkhand; KR- Karnataka; KL-Kerala; MH- Maharashtra; MP- Madhya Pradesh; OD- Odisha; RJ- Rajasthan; TL- Telangana; TN- Tamil Nadu; UP- Uttar Pradesh; WB- West Bengal.
Weights are given based on the size of working children (5-17 years).
Source: Periodic LabourForce Survey (2017-18)

Figure 6.15: Working and 'Nowhere' Older Adolescents (18-19 years) in Urban India, State-level Pattern, 2017-18



Note: AP- Andhra Pradesh; AS- Assam; BH- Bihar; CH- Chhattisgarh; DL- Delhi; GJ- Gujarat; JH- Jharkhand; KR- Karnataka; KL- Kerala; MH- Maharashtra; MP- Madhya Pradesh; OD- Odisha; RJ- Rajasthan; TL- Telangana; TN- Tamil Nadu; UP- Uttar Pradesh; WB- West Bengal.
Weights are given based on the size of the workforce (18-19 years).
Source: Periodic Labour Force Survey (2017-18)

Uttar Pradesh had 2.9 lakh working and 11 lakh 'nowhere' urban children and young adolescents (5-17 years). Poor educational infrastructure, a high rate of poverty, and a vast market for child labour are characteristics of Uttar Pradesh (Samantroy et al., 2016). Also, states like Gujarat, Chhattisgarh, Madhya Pradesh and West Bengal have a higher WPR and inactivity among the 5-17 years age group, which needs a special policy focus (Figure 6.14). On the other hand, states like Uttar Pradesh, Chhattisgarh, West Bengal and Delhi had a higher WPR and inactivity among urban older adolescents (18-19 years) (Figure 6.15). From the analysis, a pattern is emerging where Uttar Pradesh, Chhattisgarh and West Bengal need particular attention.

6.3 Nature of Work

It has been noted that the majority of economically active children and adolescents are employed in jobs that lack a decent work environment and social security. A considerably large section of them are engaged in hazardous occupations and processes which have a severe impact on their physical and mental health (ILO, 2017).

In the present chapter, data from the NSS 68th round (2011-12) on 'Employment and Unemployment Survey' and PLFS (2017-18) has been used to understand the nature and conditions employment among urban working children and adolescents. These labour force surveys provide information on the type of employment, industry and occupations, the nature of the enterprises, the nature of job contracts, and social security coverage, all of which can be used to further categorise employment into the formal or informal sectors. The empirical analysis in this section is limited to the national level because of the insufficient sample size at the state level for different age groups (5-14 years, 16-17 years and 18-19 years).

6.3.1. Types of employment (usual activity status)

All workers can be classified based on the type of employment. Based on NSSO labour force surveys on employment, all workers have been categorised into four types: 1) Own Account Worker and Employer; 2) Unpaid Family Labour; 3) Regular Salaried Worker; 4) Casual Wage Labour.

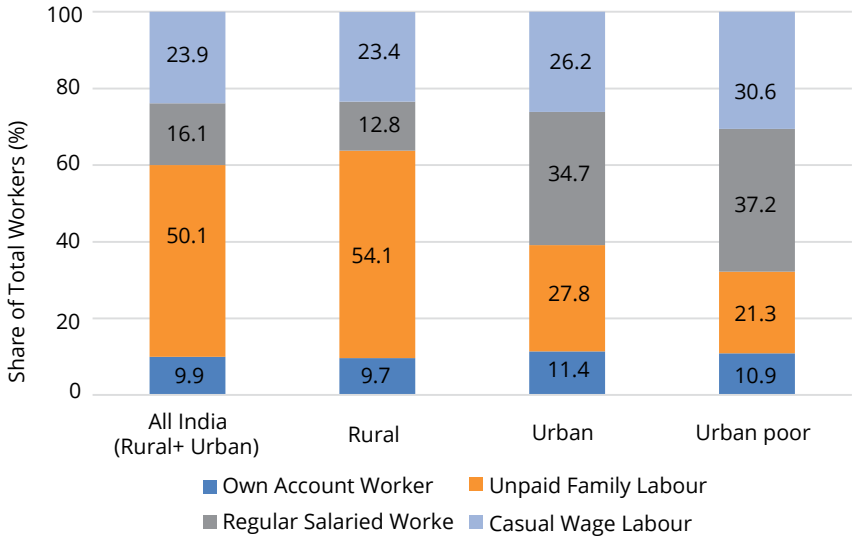
In 2017-18, around 54 per cent of the working children (5-14 years) in rural India were engaged in unpaid family labour, mostly working on their family farms. On the other hand, the majority of urban working children were mostly engaged in wage labour. In 2017-18, more than 60 per cent of the urban working children were in wage employment. Nearly a third of the total urban working children were engaged in regular salaried work, and its share has increased over the same period. This increased share of regular salaried work among children (especially the urban poor) is mostly due to the rising share of their employment in the household sector. On the other hand, the share of casual wage labour has declined both in rural and urban areas, but it is still higher among urban poor children (Figure 6.16).

Similar to working children, half of the young adolescents in rural areas were engaged in unpaid work, mostly on their family farms. On the other hand, 45 per cent of the working urban young adolescents were in regular salaried employment, and another 23 per cent were in casual employment. Understandably, the share of casual wage labour was higher among the urban poor with its share of 29.3 per cent, as opposed to the strikingly high share of regular salaried workers (54.8%) among the urban non-poor (Figure 6.17 a). These poor young adolescents mostly work in construction and transportation, which is characterised by heavy workloads and high health risks. Poor social networks restrict their upward mobility to regular jobs. It is noted that the share of regular salaried employment is higher in boys, whereas half of the girls were engaged in self-employment (6.17 b).

Similar to working children and young adolescents in urban areas, almost half of the working older adolescents were in regular salaried employment. The share of regular salaried workers was higher among boys compared to girls and among the urban non-poor compared to the urban poor (Figure 6.18).

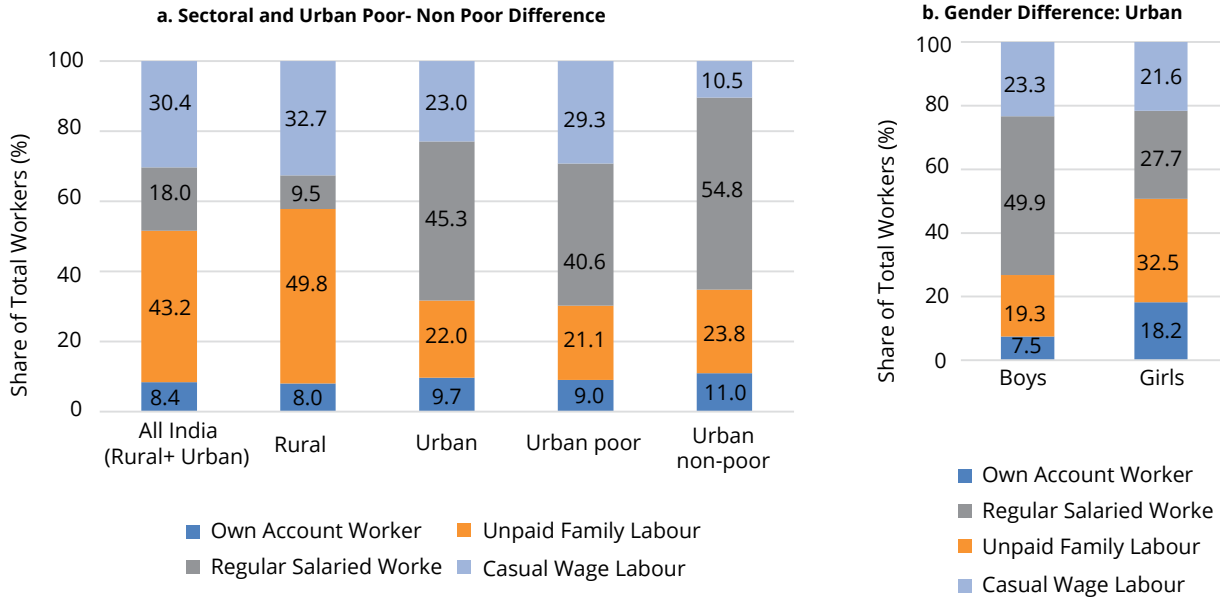
It is clear that the higher share of the unpaid family labour belongs to girls, both in rural and urban areas across all age-groups. In most cases, girls have to bear the burden of domestic duties along with economically gainful work (Burra, 2005). However, the share of it is lower among older adolescent girls compared to the younger adolescent girls.

Figure 6.16: Types of Employment Among Working Children (5-14 years) in India, 2017-18



Note: Types of employment have been categorised as per the usual status (principal and subsidiary status). There is insufficient sample size for urban non-poor and girls.
Source: Periodic Labour Force Survey, 2017-18

Figure 6.17: Types of Employment Among Working Young Adolescents (15--17 years) in India, 2017-18



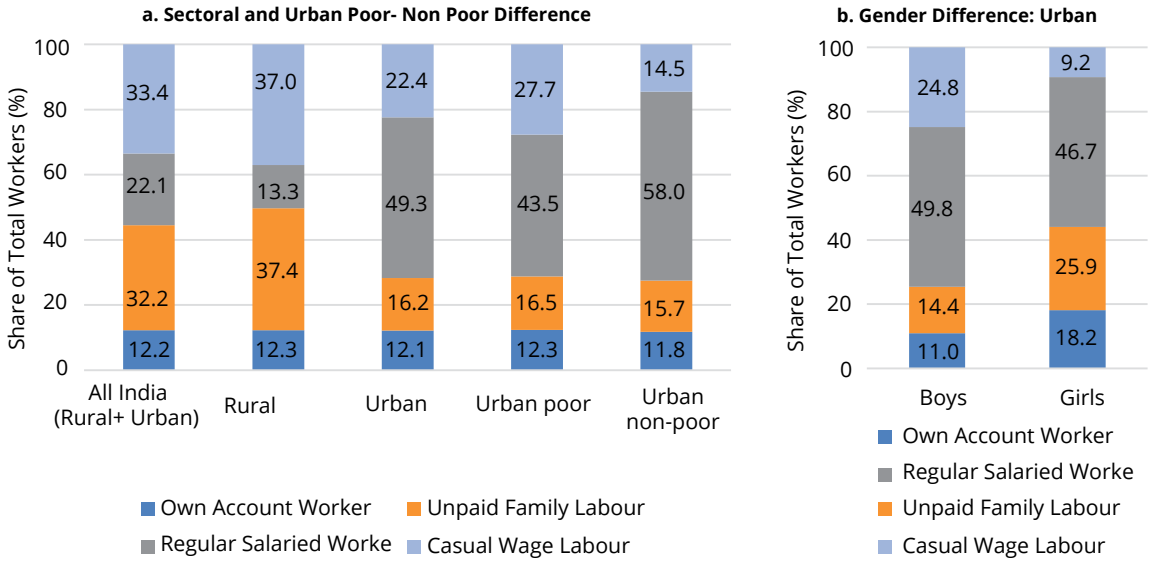
Note: Types of employment have been categorised as per the usual status (principal and subsidiary status).
Source: Periodic Labour Force Survey, 2017-18

Despite the share of wage work being higher in urban areas, a significant number of the urban poor across all three age groups were engaged in casual wage labour. Also, the share of casual wage labour is higher among boys across all age groups. Most of them worked in construction and belonged to migrant households (Srivastava, 2012; Samantroy et al., 2016).

6.3.2. Working children and adolescents in hazardous work

In the South Asian context, child labour is considered a rural phenomenon, with more than half of the children engaged in the agricultural sector (Khan and Lyon, 2015; Samantroy et al., 2016). However, in 2017-18, 41.3 per

Figure 6.18: Types of Employment Among Working Older Adolescents (18-19 years) in India, 2017-18



Note: Types of employment have been categorised as per the usual status (principal and subsidiary).
Source: Periodic Labour Force Survey, 2017-18,

cent of children in urban India were engaged in the manufacturing sector, and another 31.9 per cent were found in the trade and restaurant sectors. Also, a considerable number of urban girls (both children and adolescents) were engaged in the household sector as domestic help. Most of the children working in manufacturing units, construction sites, *dhabas* (roadside restaurants), and household sectors work for long hours and under exploitative conditions. Most of these works have been categorised as hazardous (see Box 6.3). This section, therefore, tries to analyse what constitutes hazardous working among children and adolescents.

According to the latest definition of 'hazardous' work, in 2017-18, 44.5 per cent of working children (5-14 years) in AGEGC[6] and non-agricultural employment were in hazardous industries. Despite the legal restriction of employing any children in wage-earning occupations, many are employed beyond family enterprises, particularly in urban areas. Notably, the share of working urban children in various hazardous industries was abnormally high (53.4%), especially among the urban poor (55.5%). Also, this share has increased among urban child workers, from 53.4 per cent to 55 per cent between 2011-12 and 2017-18, in contrast with the declining trend in rural areas. There has been a sharp increase in the share of urban working children from poor households, from 55.5 per cent to 62.1 per cent during the same period (Figure 6.19). Many of these poor children work in small manufacturing workshops, automobile garages, restaurants, and as domestic workers (Samantroy et al., 2016). Also, many children of migrant families accompany their parents to construction sites and brick kilns (Srivastava, 2012).

In 2017-8, 31.7 per cent of the working young adolescents (5-17 years) in AGEGC and non-agricultural employment were employed in hazardous industries. However, hazardous working among this age group is more in rural rather than urban areas because of the nature of industries (mining and manufacturing) included in the definition. In 2017-18, nearly 40 per cent of the rural working young adolescents were in hazardous industries, compared to only 18.7 per cent in urban areas. It is worth mentioning that the share of urban young adolescents in hazardous industries has declined since 2011-12, both for the urban poor and non-poor. Interestingly, this has declined among urban boys, whereas it has increased very sharply for urban girls (Figure 6.20). This is indicative of the fact that more of the latter have been hired in hazardous industries, especially home-based manufacturing.

According to location-specific micro-studies, it has been noted that Uttar Pradesh is the pioneer in terms of quantum of child workers in various hazardous industries. There are instances of working children in carpet manufacturing workshops in three core districts of Mirzapur, Sant Ravidas Nagar and Varanasi. Also,

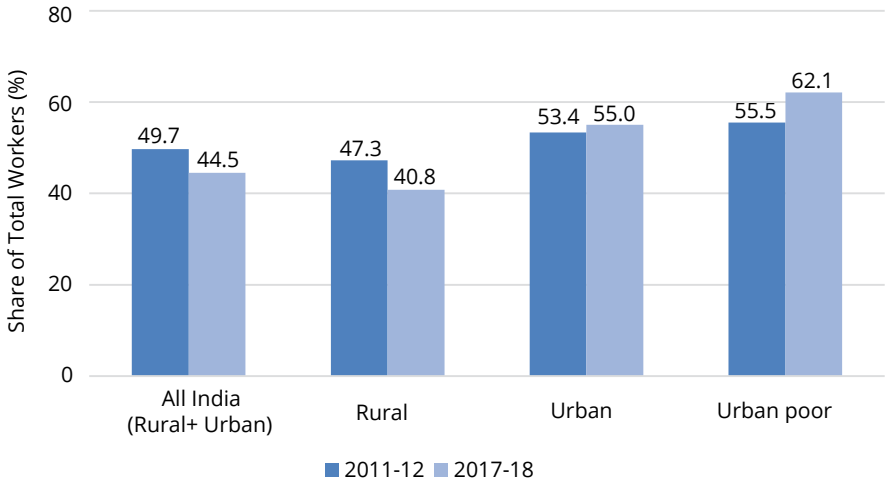
6 AGEGC employment refers to agriculture excluding growing crops.

Box 6.3: Hazardous Industries

The list of occupations and processes has been outlined in the Child Labour (Prohibition and Regulation) Amendment Act 2016. According to this amendment act, a list (Part A) of occupations and processes has been defined where the adolescents (15-17 years) are prohibited from working, and children (5-14 years) are prohibited from helping. Another list (Part B) has occupations/processes that have been listed where children are prohibited from helping, even as unpaid labour. Therefore, the present study has defined all the occupations/processes (mentioned in Part A and B) provided in both the lists to define hazardous work for children, while Part A defines hazardous work specifically for young adolescents. In the present context, hazardous occupations and processes have been identified based on the NIC 2008 5-digit list. As the 3-digit NCO 2004 has been used in the NSS 68th round and the PLFS, 2017-18, the occupations mentioned in the list (Part A) cannot be identified using this broad categorisation. Also, this classification excludes some of the occupations and processes which could not be identified through NIC 2008 (see Annexure I). Furthermore, all agricultural crop production and related activities have been excluded from the exercise. Therefore, only the remaining categories (excluding agricultural crop production) have been considered here.

A large number of working children are engaged in various hazardous occupations. According to ILO Convention No. 182, all hazardous work comes under the worst form of labour. However, other forms of labour/wage earning such as begging or prostitution cannot be quantified using the list of industries and occupations. Therefore, they have also been excluded from the analysis, and have been discussed in section I2. For the purpose of this study, the above mentioned list of occupations will be termed as 'hazardous industries'

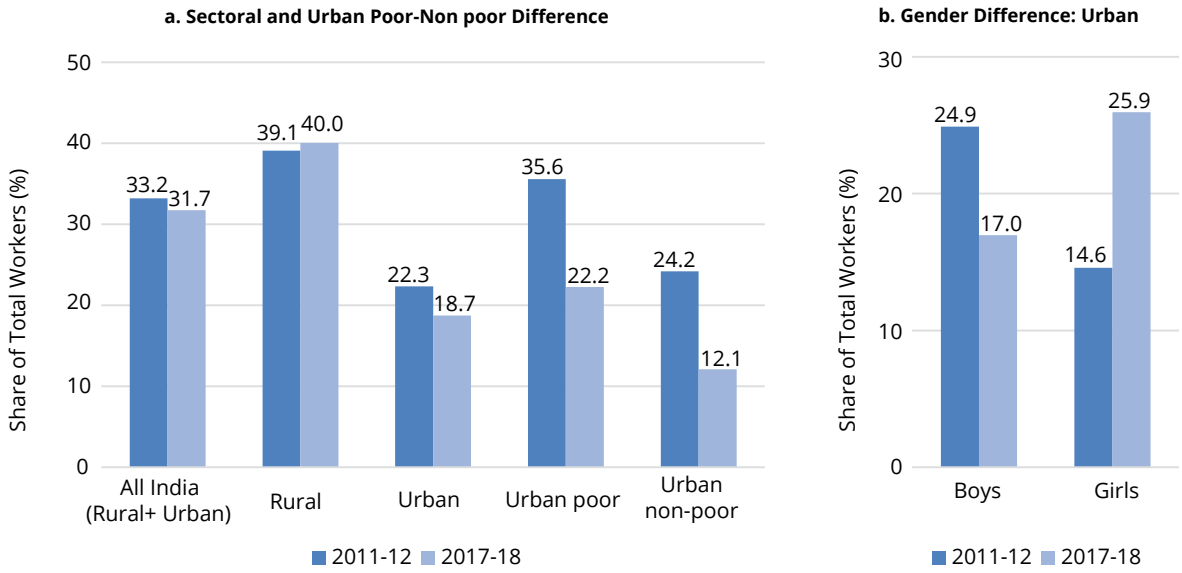
Figure 6.19: Change in the Share of Employment in Hazardous Industries Among Working Children (5-14 years) in India, 2011-12 to 2017-18



Note: As NSS 68th round and PLFS both provide the NIC 2008 classification of industries, the same codes have been used for both the rounds; the sample size for urban non-poor and urban girls are insufficient.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18.

children work in *zari* making industries in Allahabad, Jaunpur, Varanasi, and their surrounding districts. Many children work in the lock making industries of Bareilly and Aligarh footwear manufacturing industry in Agra, glass making in Firozabad, and brassware manufacture in Moradabad. A lot of these children are employed in family enterprises and therefore remain unreported. Furthermore, instances of working children can be found in the tourism industry, gem polishing, limestone products manufacture, and carpet weaving in urban Rajasthan. Urban children in Gujarat, Maharashtra and Karnataka are seen working in restaurants and small shops as well (Samantroy et al., 2016).

Figure 6.20: Change in the Share of Employment in Hazardous Industries Among Working Young Adolescents (15-17 years) in India, 2011-12 to 2017-18



Note: As NSS 68th round and PLFS both provide the NIC 2008 classification of industries, the same codes have been used for both the rounds.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12) and Periodic Labour Force Survey, 2017-18

6.3.3. Informal sector employment

In 2011-12, 90.8 per cent of the working children and young adolescents were employed in the informal sector, which marginally declined to 87.6 per cent in 2017-18. Also, the quantum of children and adolescents declined substantially, from 6.4 million to 2.8 million during the same period. Notably, the share of informal sector employment is higher among children (96%) compared to young adolescents (85.7%) (Figures 6.22 and 6.23) as a significant share of the former category work in family enterprises.

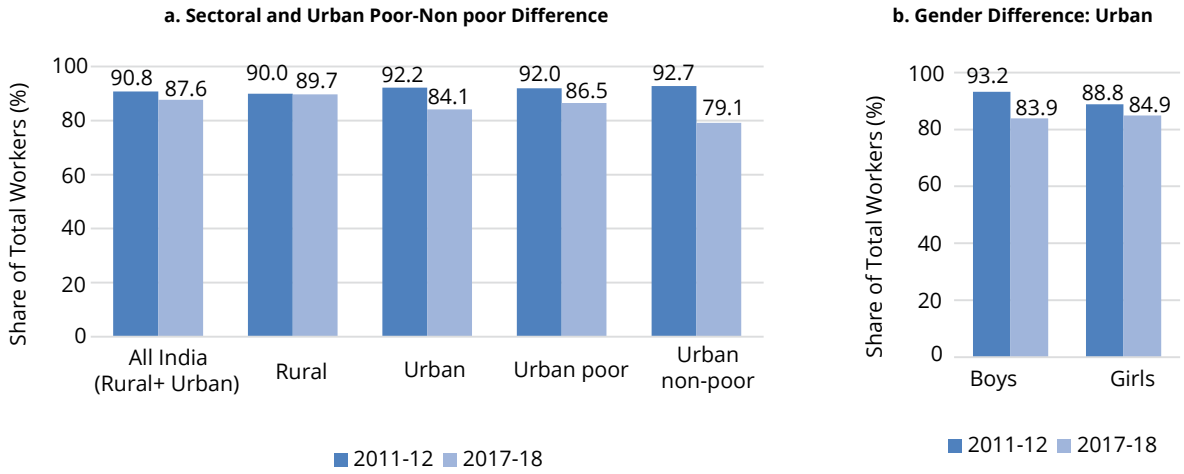
Notably, the share of informal sector employment was lower among urban children and young adolescents (84.1%) compared to that in the rural areas (89.7%) (Figure 6.21). Understandably, the share of informal sector employment is higher among the urban poor.

Disaggregated analysis for children and young adolescents: The share of informal sector employment among older adolescents (18-19 years) was noted to be much lower (81.7%) compared to children and young adolescents in 2017-18, is the reason being because most formal sector enterprises have the provision of minimum age of 18 years for hiring workers. Also, there was a stark rich-poor divide in terms of the share of employment in informal sector enterprises. In 2017-18, the share of informal sector employment among the urban non-poor was 68.4 per cent compared to 83.5 per cent among the urban poor. This is probably because of a class difference in terms of educational qualifications and social capital, which helps the younger adolescents of non-poor families to get employment in formal sector enterprises. Also, the share of informal sector employment among urban girls of this age group is much higher compared to boys (Figure 6.24).

In terms of informal sector employment among older adolescents, it is higher in Uttar Pradesh and Rajasthan. Most of these older adolescents in Uttar Pradesh work in family enterprises or small workshops (PLFS, 2017-18)[7].

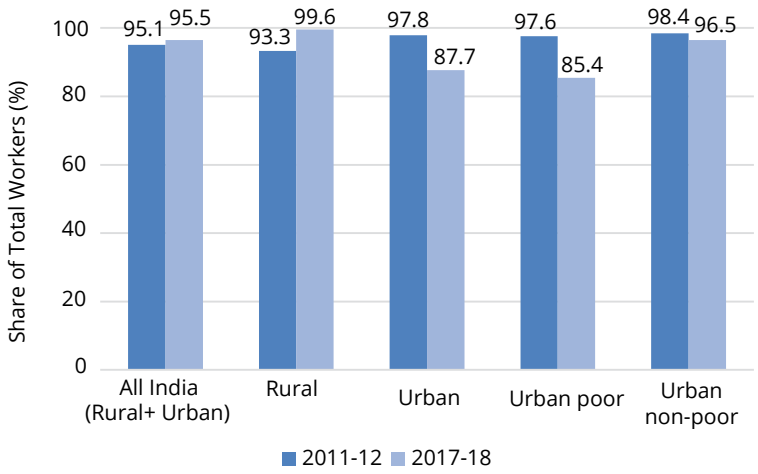
7 State level analysis of the share of informal sector workers among children and young adolescents (5-17 years) could not be done due to insufficient samples.

Figure 6.21: Change in the Share of Informal Sector Employment Among Working Children and Young Adolescents (5-17 years) in India, 2011-12 to 2017-18



Note: Informal Sector is defined as a part of the total non crop production in the farm sector and the total non-farm sector. The workers in agricultural crop production are excluded.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

Figure 6.22: Change in the Share of Informal Sector Employment Among Working Children (5-14 years) in India, 2011-12 to 2017-18



Note: Gender difference for the age group of 5-14 years could not be estimated due to the insufficient sample for girls; Informal Sector is defined as a part of the non crop production in the farm sector and total non-farm sector. The workers in agricultural crop production are excluded.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

6.3.4. Informal employment

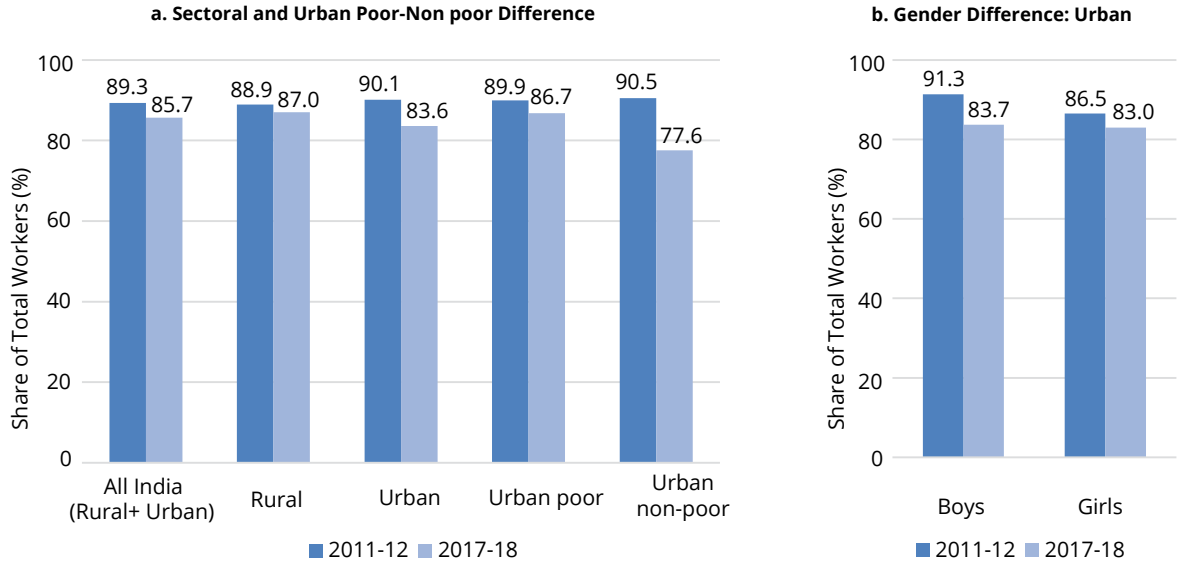
Almost all of the working children and young adolescents are into jobs which can be categorised as informal employment, because of the lack of a formal job contract and social security benefits. The reason behind the lack of job contract and social security among children below 14 years age is due to the avoidance of the legal obligations mandatory for hiring children below 14 years. Therefore, almost all the children below 14 years working as wage labourers are hired informally. Also, the lack of skills and labour market experience and bargaining power make the children (15-17 years) and adolescents (18-19 years) extremely vulnerable. Therefore, in most cases, they are outside the domain of formal employment.

In 2017-18, among the total working children and adolescents, more than 97 per cent of children, 96.8 per cent of the young adolescents, and 94.5 per cent of older adolescents were employed in the informal sector.

Evidently, the share of informal employment declined marginally for both children and young adolescents, whereas it remained stagnant for older adolescents. In contrast to the overall scenario, the share of informal employment has increased for children in urban areas between 2011-12 and 2017-18. In contrast, it declined for the other two age groups (Figure 6.25). Notably, there is no spatial variation in terms of the share of informal employment among children and adolescents.

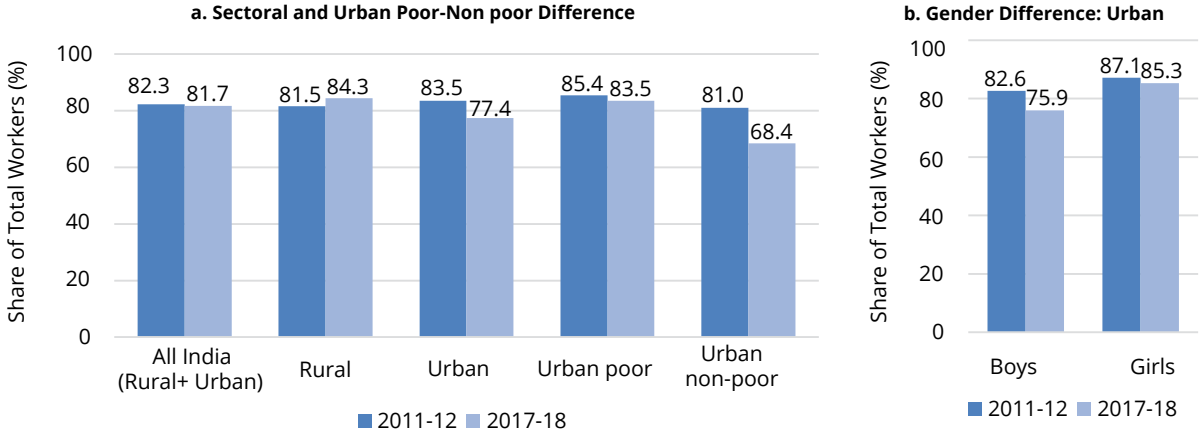
In terms of the working condition among children and young adolescents, it is noted that despite more than 40 per cent of the working children and adolescents being employed as regular salaried workers, a considerable share of them are engaged in various hazardous industries. The majority of the urban young and adolescent boys are engaged in small manufacturing workshops, restaurants and street food stalls, which have deplorable working conditions. On the other hand, young and adolescent girls are employed as domestic

Figure 6.23: Change in the Share of Informal Sector Employment Among Working Young Adolescents (15-17 years) in India, 2011-12 to 2017-18



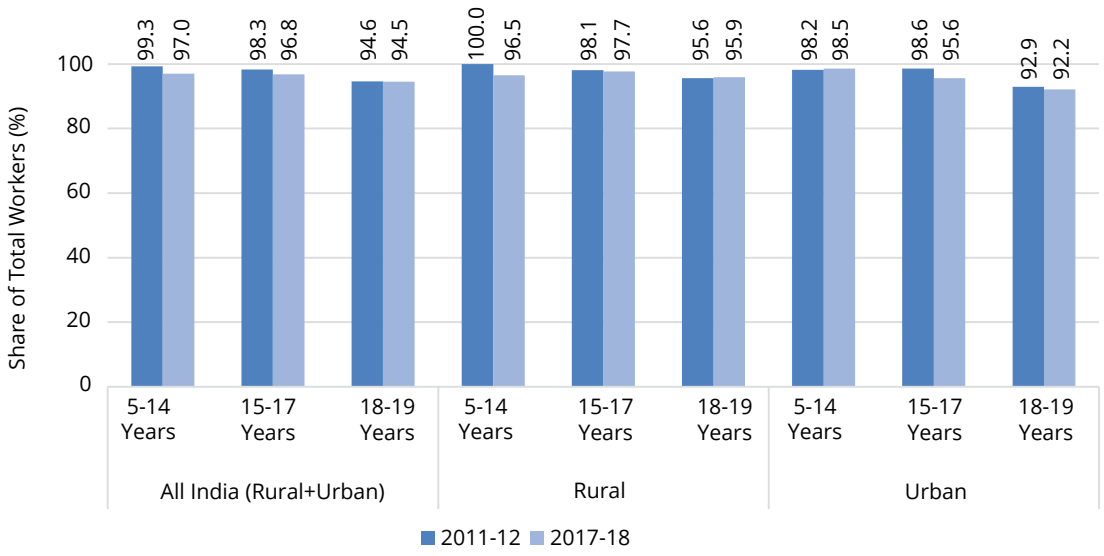
Note: Informal Sector is defined as a part of the non crop production in the farm sector and total non-farm sector. The workers in agricultural crop production are excluded.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

Figure 6.24: Change in the Share of Informal Sector Employment Among Working Older Adolescents (18-19 years), 2011-12 to 2017-18



Note: Informal Sector is defined as a part of the non crop production in the farm sector and total non-farm sector. The workers in agricultural crop production are excluded.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

Figure 6.25: Share of Informal Employment Among Working Children and Adolescents (5-19 years) in India, 2011-12 to 2017-18



Note: Informal Sector is defined as a part of the non crop production in the farm sector and total non-farm sector. The workers in agricultural crop production are excluded.
Source: NSS 68th round on 'Employment and Unemployment', 2011-12 and Periodic Labour Force Survey, 2017-18

servants whose working conditions are often very exploitative and hard to monitor. Also, the enterprises and household sectors hiring children and adolescents are small in size and not registered under the Factory Act 1948. Evidently, the number of children and adolescents employed in the informal sector and hazardous industries have declined over the period. However, a large number of children and adolescents in states like Uttar Pradesh, West Bengal and Gujarat are employed in the informal sector and hazardous industries, which need strict monitoring.

6.4 Employment-related Migration and Work Among Children (5-14 years) and A dolescents (15-19 years)

Migrant children are more vulnerable compared to those who are non-migrant (PwC-Save the Children, 2015). Each year, a substantial number of children and adolescents migrate permanently or on a seasonal basis, mostly for economic reasons. Though a large number of migrant children report associational moves as the reason, many of them start working after reaching the destination (Srivastava, 2012).

The Population Census of India, 2011 provides the latest information on the pattern of migration, employment-related migration, and working migrant children and adolescents. However, it provides age-segregated data based on a five-year age-cohort. Therefore, although the categorisation of the age group 5-14 years is possible, it is not possible to disaggregate between 15-17 years and 18-19 years. Therefore, in this section, the 5-14 year age-group has been classified as children, whereas 15-19 years has been termed as adolescents. Also, the Census does not provide any information on household income, expenditure or wealth possession. Therefore, the categorisation of children and adolescents based on income was not possible using this dataset.

6.4.1. Migration rate and employment-related migration among children (5-14 years) and adolescents (15-19 years)

In 2011 there were 44.8 million lifetime migrant[8] children (5-14 years) and 29.2 million adolescents (15-19 years) at the national level. Among them, 20.2 million children and 12.7 million adolescents were in urban areas (RGI, 2011). However, only a fraction of the children (less than 0.5%) from this age group were seen

8 Lifetime migrants denote all-duration migrants by the PoLR definition.

Figure 6.26: Migration Rate among Children (5-14 years) and Adolescents (15-19 years) in India, Sectoral Difference, 2011

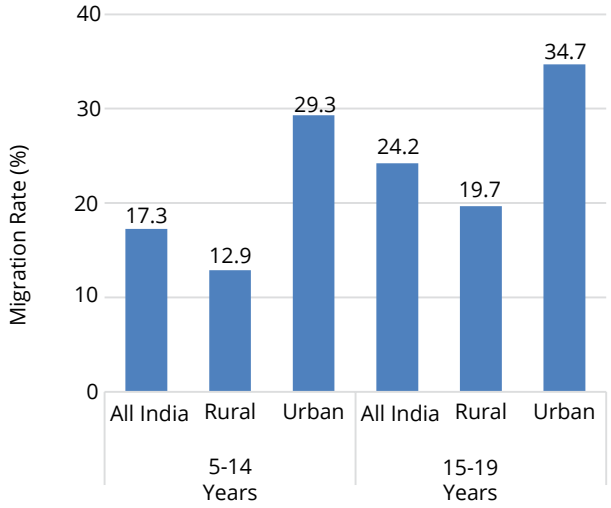
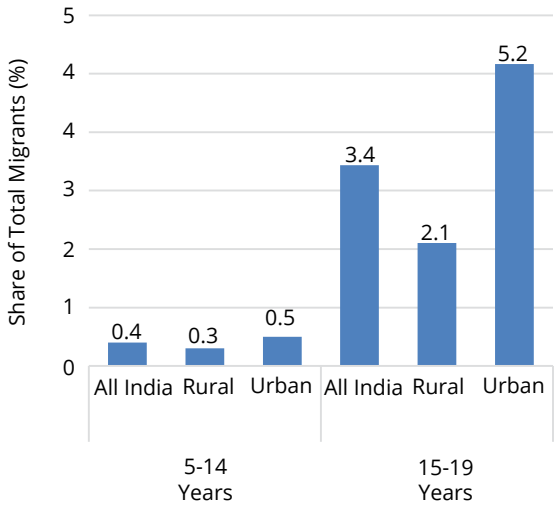


Figure 6.27: Share of Employment-Related Migration among Children (5-14 years) and Adolescents (15-19 years) in India, Sectoral Difference, 2011



Source: Population Census of India, 2011

to migrate for employment-related reasons. Rather, the share of employment-related migration was higher among adolescents (3.4%) (Figure 6.27). Their share was much higher in urban compared to rural areas, illustrating the fact that urban areas provide a wide range of opportunities for young workers.

6.4.2. Employment-related migration: state-level pattern

Though the share of employment-related migration is less than one per cent of the total migration figure among children, it is for this reason primarily that a large number of them migrate. These children are vulnerable and mostly engaged in hazardous industries. As they migrate and stay in the city in unsupervised conditions, they are denied their basic rights to decent living conditions and education. This section attempts to identify the volume of employment-related migrant children and adolescents in urban areas.

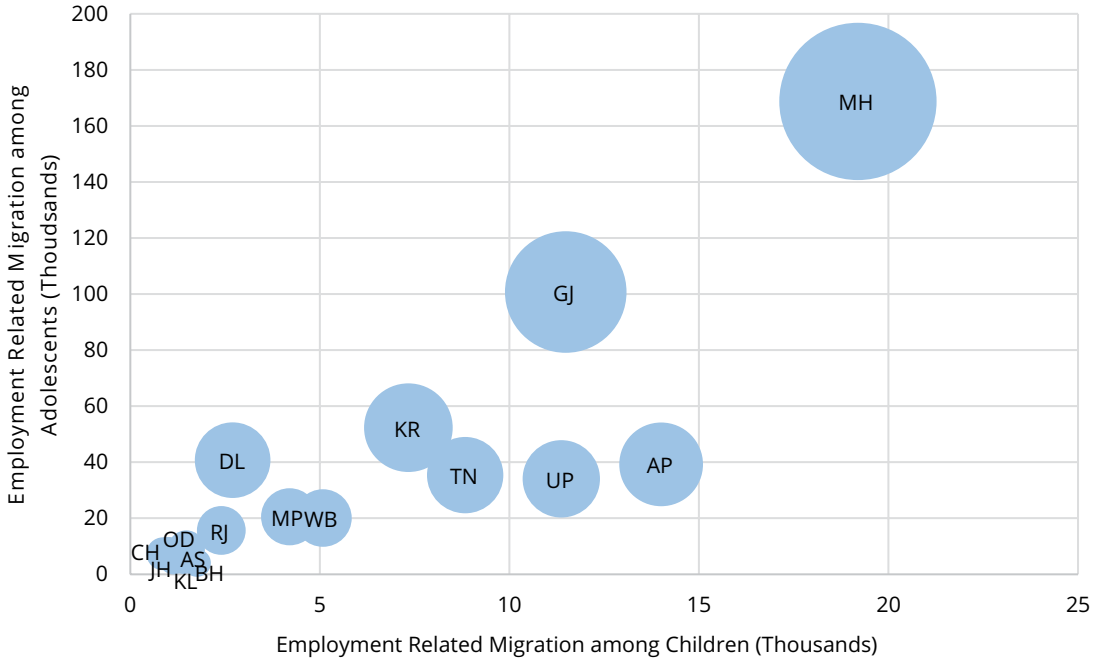
In 2011 Maharashtra and Gujarat were two of the main receiving states of migrant labour (children and adolescents). In 2011, Maharashtra received close to 20,000 children and 1.7 lakh adolescents who migrated for employment. In Gujarat, there were approximately 12,000 children and 1 lakh adolescents who migrated due to employment-related reasons. Other states, such as Andhra Pradesh received close to 14,000 children, and Uttar Pradesh received 12,000 children (Figure 6.28). Also, many micro-studies have found instances of voluntary migration among children and adolescents for employment to cities like Bangalore (Whitehead, 2012).

6.4.3. Working among migrant children and adolescents

It is noted that though the share of employment-related migration among children appears insignificant, the number of migrant children who work is much higher compared to the average figure of working children, especially in the urban context, as many migrant children join the workforce after reaching their destination. In 2011, the WPR among migrant children was 4.4, compared to the average WPR of 3.9. The migrant-non-migrant gap is even higher in urban areas compared to its rural counterparts (Figure 6.29a). Contrary to the figures for children, the migrant-non-migrant gap is not prevalent among adolescents, especially in urban settings (Figure 6.29b). However, most of the employment-related migration among children remains unreported.

The WPR among migrant children was noted to be significantly high in states like Uttar Pradesh (7.3%), Assam (5.3%) and Bihar (5.4%) compared to non-migrant children. In the case of adolescents, the migrant-non-migrant differences can be noted only in Delhi (Figures 6.30 and 6.31).

Figure 6.28: Quantum of Employment-related Migration Among Children (5-14 years) and Adolescents (15-19 years) in India, State-Level Pattern, 2011

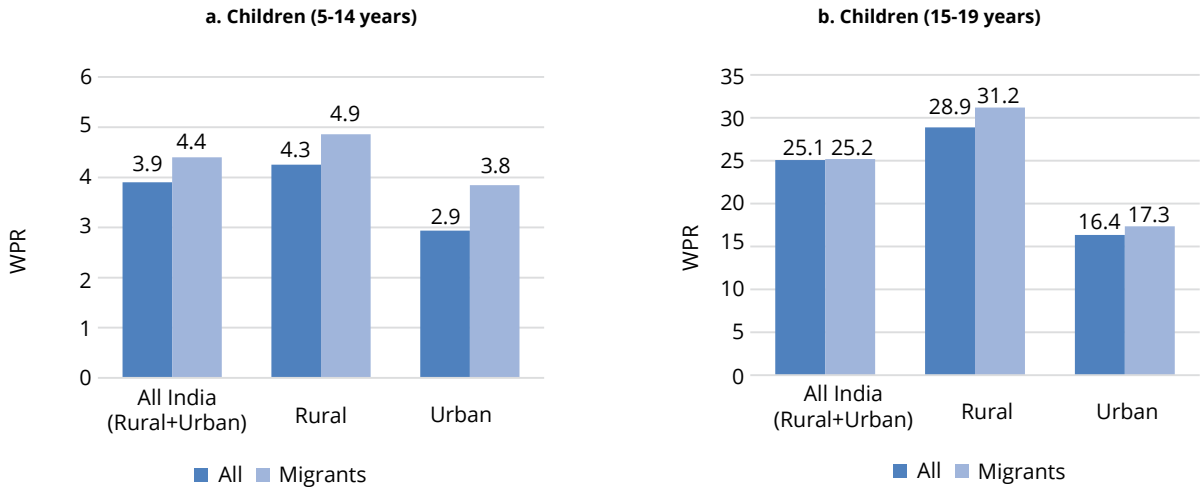


Note: AP- Andhra Pradesh; AS- Assam; BH- Bihar; CH- Chhattisgarh; DL – Delhi; GJ- Gujarat; JH- Jharkhand; KR- Karnataka; KL- Kerala; MH- Maharashtra; MP- Madhya Pradesh; OD- Odisha; RJ- Rajasthan; TL- Telangana; TN – Tamil Nadu; UP- Uttar Pradesh; WB- West Bengal.

Weight has been given on the basis of total employment-related migrants.

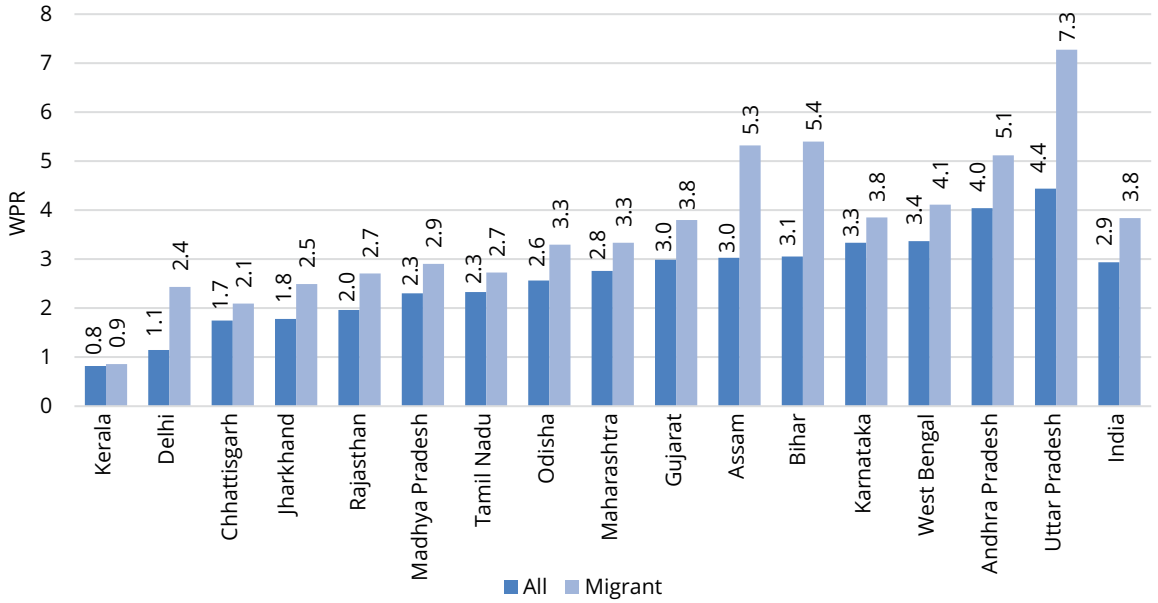
Source: Population Census of India, 2011

Figure 6.29: Work Participation Among Migrant Children (5-14 years) and Adolescents (15-19 years), Sectoral Difference, 2011



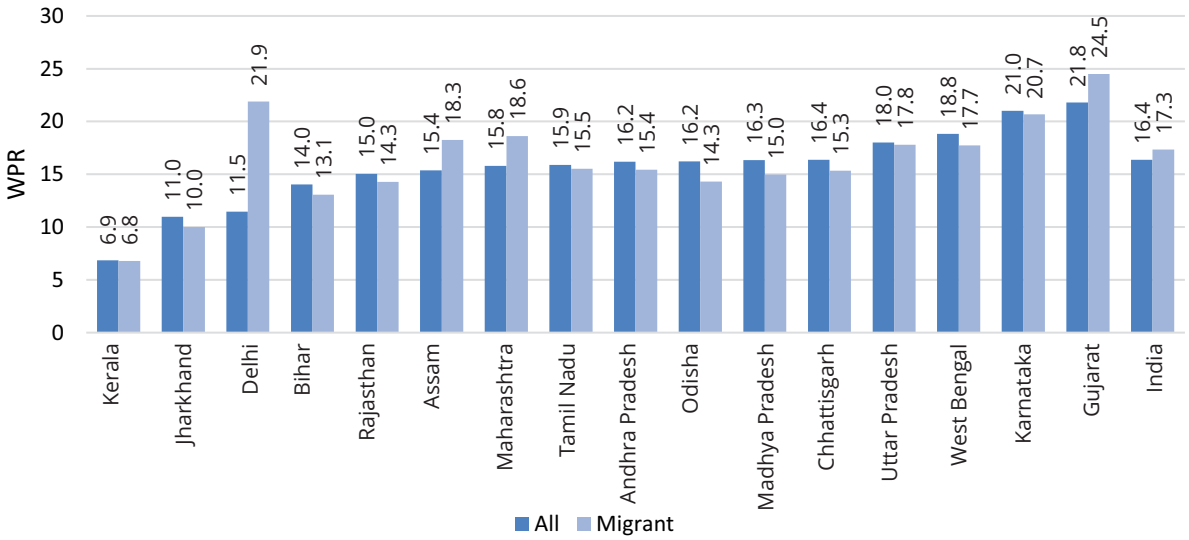
Note: 'All' refers to the total working population of children (5-14 years) and adolescents (15-19 years).
Source: Population Census of India, 2011

Figure 6.30: Work Participation Rate Among Migrant Children (5-14 years) Compared to Overall Children's Work Participation, Urban, State-level, 2011



Note: 'All' refers to the total working population of children (5-14 years), Only 17 states where UNICEF has intervention have been covered.
Source: Census of India, 2011

Figure 6.31: Work Participation Rate Among Migrant Adolescents (15-19 yrs) Compared to Overall Adolescent's Work Participation, Urban, State-level Pattern, 2011



Note: 'All' refers to the total working population of adolescents (15-19 years). Only 17 states where UNICEF has intervention have been covered.
Source: Census of India, 2011

6.4.4. Seasonal migration

Work participation rates are even higher among seasonal migrant children and adolescents. According to the estimates based on NSS 64th round on 'Employment, Unemployment, and Migration', in 2007-08, there were 1.9 lakh children (5-14 years), 5.3 lakh young adolescents (15-17 years) and 7.7 lakh older adolescents (18-19 years) who had migrated for a period of less than six months to an urban area. Most children and adolescent seasonal migrants belong to the poorest income group and accompany their parents, often joining the

workforce at the destination. It has been noted that 53 per cent of such children and nearly 90 per cent young and older adolescents who have reported urban destinations during the longest spell were employed (NSSO, 2007-08). Most of them work in construction sites and brick kilns under exploitative conditions. Furthermore, these children and young adolescents are often deprived of their right to education (Srivastava, 2012).

Therefore, it can be summed up that the situation of migrant children in terms of employment is worrisome. Particular attention should be paid to seasonal migrant children, among whom work participation is much higher.

6.5 Data Gap

A major reason for shortcomings in policy and lack of understanding of the extent and severity of employment among children and adolescents arises from the gaps in existing data sources. Only the Population Census of India and NSSO rounds on labour force surveys collect information regarding working among these age groups. However, the Census does not provide information regarding the nature of employment and conditions of work. On the other hand, NSS rounds tend to under-report the extent of working children (especially below 15 years), as these surveys are mainly aimed to estimate the labour force condition of the economically active age group (15-59 years). In fact, there was a huge mismatch in the figures reported in the 2011 Census, and those estimated through the NSS 68th round, 2011-12. According to the Census, the work participation rate among children between 5-14 years was 2.9 per cent, which was more than double the estimated figure of 1.2 per cent in the NSS 68th round. Also, age-disaggregated figures for the age group of 15-17 years are not available in the Census. Therefore, policymakers have to rely solely on the labour force sample surveys for this age group. Notably, the number of samples of working children has reduced drastically over the rounds, probably due to the decline in working among this age group. Therefore, spatially disaggregated level analysis becomes very difficult using the dataset. Notably, in the urban context, the identification of child labour pockets becomes very difficult because of lack of granular level data, especially for urban areas. In this regard, India may learn from its neighbour Sri Lanka, which has a dedicated survey on working children, which could be very helpful in policy formulation in the future.

The second problem arises from the definition of hazardous work as per the Child Labour (Prohibition and Regulation) Amendment Act, 2016. Also, the given list of industries and occupations hardly matches with the National Industrial Classification (NIC) and National Classification of Occupation (NCO) given in the labour force surveys. Therefore, it would be useful to include the 6-digit NCO classification in the labour force survey, which would help to identify all the hazardous occupations. Presently, with the lack of appropriate structure of the available secondary data, understanding the extent of workers in hazardous works often remains under- or over-estimated, which definitely affects policy measures.

Also, in terms of migration, the Population Census of India, 2011 is the latest available data source, which has become outdated. Therefore, framing a policy related to migrant children and adolescents is not realistically possible under the constantly changing conditions. Also, the Census does not provide any information on seasonal migration. The NSS 64th round (2007-08) is again the latest available information regarding long-term and seasonal migration among children and adolescents, providing information regarding their activity status and their nature of employment. So in the absence of a current dataset, policy formulation regarding migrant children and adolescents at this juncture becomes very difficult.

6.6 Legislative Framework and Policies

6.6.1 Legislative frameworks

The Constitution of the Republic of India safeguards the concerns of children mainly through Article 21A (Right to Education), Article 24 (Prohibition of employment of children in factories) and Article 39 (the state shall direct its policies to secure the health and strength of its workers, including children). To regulate the issue of child labour, India had enacted the Child Labour (Prohibition and Regulation) Act in 1986, which was further revised into the Child Labour (Prohibition and Regulation) Amendment Act in 2016. Also, the Juvenile Justice Act (2000), the Amendment of the Act (2006), and the revised Act (2015) have been constituted to protect working children against all kinds of exploitation at the workplace.

National Child Labour Policy (NCLP): The Union Ministry of Labour and Employment initiated the National Child Labour Policy (NCLP) Scheme in August 1987, following the Child Labour (P and R) Act, 1986, which was further revised during the 12th Five Year Plan (FYP) period. It is a fully centre-sponsored action-based programme with three main tasks: 1) survey and identification of child labour endemic regions and sectors, 2) rehabilitation of working children under the age of 14 years and all children aged 15-17 years employed in hazardous industries, through project-based programmes, and 3) poverty alleviation and upliftment of all families with child labour through the integration of several ministries and programmes. Different states and their respective districts are assigned responsibilities for conducting the baseline survey and the rehabilitation of all working children up to 14 years and all children in the 15-17 years age group employed in hazardous industries. There are several NCLP special training centres in the districts with NCLP projects. All the rehabilitated children up to 14 years are directly enrolled in regular schools where the children aged 15-17 years are sent to NCLP training centres for non-formal education and vocational training. For poverty alleviation and awareness generation, NCLP is closely associated with the Ministry of Women and Child Development, Ministry of Rural Development, and State Department of Labour. NCLP also tries to implement programmes such as MNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), IAY/PMAY-G (Indira Awas Yojana/Pradhan Mantri Awas Yojana), PMAY (Pradhan Mantri Awas Yojana), RSBY (Rashtriya Swasthya Bima Yojana), AABY (Aam Admi Bima Yojana) for employment generation and the elimination of poverty. It also aims to form a special cell to rehabilitate trafficked children with collaboration with the State Department of Labour and the Union Ministry of Railways. At the end of the 11th Five Year Plan, a total of 266 child labour endemic districts from 20 states had been covered under the NCLP scheme through 271 projects.

6.6.2. Involvement of international agencies

International Labour Organization (ILO): The ILO launched the International Programme for Elimination of Child Labour (IPEC) in India in 1992. Its main objective was to eliminate child labour through community participation and social mobilisation. In 2008, ILO assisted a programme called INDUS with joint funding by the Government of India and US Department of Labour (USDOL), which covered 21 districts of five states—Madhya Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh and Delhi. Later on, the IPEC was upgraded with financial support from USDOL, and it covered ten districts of five states—Bihar, Jharkhand, Gujarat, Madhya Pradesh and Odisha.

UNICEF : UNICEF has a strong commitment to the elimination of child labour. However, their intervention is limited to a few sectors and states: cotton production in Maharashtra, Andhra Pradesh and Gujarat; metalwork and carpet industry in Uttar Pradesh; and tea gardens in Assam. It mainly focuses on the strict enforcement of child labour laws and the integration of various ministries for the better implementation of NCLP.

6.7 Conclusion

India is making progress towards the Sustainable Development Goal (SDG) 8.7 agenda to eliminate all kinds of working among children below 15 years of age and regulating hazardous working among the 15-17 years age group. The declining number and share of working children and those who are 'neither studying nor working' corroborate the argument. This is undoubtedly a result of the successful implementation of policies like the National Child Labour Policy (NCLP) along with the universalisation of education through Sarva Shiksha Abhiyan (SSA). Nevertheless, there is a need for universalisation of secondary and higher secondary education to regulate the issue of working and inactivity among young and older adolescents. Though the average urban child and adolescent is at an advantageous position compared to rural children, urban areas are characterised by a high rich-poor gap, which is yet to be overcome. Vulnerable groups such as the poor and migrant children and adolescents still have higher work participation. Also, half of the urban poor working children and adolescents are employed in hazardous industries and informal sector enterprises, which have severe impacts on their physical and mental health. Also, a special focus should be on children and adolescent girls (5-19 years), as most of them remain invisible and burdened with household work, which hampers their schooling. Therefore, to meet the SDG-8.7 agenda, a special focus should be on urban poor children and adolescents, especially girls. Also, special focus should be given to the states of Uttar Pradesh, Madhya Pradesh, Gujarat, West Bengal and Chhattisgarh, as these states have a large number of working children and adolescents, mostly engaged in hazardous work.

6.8 Policy Recommendations

NCLP is the only centrally-sponsored policy at the national level, which deals with the issue of child labour. Notably, the policy is mainly project-based, with no special focus on urban areas. Also, the programmes run by ILO and UNICEF so far concentrate largely on rural areas as child labour is considered mainly a rural phenomenon. Therefore, the focus should be on the following tasks which have emerged from the present situation analysis:

Abolition of working among children (5-14 years): The problem of working among children persists in reality despite the national statistics indicating a decline in the share of child workers. Under-reporting of working and employment-related migration among children are major challenges to policy implementation. According to PLFS (2017-18), there are still 1.2 million children under 18 years who are employed, and 0.2 million belong to the age group of 5-14 years. Also, nearly three-fourths of urban working children come from poor households, and this needs urgent policy intervention. The focus should be on states like Uttar Pradesh, Madhya Pradesh and Gujarat, where the quantum of working children is very high. Also, a special focus should be on urban poor children in Delhi, considering the notably high work participation here among the poor.

Regulation of hazardous working among children (5-14 years) and young adolescents (15-17 years): More than 40 per cent of the children (5-14 years) and a fifth of young adolescents (15-17 years) in urban areas are employed in various hazardous industries. Despite the decline in the number of working children over the years, the share of children's employment in hazardous industries has not declined to the desired level. It is noted that employment in hazardous work is more severe among girls of this age and children of the urban poor. Most of the girls are employed in household sectors as domestic help, which makes them invisible and exposes them to sexual and physical exploitation. Also, special focus should be given to children in states like Delhi, Uttar Pradesh, Gujarat and West Bengal, where the share of children working in hazardous industries is high.

Mainstreaming of 'nowhere' children and young adolescents (5-17 years): Despite a sharp decline in the share of 'nowhere' children and young adolescents over the period, in 2017-18, there were still 2.3 million children (5-14 years) and 1.7 million children (15-17 years) in urban areas. Special policy emphasis should be given to poorer states like Uttar Pradesh, Bihar, Rajasthan, and Madhya Pradesh. Besides, Gujarat and Maharashtra have a considerably large number of 'nowhere' children, mostly associational poor migrants. Also, a more inclusive approach in the education system should be introduced in Delhi, Rajasthan, Bihar, Jharkhand and Odisha, where poor children are highly deprived of their right to compulsory and free education.

Provision of social protection to children (15-17 years): It is noted that the policy framework only focuses on those children who are engaged in hazardous industries, leaving close to 60 per cent of these young workers in non-hazardous industries. More than 90 per cent of children of this age group are employed in informal sector enterprises, mostly outside the labour legislations. Though the share of this age group has declined over the period, the decline is not satisfactory. Most enterprises hire children below 18 years of age informally because of the fear of punishment. Therefore, the government should frame a special policy framework for workers aged 15-17 years employed in various non-hazardous industries.

Rising unemployment among adolescents (18-19 years): Rising inactivity among urban adolescents (18-19 years) has emerged as a problem in 2017-18. The unemployment rate has almost doubled between 2011-12 and 2017-18. The problem has become more prominent among urban poor adolescents, indicating a class barrier in access to market-oriented skill development. States like Delhi, Tamil Nadu, Karnataka and West Bengal should be given more priority where unemployment among this age group is very high.

Urgent policy requirement for the protection of adolescents (18-19 years): Along with rising unemployment among adolescents, more than 95 per cent of such workers lack job security and social security, which needs to be addressed on an urgent basis. The Social Security Bill, 2008 provides guidelines for the provision of social security coverage for workers. However, to protect these workers, a special section comprising the needs of the older adolescents should be added to the existing bill.

Policy for migrant children and adolescents: Poor migrant children and adolescents comprise the most vulnerable sections in urban areas. Fortunately, there is a decline in employment-related migration among children and adolescents. However, in 2011, Maharashtra alone received 20,000 children (5-14 years) and 1.7

lakh adolescents (15-19 years) who had migrated for employment-related reasons. This needs urgent policy action. Also, work participation among migrant children and adolescents was higher, especially in states like Uttar Pradesh, Bihar and Delhi, which also demands policy focus. Because of data limitations, the present study is unable to understand the working conditions of migrant children and adolescents in these states. Mostly, the majority of them are in hazardous industries working under poor conditions. Seasonal migrants comprise the most vulnerable section as they belong to the poorest socio-economic stratum. However, data limitation is a major challenge in locating those spatial pockets with severe seasonal migration among these groups.

Extension of sectoral and spatial coverage: Besides the current sectors which are already covered by UNICEF, industries like cotton textiles, readymade garments, leather products, chemical industries, hotel and restaurant industries and the household sector should be given priority. In terms of spatial coverage, special policy interventions should be started in urban areas of Gujarat, Madhya Pradesh, West Bengal and Delhi.

7

Crimes Involving Children and Adolescents

7.1 Introduction

Violence against children is one of the biggest problems affecting families and societies across the globe. In fact, every five minutes, a child dies as a result of violence in the world. Globally, about half of the world's children, i.e. 1 billion (under 18 years of age) experienced physical, sexual or emotional violence or neglect in 2016 (Hillis et al., 2016). Evidence suggests that the magnitude of the problem amplifies in some of the world's fastest growing and most populous countries such as India, China and other sub-Saharan African countries (The Economist Intelligence Unit, 2019).

India has one of the largest shares of population in the younger age group in the world. Forty-one per cent of the population accounts for less than 18 years of age. According to the National Crime Records Bureau (NCRB) survey report 'Crime in India-2017', major reported crimes were kidnapping and abduction (42.0%) and cases under the Protection of Children from Sexual Offences Act, 2012 (25.3%) including child rapes. Every year, cases of rape and murder of children are increasing.

Violence in any form has a deep impact on the overall development of a child. Child abuse results in actual or potential harm to a child's health, survival, development and self-confidence. Sustainable Development Goals (SDGs)—notably SDGs 5, 8 and 16—call to end all forms of violence against children and recognise the right of every child to live free from fear, neglect, abuse and exploitation. However, despite the increasing condemnation of violence by the international community and a growing body of legislation as well as policy and institutions to protect them, violence remains a harsh reality in the daily lives of many children.

It is found that countries with higher risk have the least information on the issues related to crime and violence (UNICEF, 2017; Hillis et al., 2016). Crime and violence against children either gets unaccounted for or undercounted. Even in India, the NCRB National Report only gives information on the number of crimes and lacks in identifying specificities of crimes and offenders. So far this has been a neglected area of research in the country. The present study is an attempt to fill this gap by identifying the determining factors relating to the patterns and trends of the conditions in which crimes against children take place. The discussion is based on time-series data published by NCRB and content analyses of published news articles. This chapter specifically looks at the age group of 0 to18 years—the age cohort available in NCRB data. Disaggregated analysis by urban areas could not be attempted due to the absence of such information from NCRB.

7.2 Data and Methods

The term 'crime' used in the study denotes crimes under both the Indian Penal Code (IPC) and Special and Local Laws (SLL). The information on levels and patterns of crime against children is drawn from the information compiled by the National Crime Records Bureau (NCRB) under the Ministry of Home Affairs (MoHA) in India. The crime rate per lakh population (under 18 years of age) is calculated at national and state level. Crime rates are calculated by dividing the total number of reported crimes against children (those under 18 years of age) by total population. For calculation of crime rate for the years 2009-13, the denominator is taken from the Population Census of India, 2011. From the year 2014 onwards (2014-17), the projected population below 18 years of age is used. The analysis is restricted to UNICEF focused states including Delhi and 19 metropolitan cities with more than two million population for which information is available.

In addition to this, information from news articles on crimes involving children were also analysed to explore details of such crimes, which otherwise is not available in the NCRB data. For this, the Indian national newspaper *The Times of India* was selected due to its quality, high circulation among the readers and its presence in four big Indian cities (Mumbai, Delhi, Kolkata and Chennai). Since this roughly represents four major regions of the country, the sample ensures national representation of urban India. Relevant newspaper articles were identified between 1 June, 2018 to 31 May, 2019 on *The Times of India* website (https://epaper.timesgroup.com/). Articles were searched using search strings such as 'child', 'minor', 'adolescents', 'youth', 'rape', 'sexual abuse', 'murder', 'kidnapping', 'honour killing', 'crime', and others. News items were further filtered for repetition. Finally, a total of 697 articles were found relevant to our research theme and were used for coding and analyses. The results presented are broadly categorised into two sections: (i) crimes against children, and (ii) crimes committed by children.

Mixed-method content analysis was used for comprehensive analysis of the selected media content. First, quantitative analysis of reported news articles was done to measure the frequency of content within the articles among total samples. This involved summary statistics of the type of news and appearing themes. After that, qualitative content analysis was done of the selected articles for more in-depth understanding. This includes the following steps: constructing a coding frame; coding news articles using the coding frame; analysing the quantitative data; identifying aspects of content to examine further using qualitative analysis; and finally, performing thematic analysis of the latent content of news articles of interest. Such methodology has been used earlier in various research studies (Patterson et al., 2016; Altheide and Schneider, 2012).

Based on the news articles, broad themes were identified by types of crime, perpetuators of crime and reasons for crime. An initial code list was prepared and used to code randomly selected 25 news articles,

Figure 7.1: Selected News Articles, The Times of India, 1 June, 2018 to 31 May, 2019

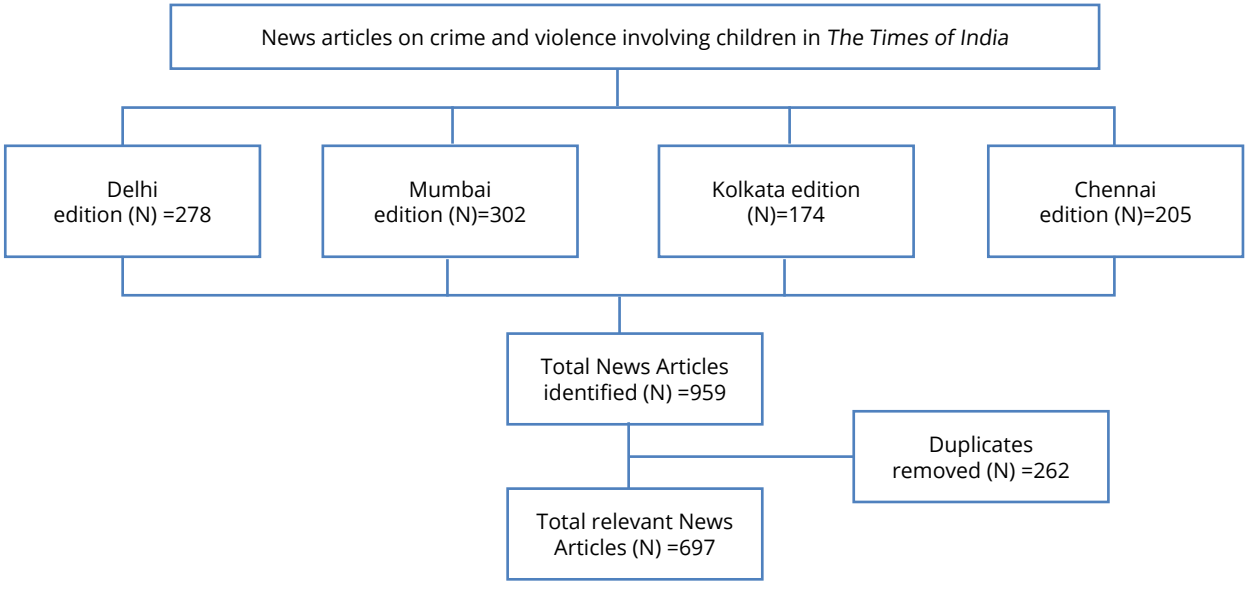
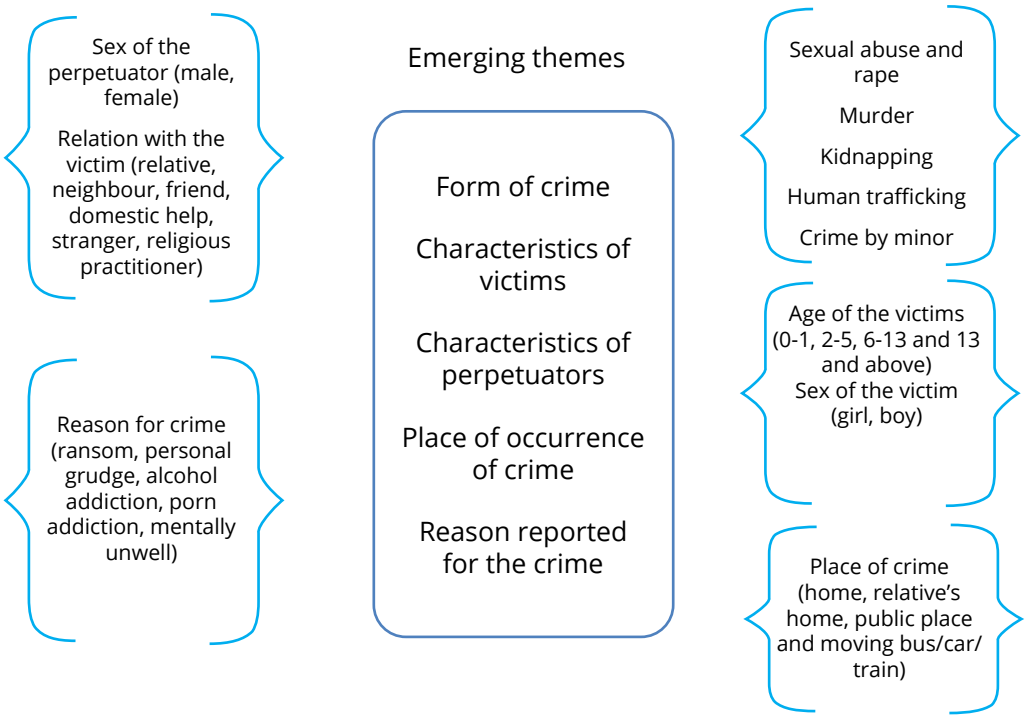


Figure 7.2: Identified Themes and Sub-themes from News Articles



separately by two researchers to test the relevance of the code list based on these themes. All discrepancies were resolved, and the code list was finalised by adding new codes as they emerged as well as modifying old codes wherever it was needed.

The final code list was then used to code news articles, and all transcripts were double coded to avoid discrepancies. The findings from the thematic analyses are presented below by the types of crime. The content analysis has been carried out using NVivo version-10. Besides this MS office suite has been used for descriptive analysis and graphical presentations.

7.3 Crime Against Children in India

7.3.1 Findings from the secondary database

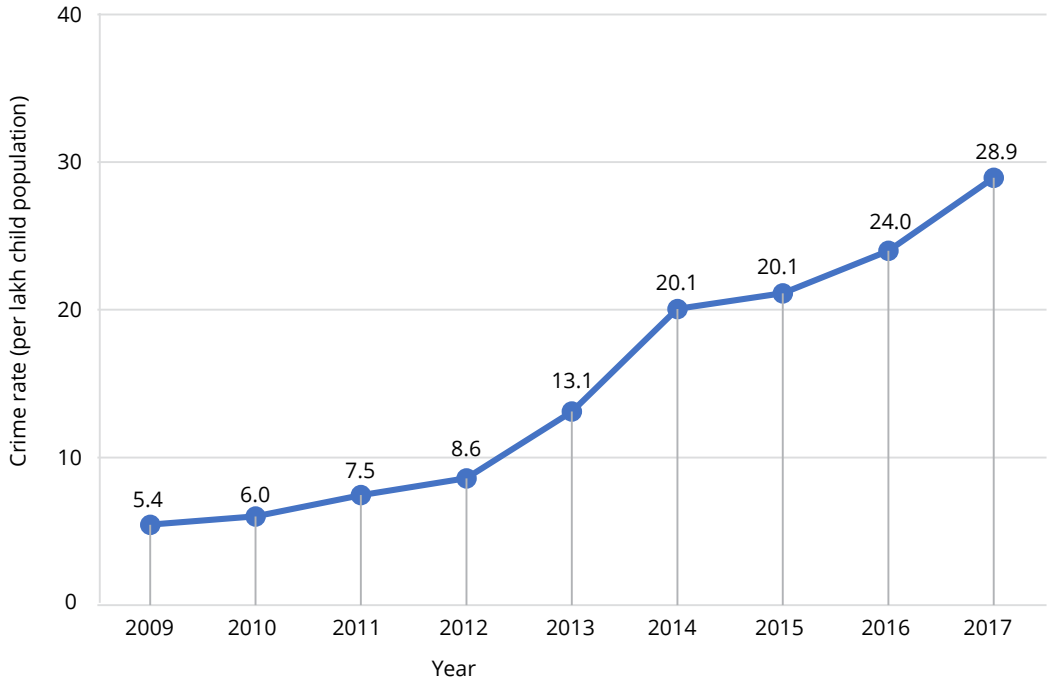
The publication 'Crime in India' by National Crime Record Bureau (NCRB) is the only source of information on crime. In this section, an analysis has been done on broad indicators to present the current situation of crimes against children. It has been observed that the crime rate against children has increased continuously with time. Nearly 5.4 children per lakh child population has experienced a crime in 2009, which increased to 28.9 per lakh child population in 2017.

The crime rate for children below 18 years of age for India in the year 2015 was 21 per lakh child population below 18 years, which increased to 29 per lakh child population below 18 years in 2017. Among states, crime rates were highest in Delhi (169 per lakh children in 2015 and 140 per lakh children in 2017) followed by Chhattisgarh, Madhya Pradesh and Maharashtra, and lowest in Jharkhand (3 per lakh children in 2015 and 10 per lakh children in 2017) followed by Bihar, Andhra Pradesh and Tamil Nadu. Six UNICEF intervention states and Delhi had a higher crime rate compared to the national average. It is, however, interesting to see that while the crime rates in all the given states rose during 2015-17, Delhi had a declining crime rate during the same period.

Among 19 metropolitan cities (with >2 million population), Delhi's share was highest followed by Mumbai and Bengaluru. Coimbatore reported the lowest per cent of crimes against children followed by Ghaziabad and Patna.

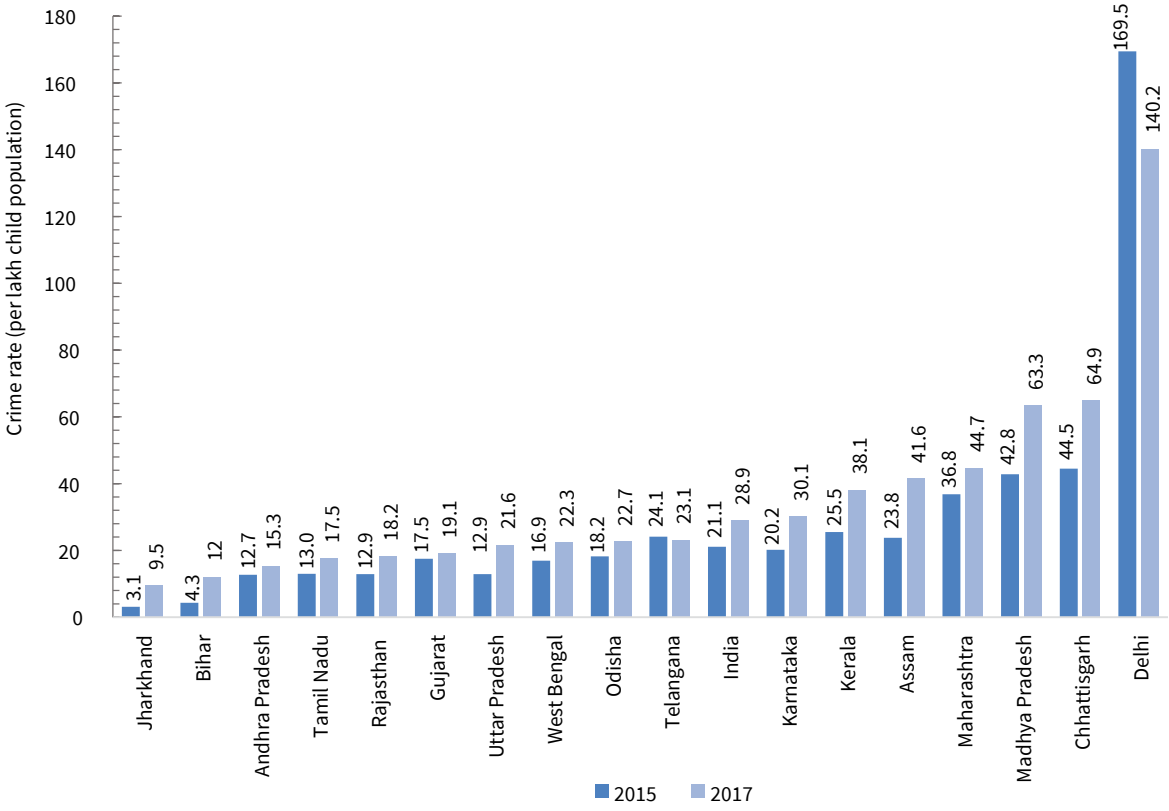
Kidnapping emerged as the major form of crime followed by other crimes and sexual abuses/rapes (Figure

Figure 7.3: Trends in Crime Rate (Per Lakh Child Population) Against Children Below 18 Years of Age, India, 2009-2017



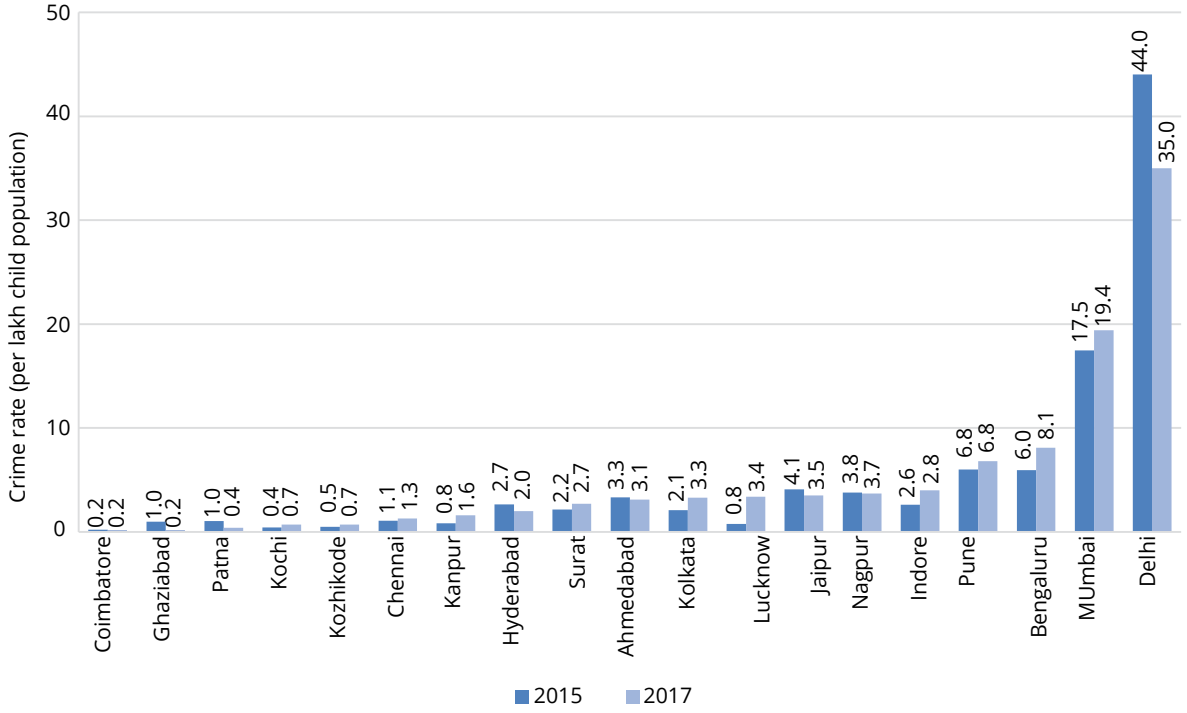
Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2009-2017

Figure 7.4: Crime Rate (Per Lakh Child Population) Against Children Across States, India, 2015 and 2017



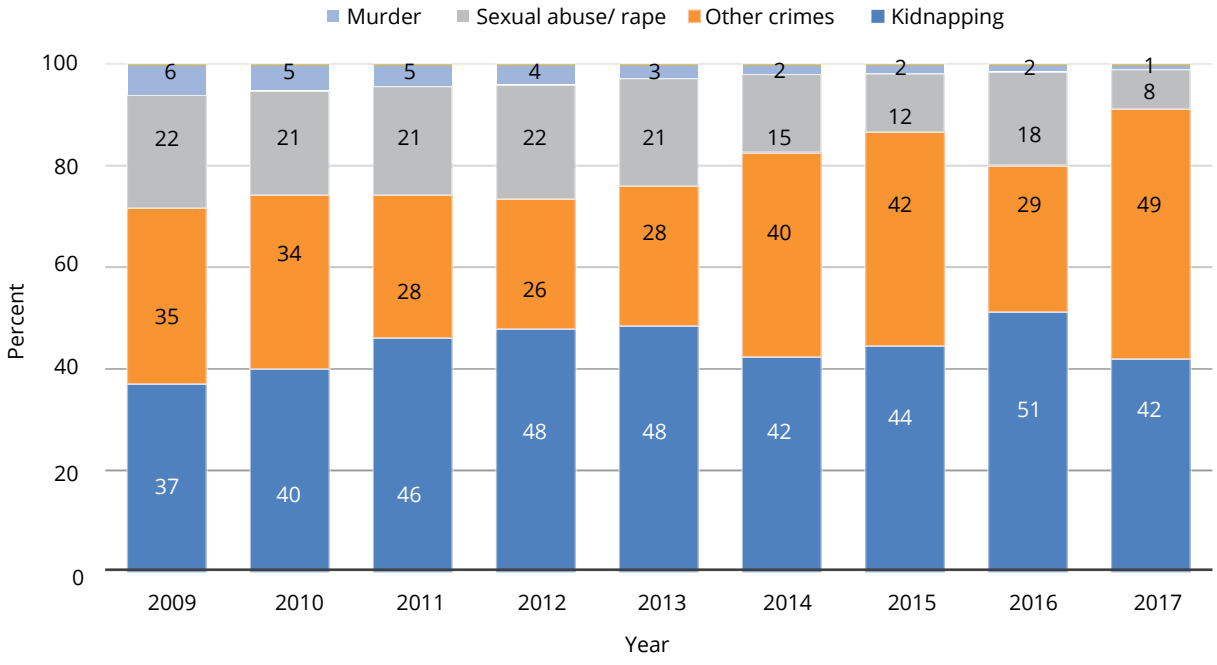
Note: Only UNICEF intervention states along with NCT of Delhi have been included here.
Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2015-2017

Figure 7.5: Crime Rates (Per Lakh Child Population) Against Children in 19 Metro Cities (with >2 million population), 2015 and 2017



Note: Data for 19 metropolitan cities with more than 2 million population is available.
Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2015-2017

Figure 7.6: Composition of Crimes Against Children in India, 2009-2017



Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2009-2017

Box 7.1 Limitation of Statistics in 'Crime in India' by National Crime Record Bureau (NCRB)

- Since the publication caters to the 'Principle Offence Rule' for classification of crimes, the actual count of each crime head may be under-reported. This is because among many offences registered in a single First Information Report (FIR), only most heinous crimes (subject to maximum punishment) are considered for the counting unit. Hence, there is a likelihood that some IPC/SLL cases are under-reported as they are covered under major IPC crimes. For example, Murder with Rape is accounted as Murder.
- The socio-economic causative factors or reasons for crime are not captured by the bureau. Only crime cases recorded by police are part of this publication.
- Crime rates of states/UTs have been calculated using the Mid-Year Projected Population of 2017 based on the Population Census of India, 2001. However, since this is not available for metropolitan cities, their crime rates have been calculated using the 2011 Census. Hence, crime rates of states and metropolitan cities are not comparable.
- 'Crime Rate' is not calculated for individual cities under 'Children' due to non-availability of population figures of the cities.

7.6). The NCRB Report defines other crimes as infanticide, foeticide, exposure and abandonment, human trafficking, selling of minors for prostitution, buying of minors for prostitution, unnatural offences and various other forms of crimes mentioned within special and local laws. Murder had the lowest share among all forms of crimes against children and its per cent share declined from 2009 to 2017.

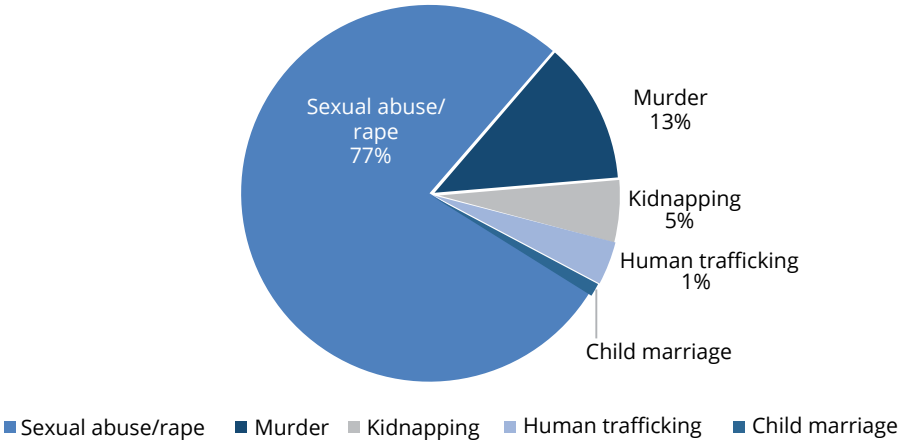
7.3.2 Findings from the content analysis

Between 1 June, 2018 to 31 May, 2019, 697 articles about crimes involving children and adolescents were published in *The Times of India* in selected four city editions. Of these articles 615 were related to crime against children including 476 (77%) cases of sexual abuse/rape, 76 (13%) of murder, 33 (5%) in kidnapping, 23 (4%) of human trafficking and 7 (1%) of child marriage (Figure 7.7).

It can be seen that of the total victims, 87 per cent were girls and 13 per cent were boys (Figure 7.8). Distribution of crimes against girls was very skewed with 83 per cent being victims of sexual abuse/rape whereas a relatively low proportion were victims of murder (10%). Human trafficking (4%) and kidnapping (3%) were among the lowest crimes against girls. As far as boys were concerned, along with sexual abuse and rape (37%), a significant proportion were victims of crimes such as murder (32%) and kidnapping (24%). Reported cases of child marriage in the newspaper were only 1 per cent among both boys and girls.

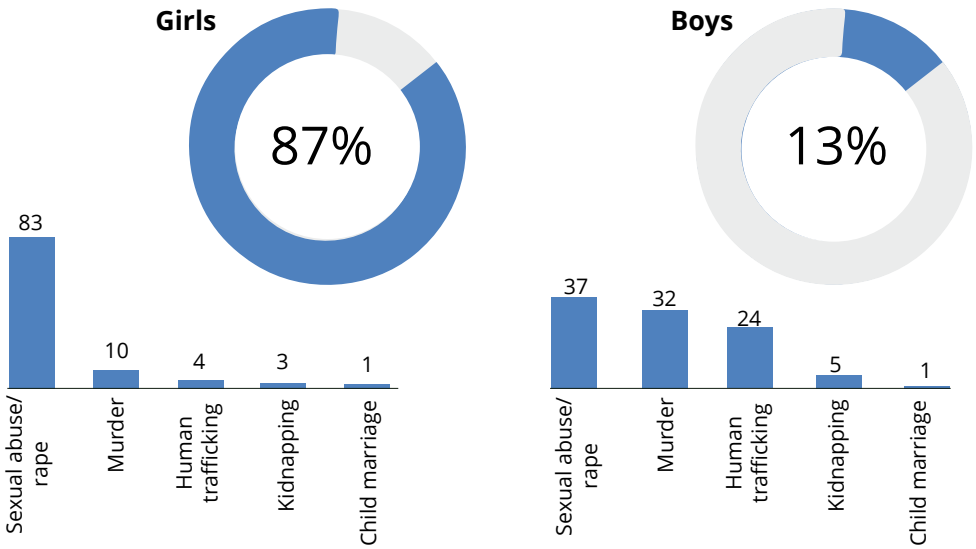
Forty-five per cent of the cases relating to rape and sexual abuse were observed in the age group 13 years and above, followed by 37 per cent in the 6-12 years age group, 17 per cent in 2-5 years, and 1 per cent in 0-1 year age group. A similar pattern was found for murder and human trafficking where the highest proportion of victims was from the older age group (13 years and above). The age pattern of victims was different in cases of kidnapping. Among the total victims here, 43 per cent were from the age group 2-5 years followed by 27 per cent in the 6-12 years group.

Figure 7.7: Types of Crime Against Children in India, 2018-19



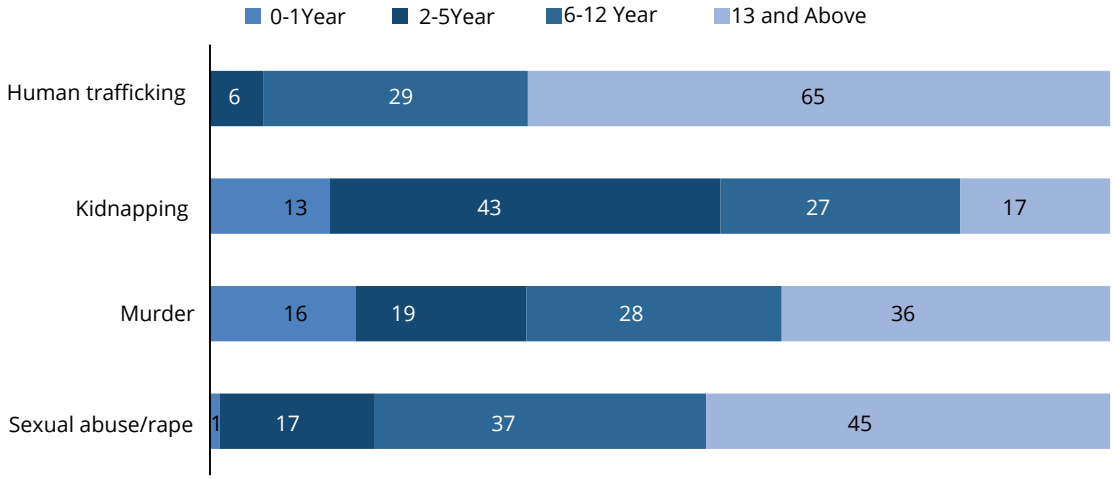
Source: Content analysis of news on crimes, The Times of India, 2018-2019

Figure 7.8: Types of Crime Against Children by Gender in India



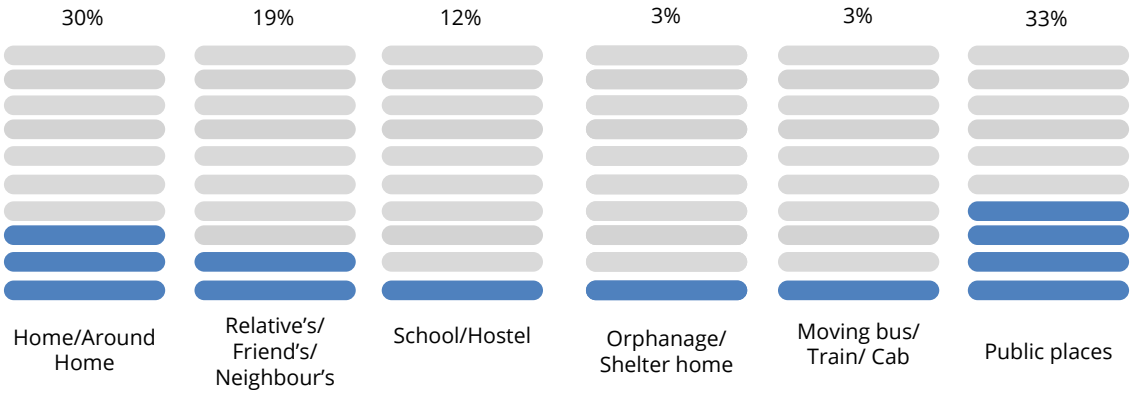
Source: Content analysis of news on crime, The Times of India, 2018-2019

Figure 7.9: Percentage Distribution Across Types of Crime Against Children, 2018-19



Source: Content analysis of news on crime, The Times of India, 2018-2019

Figure 7.10: Crimes Against Children by Place of Occurrence in India, 2018-19



Source: Content analysis of news on crime, The Times of India, 2018-2019

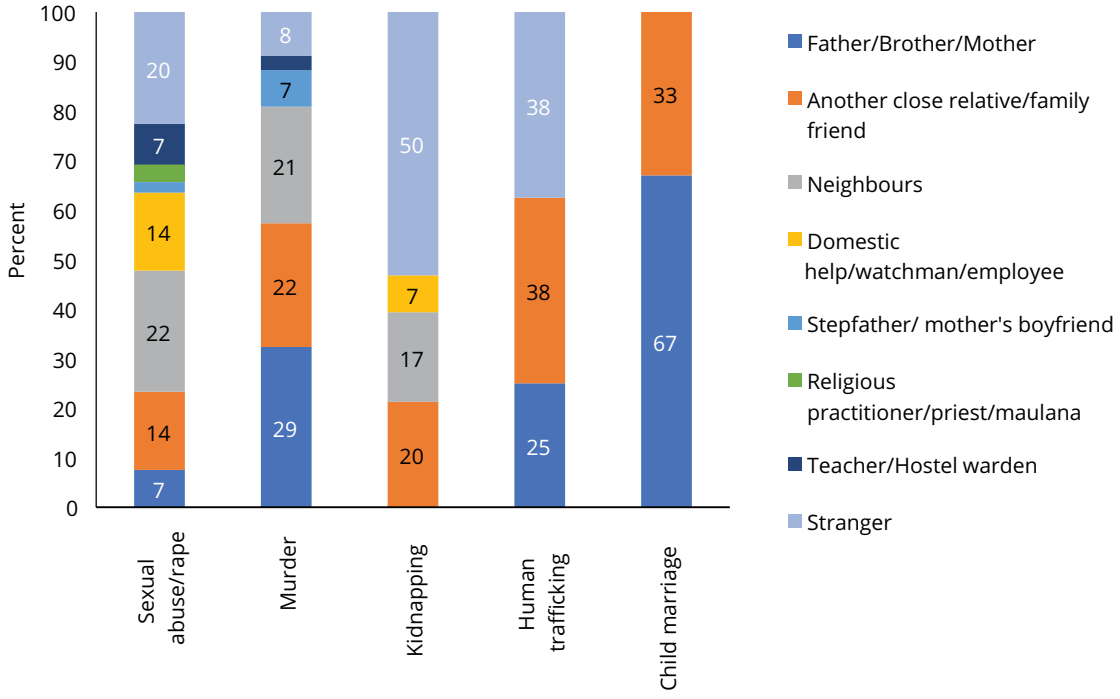
About 33 per cent of the crimes occurred in public places including markets, streets, hospitals, clinics and police stations, whereas 30 per cent took place at homes or when children were playing around homes. About 19 per cent crimes occurred at the homes of close relatives or friends. The balance 12 per cent took place in schools and hostels followed by orphanages and shelter homes and in moving buses/trains/cabs (3% in each category).

The main perpetrators of rape and sexual abuse in the reported cases were neighbours (22%), close relatives/ friends (17%), domestic helps/employees (14%), teachers/heads of schools (7%), own fathers/brothers (7%)

Figure 7.11: Cloud Map of Crime Against Children by Place of Occurrence

Source: Content analysis of news on crime, The Times of India, 2018-2019

Figure 7.12: Relationship of the Child-Victim with the Perpetrator of the Crime, 2018-19



Source: Content analysis of news on crime, The Times of India, 2018-2019

and religious practitioners (3%). News of murders reported involved parents and brothers in 30 per cent of cases, close relatives/friends in 22 per cent and neighbours in 21 per cent. In 3 per cent cases, crimes were committed by teachers or hostel wardens. Domestic helps/employees committed 14 per cent of sexual abuse cases and 7 per cent of kidnapping while priests were involved in 3 per cent of sexual abuse cases. Surprisingly, strangers were involved in 20 per cent sexual abuse cases and rapes, 50 per cent in kidnappings, 8 per cent in murders and 38 per cent in human trafficking. Child marriages were mostly arranged by victims' family members and in 33 per cent cases they were arranged by close relatives/friends.

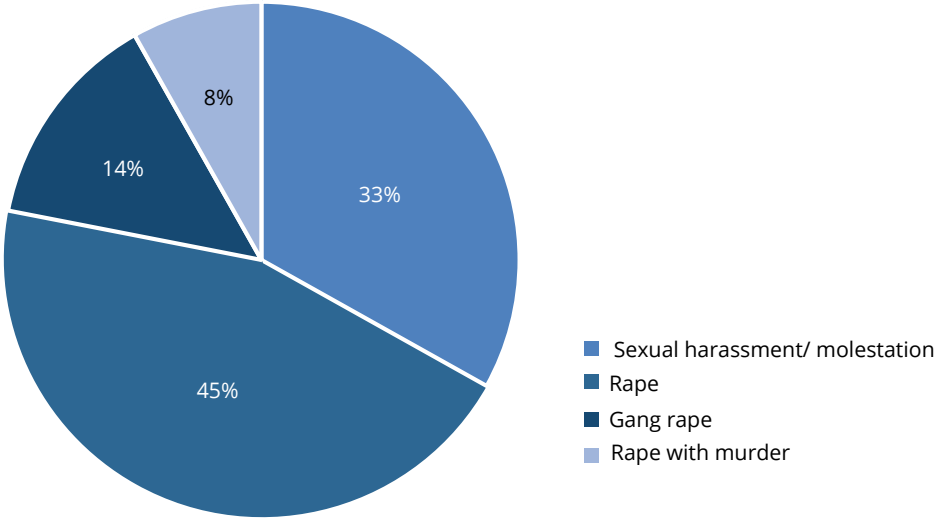
Among all news reports on rapes and sexual abuse, 45 per cent were rape victims, and 33 per cent were sexually harassed or molested, but not raped. In 14 per cent cases the victims were gang-raped and in 8 per cent the victims were killed after being raped.

While looking for the reasons of such gruesome crimes, major identified reasons from newspaper articles

Figure 7.13: Cloud Map of Perpetuators of Crime Against Children

Source: Content analysis of news on crime, The Times of India, 2018-2019

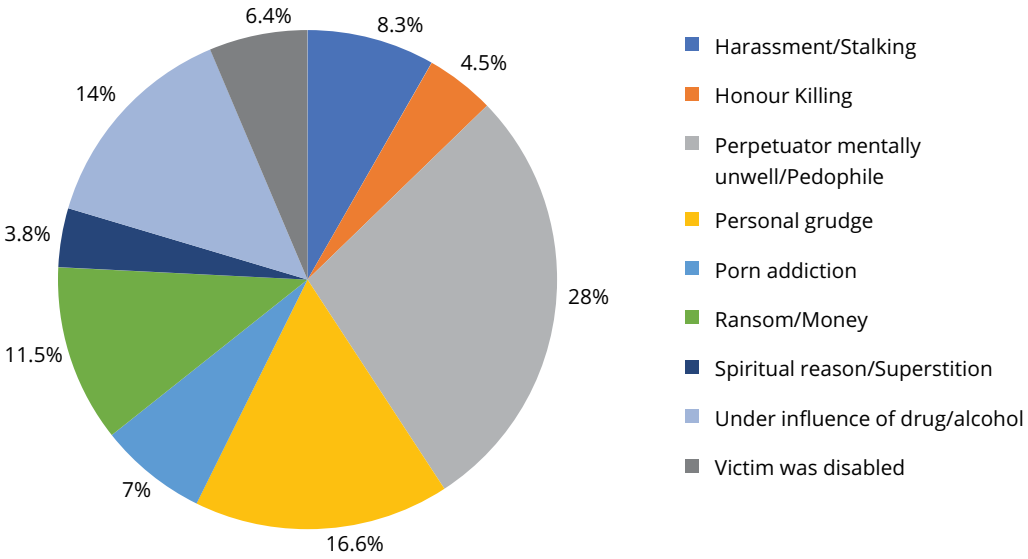
Figure 7.14: Types of Sexual Abuse and Rape Against Children, 2018-19



Source: Content analysis of news on crime, The Times of India, 2018-2019

were harassment/stalking (8%), the influence of drugs/alcohol (14%), personal grudge against the victim or their parents (17%), spiritual reason (4%), ransom/money (11%), porn addiction (7%), honour killing (4%), pedophile or mentally unwell perpetuator (28%), and disability of the victims (6%).

Figure 7.15: Major Reasons for Crimes Against Children in India, 2018-19



Source: Content analysis of news on crime, The Times of India, 2018-2019

Figure 7.16: Place, Perpetuator and Identified Vulnerabilities of Crime Against Children in India

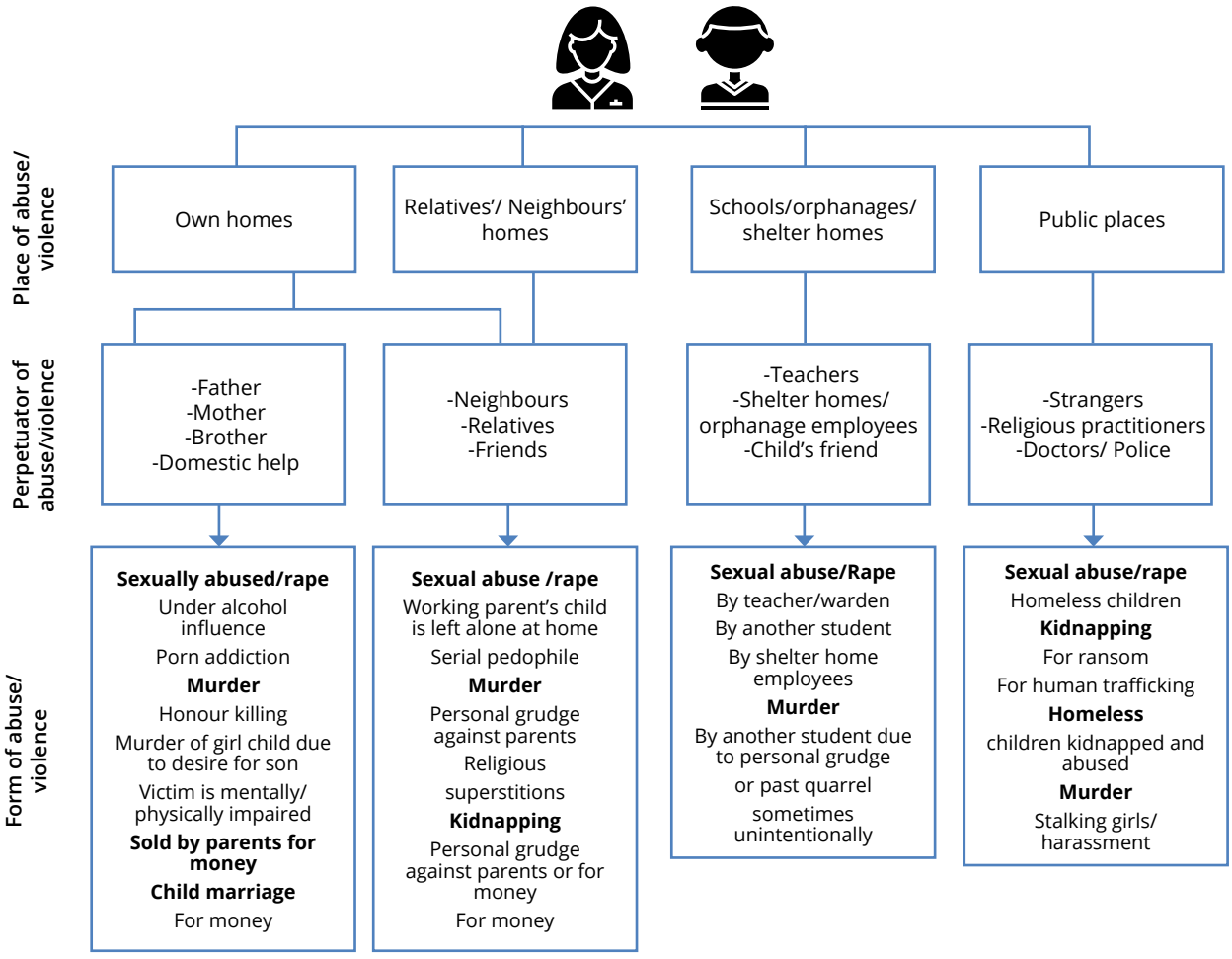


Table 7.1: Specific Situations and Reasons Related to Crime Against Children

Situation and reasons reported	Example
Sexual abuse by own father	"According to special public prosecutor, the girl suffers from asthma, and her father had told her that sexual intercourse with him was part of the treatment." (May 2019)
Rape revealed only after pregnancy	"The 16-year-old girl was doing household chores when her unusually bulging belly caught her aunt's attention. On inquiry, she revealed that her father had been raping her for over a year and that is how she got pregnant." (June 2018)
Rape of very young girl followed by brutal murder	"A 3-year-old girl was kidnapped and sexually assaulted in a barbaric manner. She was tortured, her left arm hacked off, and ultimately she was murdered in Indore city." (December 2018)
Disabled child killed by parents	"A nine-year-old mentally ill girl, who was allegedly fed poison by her parents two days ago, passed away at the Government Rajaji Hospital in Madurai on Saturday." (May 2019)
Endangerment due to alcohol consumption	"A five-year-old girl died after her father slapped her several times in northeast Delhi's Seelampur on Saturday. The father, who was drunk at the time of the incident, has been arrested." (July 2018)
Honour killing	"Furious over their 18-year-old daughter's affair with a youth from a different community, a couple in Malegaon sedated her by mixing sleeping pills in her food and strangled her to death on her birthday." (October 2018)
Religious reasons/ superstitions	"A 26-year-old man was arrested from Jodhpur on Saturday for allegedly killing his four-year-old daughter to appease God through a 'sacrificial offering' during a month of religious offerings. The child was found with her throat slit early on Friday." (June 2018)
Harassment/stalking	"Jayaraman, 28, fell in love with a 17-year-old girl Anu Bharathi, Class XII student of Manali. Irked that Anu didn't reciprocate the love, Jayaraman began stalking Anu when she was on her way to and from school, despite repeated warnings." (December 2018)
Personal grudge against parents	"A 22-year-old man has been arrested for allegedly strangling his 7-year-old nephew and then slitting his throat with a beer bottle. The police said that Naushad Ansari, a zari worker, murdered the boy, Mohammed Irfan, as the child's parents treated him shabbily." (January 2019)
Vulnerability of children living on street	"A two-month-old boy who was kidnapped from his mother when they were sleeping under an under-construction flyover in Delhi's Adarsh Nagar was recovered from a childless couple. Police said that the couple had sought the help of their associate, who was earlier caught for theft, to lift the child for them so that they could adopt the baby as theirs." (May 2019)
Lured for money on the pretext of providing work	"Investigations revealed that the girl from Darjeeling was lured by traffickers with the promise of a good job and was sold for Rs 20,000. She was slated to be pushed into the flesh trade at Varanasi. Police said that two persons brought her to Sealdah from Darjeeling on August 30." (September 2018)
Gangs trafficking children outside of country	"When the gang receive an order from an American client for a child……they find a poor family, willing to sell a child, and another poor family willing to rent out their child's passport. A passport with a picture with some resemblance to the about-to-be trafficked child would be selected. The gang would then pay a carrier to take the child to the US on the chosen passport. Before that, make-up would be applied on the child for a stronger resemblance with the picture on the passport." (August 2018)
Sold by own father for money	"An 11-year-old girl was allegedly sold to a man three times her age by her alcoholic father in Chhatarpur district of Bundelkhand. The 35-year-old man raped her for three days and brought the child back to her village, saying she was crying too much." (May 2019)
Cases of child marriage reported only after serious assault	"A 56-year-old city lawyer was charged with rape and sexual assault of his 14-year-old 'wife' and violation of the Prohibition of Child Marriage Act in Bombay High Court. The lawyer was 52 when he got married." (May 2019)
Girl child killed for son preference	"In Chhattisgarh's Janjgir-Champa district, a woman threw both her daughters—a newborn and a two-year-old—into a well on Monday evening, killing both of them, because of continuous harassment by her husband for not giving birth to a boy." (May 2019)

Source: Content analysis of news on crime involving children and adolescents, The Times of India, 2018-2019

7.4 Circumstances of Crime Occurrences and Reasons

7.4.1 Sexual abuse and rape related news

As mentioned earlier, in many cases children were victimised by their own fathers/brothers or someone they knew, such as close relatives, cousins or neighbours. Incidents took place in their own homes and in some cases, victims were tortured repeatedly for prolonged periods of time. Due to fear and confusion, children were often not able to speak to anyone about the crime. In many cases, the rape came to the notice of other

family members only when the victim was found to be pregnant. While looking into the reasons for such crimes, it emerged that harassment/stalking is the most prominent reason for rape and sexual abuse in India. Apart from this, such crimes were committed under the influence of drugs/alcohol, personal grudge against the victim or their parents, religious reasons, ransom/money and porn addiction. The intensity of the crimes ranged from molesting a newborn child, raping and killing the adolescent and gang rape where the victim was raped repeatedly, in some cases by a large group over a period or raped and killed in a very brutal manner.

7.4.2 Murder

Own parents were involved in the murder of their offspring for reasons such as mentally unwell child and honour killing. In total, eight cases of honour killing were reported in 2018-19 in different parts of the country and all the victims were girls. In two cases, the parents killed their children along with themselves due to financial pressure. An incident was reported where the father killed his own daughter under the influence of alcohol. Girls were also killed by their stalkers or male friends when they did not respond positively to their romantic advancements. In many incidents, children were also killed by someone close for revenge where the perpetuator had a feud going either with the child's parents or the child and wanted to settle a score. Children and victims were also victimised due to superstitions where the perpetuator wanted to appease God or blamed the child for his/her misfortunes. These crimes were committed often by friends or relatives. In some cases, a child was kidnapped for ransom, but was killed later for fear of getting caught or when the child could not bear the sedatives/drugs anymore.

7.4.3 Kidnapping

The majority of children were kidnapped from public places, streets and markets either when they were returning from school or while playing outside their houses. These crimes were mostly carried out by strangers, followed by neighbours/relatives. In a few cases, the domestic help of the household was also involved in the kidnapping of a child, particularly of rich employers, and abducted for money. In some cases, children were kidnapped to put pressure on the family. While a majority of perpetuators were males, a good proportion of kidnappings were orchestrated by females too. Reasons behind kidnapping and abduction of children were ransom, childlessness and personal grudge. There were few cases where, after their arrest, the perpetuators said that they kidnapped the child to adopt as they are childless. But these kidnappings can also be cases of human trafficking. Evidence from reported news reveals that many kidnapped children were homeless and lived on streets with their parents; homeless children being kidnapped in the middle of the night from the streets was common.

7.4.4 Human trafficking

Trafficking rackets were involved in buying/selling a single child as well as a large group of both boys and girls. Children and adolescents were kidnapped and trafficked both within states as well as out of a state. As reported, children/adolescents were kidnapped from smaller cities and trafficked to bigger cities like Delhi and Mumbai. Victims were abducted from different parts of the country such as Bihar, Gujarat, UP, Jharkhand, Assam, West Bengal, Delhi and Mumbai. According to the reported news, the maximum kidnappings for human trafficking were done in the states of Jharkhand, Assam and West Bengal. Victims, largely girls, were persuaded to leave their homes under the pretext of work in the city and later on sold for flesh trade. The money involved in this criminal activity ranged from INR 4,000 to 20,000.

News reports indicate the stronghold of a large trafficking industry within the country. In many cases it was reported that traffickers follow a well devised plan for trafficking children/adolescents. After they receive a demand from a client, sometimes a foreign one, they find a child from a poor family, where either the parents are willing to sell the child or the family is looking for jobs for the children/adolescents. A fake passport is then arranged for the child who is then sent to the destination, which can often be a foreign country. Victims are mostly forced into the sex trade both inside and outside the country. Families sell their children thinking that their child will see prosperity and have a better life. In some cases, the children are brought back if they do not follow the rules.

7.4.5 Child marriage

In all four city editions of the selected newspaper, five cases of child marriage and one case of child worker were reported. Accordingly, girls were married off at the ages of 13-15 years to males who are10-20 years older than them. In one of the cases, a 14-year-old girl was married to a 56-year-old man. Three of the girls were married illegally by their parents before attaining 18 years of age. In two other reports, they were forced into the marriage. These girls were first abducted by the perpetuators who later married them. The cases came to light after a few girls reported rape/sexual abuse against their husbands or came to hospital to give birth. In a few cases, the police also got clues from anonymous callers about the girls' situation. In one reported case of child labour, the girl, aged 14, was brought to the city to work as a house help for a woman. She told the police how she was forced to do household chores and was not given enough food and was often assaulted.

7.4.6 Son preference

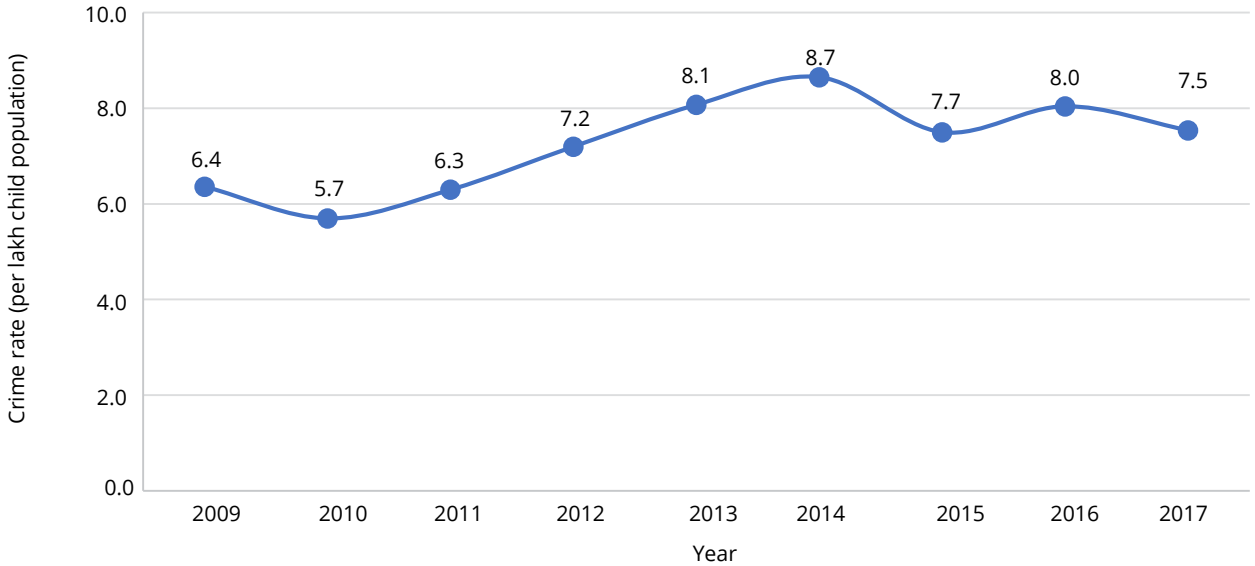
Since the beginning of the present century, a multitude of factors have been analysed in connection with various biases towards son and elimination of unborn females in the family. This study brings out a very cruel facet of intensity of such preferences. In 14 news reports, girl children (newborn or infant) were either killed or abandoned by their own parents because they wanted sons. Crimes were committed either by the mother alone or by both mother and father. Mothers had reported committing the crime under the pressure of their husbands or because they were psychologically depressed after having given birth to a daughter. The strong desire for a son compelled parents to either abandon or kill a daughter. It was found in one of the cases that the couple had repeatedly killed each daughter born to them.

7.5 Crimes Committed by Children

Children are vital to any country's progress. However, the statistics of crime committed by children manifest a worrisome scenario in India. Crime statistics from NCRB show a rise in crime committed by children in recent years, with some irregularities in the trend. The crime rate of children has increased from 6.4 per lakh child population in 2009 to 7.5 children per lakh child population in 2017. The following section elaborates on state and city-level crime rates.

Among selected states, crime rates for the years 2015 and 2017 show that Delhi had the highest share (42.3%) and (52.9%) respectively for crimes committed by children, while the proportionate share was lowest in Jharkhand (0.9%) and (0.6%) for the same two years.

Figure 7.17: Crime Rate (IPC and SLL) Against Children Under 18 Years of Age in India, 2009-2017



Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2009-2017

Among 19 metropolitan cities, Delhi had the highest share (35.2%) for crimes committed by children for the years 2015 and 2017, whereas the proportionate shares for both the years were lowest in Kanpur (0.1%).

Among crimes committed by children and adolescents, more than half were of sexual assault/rape (61%) followed by murder (33%) and kidnappings (2%).

Content analyses of news reports highlight that the majority of children and adolescents who were involved in criminal activities were teenage boys between the ages of 15 to19 years. These crimes mostly took place within school premises, playgrounds and in the homes of the victims. The most common reasons reported for crimes committed by children and adolescents were harassment/stalking, school fights, personal grudge and for ransom/money. Unable to control their anger and emotions, the perpetuators often reacted by taking revenge for past quarrels or due to jealousy, which led to hurting their friends, family members and girlfriends.

> *"The boys were playing when the argument broke out, the seven-year-old allegedly kicked him, then the 13-year-old pushed his friend. He slipped into a ditch and his chin hit a stone. He was bleeding. [The teenager said in his statement] I went into the ditch and wanted to get him out. However, he abused my mother and threatened to complain against me. I was angry and…. hit him four five times with stones lying there." (April 2019)*

More than half of the crimes committed by teenage boys were related to stalking, sexual harassment and failed love affairs. Young boys sexually assaulted victims who were known to them, such as neighbours and close relatives. In a few sexual abuse cases, the perpetuators were porn addicts; forced by their addictions they raped/gang raped, at times their own sisters or neighbours.

> *"A 15-year-old boy, detained for attempting to sexually abuse and murder his 10- year-old friend, told police he had watched porn on his parents' cellphone before the crime….he would borrow his parents' phone to play games. Once, he saw pop-ups with adult content and then started to view porn more frequently." (December 2018)*

There were few cases of sexual assault where young teenaged girls helped their male friends. These girls lured other girls to places where their male friends could abuse them. In half of the incidents, adolescents committed crimes in groups with their friends/schoolmates or even older men. News reports indicate that teenagers worked with criminal gangs and used firearms. A news report also indicated that caste-based hatred runs deep even among teenagers.

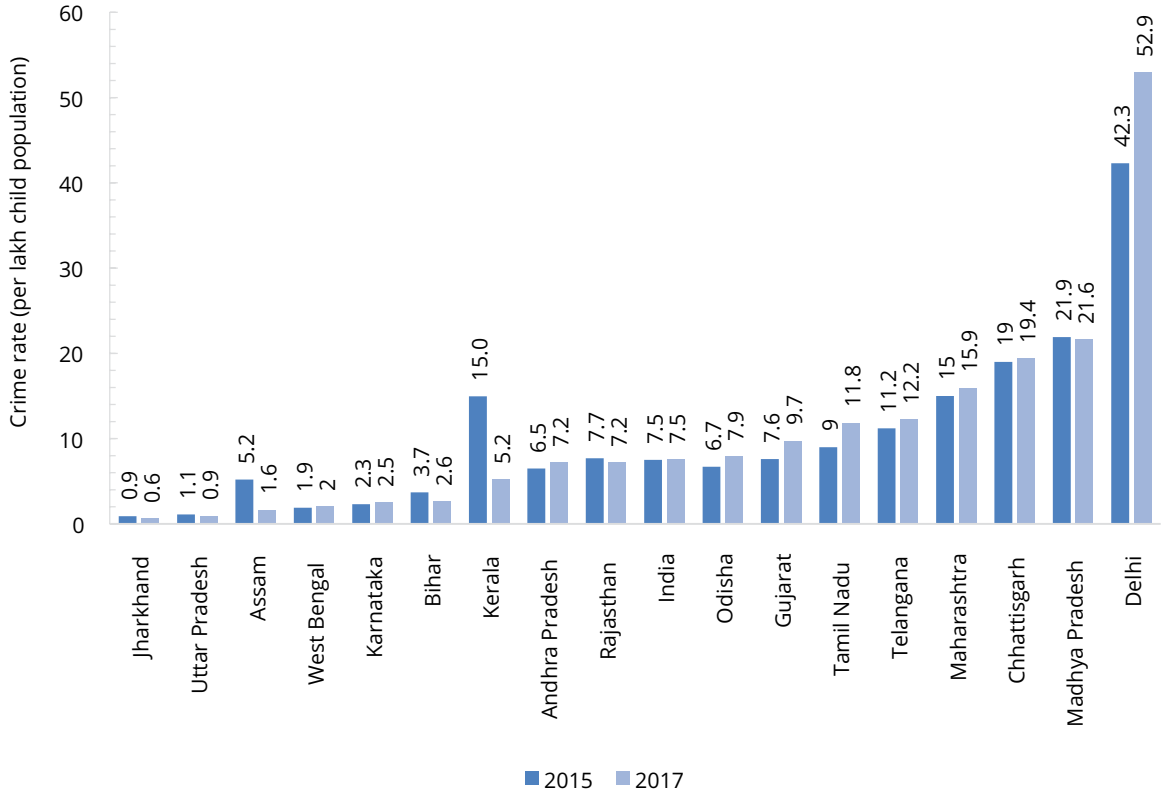
> *"Seven juveniles were found to be involved in the killing of a boy who was to marry the sister of one of them, a thevar. Shankar, 32, who belonged to the konar community, was hacked to death by the gang of minors on Tuesday morning." (November 2018)*

Addiction to alcohol among children and adolescents has also been reported with crimes being committed under the influence of alcohol. Furthermore, there were reports where children/adolescents committed suicide because they were scolded by parents or their wishes were not fulfilled; because of loneliness and lack of support suicide was allegedly thought to be their only option.

> *"An 18-year-old girl live-streamed her suicide on Instagram late on Thursday, alleging her boyfriend's deception as the cause behind her extreme step. She hung to death and left a note in her diary that her boyfriend had deceived her, compelling her to kill herself. Police said Manisha's father had moved to France in 2004 and her mother had died four years ago." (August 2018)*

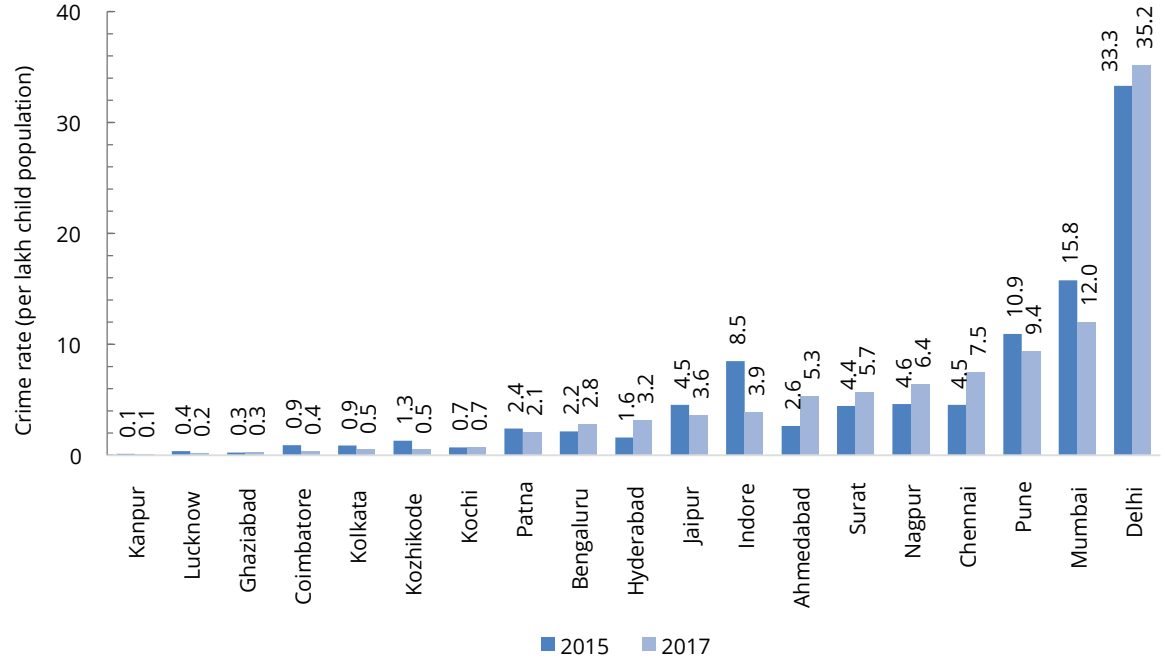
Use of mobile, internet and social media in crimes committed by children and adolescents was also evident. Mobiles were used to film obscene video clips of the victims and then to blackmail them later. In a few news items it was found that a reported crime was not the perpetrator's first crime and the minor in question had been involved in other crimes in the past.

Figure 7.18: State-wise Criminal Activities by Children Under 18 Years of Age in India, 2015 and 2017



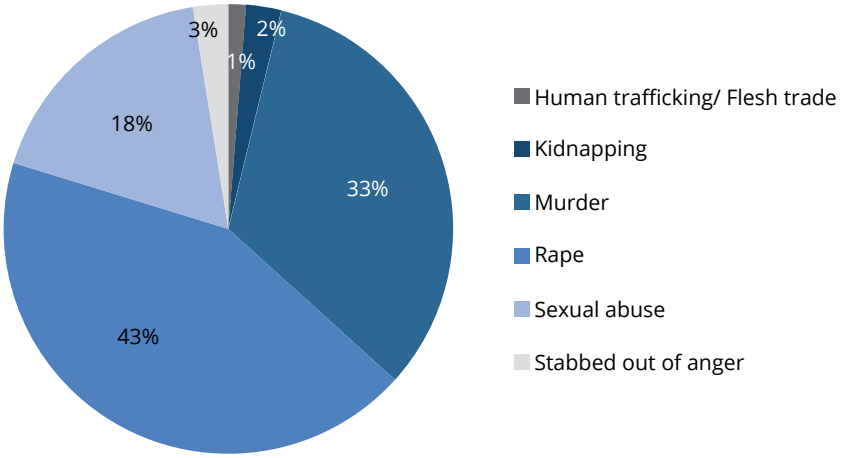
Note: Data for states with UNICEF intervention along with NCT of Delhi has been presented here.
Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2015-2017

Figure 7.19: Children Under 18 Years of Age Involved in Criminal Activities in Select Cities, India, 2015 and 2017



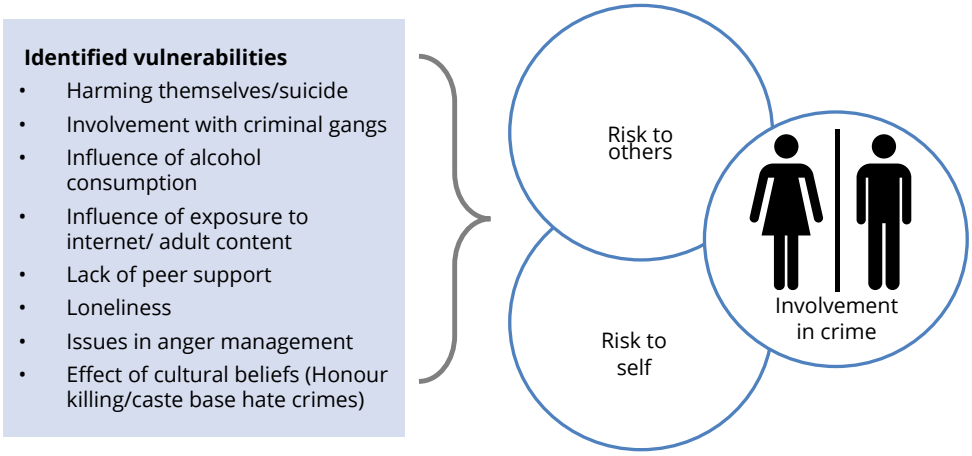
Note: Data for 19 metropolitan cities with more than 2 million population has been available.
Source: 'Crime in India' published by National Crime Records Bureau (NCRB), 2015-2017

Figure 7.20: Types of Crimes Committed by Children, 2018-19



Source: Content analysis of news on crime, The Times of India, 2018-2019

Figure 7.21: Emerging Vulnerabilities of Children Involved in Criminal Activities



Source: Content analysis of news on crime, The Times of India, 2018-2019

7.6 Conclusion

The present chapter attempted to analyse children's and especially adolescents' involvement in criminal activities, identifying the determining factors for the patterns and trend of the conditions in which crime against children take place. It has been observed that the crime rate against children has increased continuously with time, Delhi reporting the highest among cities, although with a declining rate.

Content analysis revealed that among children, girls are the main victims, mostly of crimes such as sexual abuse and rape, whereas boys are more vulnerable to murder and kidnapping. However, cases of sexual abuse of boys have also been reported. In a majority of cases, the perpetuators were known to the victims, being their own fathers/brothers, close relatives or neighbours. There were also news reports of children and adolescents being abused by religious practitioners/priests/other religious heads or by relatives/neighbours driven by superstition. Among the perpetrators of rape and sexual abuse, there are also many cases of serial crimes and crimes by pedophiles.

The reporting of murder of girl newborns by their own parents shows that unfortunately abuse of the girl child in India starts right from the womb due to strong son preference. Content analysis showed that unwanted girls who survived are later subjected to infanticide by their own parents. Socio-cultural and economic factors such as poverty, residing in the street, familial risk factors and lack of enforcement in terms of child marriage and human trafficking increase the vulnerabilities of children.

The majority of crimes committed by teenage boys was related to sexual abuse. Adolescence marks the age of puberty and in the absence of proper guidance many adolescents are confused about their sexuality. This is in addition to easy access to sexualised material through movies, television, music and internet which aggravate their risky behaviour.

Early exposure of children to the internet without any awareness on appropriate use of internet and being safe while surfing online, adult content (porn addiction) and stress in their personal lives (romantic life, loneliness, feud between friends) may drive them towards criminal activities. Past studies have also found that at least a third of adolescent violent behaviour can be predicted by variables such as gender, substance abuse, stressful and traumatic events (Stiffman et al., 1996). All these factors (combined or in isolation) make understanding of criminal behaviour among adolescents a complex phenomenon and require a deeper understanding of the causes of such deviant behaviours.

The analysis revealed that criminal activities committed by children have also increased in recent years with minor fluctuations. Also, this is true for not only children from disadvantaged backgrounds and school drop-outs who commit crimes but a substantial proportion of crimes committed by children takes place in schools and homes indicating that school-going children from well-off families are also involved in criminal activity.

Children's vulnerability in their own homes and among their own peer groups calls for greater attention jointly from parents and the state. Behaviour Change Communication (BCC) programmes are needed not only to save children from violence against them, but also to save them from becoming criminals. Proper sex education provided to young children may help in attending to their curiosity apart from their being in a better position to judge when they are violated. Proper tracking of children's behaviour is necessary to identify early signs of deviance, both as victims and perpetuators. Making children aware of laws on child abuse and other kinds of abuses they can face will empower them in protecting themselves.

Also, a substantial proportion of crimes taking place in homes and schools and by known people of children indicates that parents need to be cautious about the surrounding environment. Children should be taught to identify the early signs of 'bad' or suspicious touching of their bodies and methods that perpetuators can use to lure them. Children should be encouraged to talk to their elders freely in case they are being violated or they have any suspicions. Parents and teachers should be sensitive and vigilant all the time.

Protecting children against violence is an integral part of three SDG goals, namely, goals 5, 8 and 16. These goals talk about creating a peaceful and secure environment and reducing violence of any kind against children. It has emerged that the majority of crimes are committed by people familiar to the victims and in the vicinity of their homes and schools. Hence, along with the increase in security and safety measures the present findings also call for major behavioural changes among adults.

7.7 Policy Recommendations

The following policy recommendations are important to deal with the present situation situation:

Integrated Approach: The judicial system plays a vital role in preventing crime against children but many other sectors need to be involved to ensure a comprehensive intervention strategy. The Government, international organisations, NGOs, and other stakeholders need to adopt an integrated approach. There is a need to establish the link between missing person's bureau, anti-human trafficking units and law enforcement agencies. The coordinated approach of these agencies will help in strengthening the response mechanism in cases of child kidnapping and abduction. There is also a need to build coalitions between local NGOs, community organisations and police to map street children and to track them.

Bridging the Data gap: A major reason for shortcomings in policies, programmes, and in understanding the extent and severity of the problem of crime against children and involvement of children in crime arises from the gaps in existing data sources. The National Crime Record Bureau provides limited data, which is based on the First Information Report (FIR). According to the Principal Offence Rule, each criminal incident is recorded as one crime. If many offences are registered in a single FIR case, only the most heinous crime (one that attracts maximum punishment) is considered as a counting unit. This results in under-reporting of cases. Also, there is a lack of granular data at a disaggregated level. Policymakers have to rely on limited available

data sources, which hinders evidence-based policy formulation and any kind of spatially disaggregated level analysis for programme intervention. There is a need for real-time data on crime and punishment at a disaggregated level on a regular basis.

Development of context specific crime prevention programmes: There is a need for developing effective crime prevention programme initiatives and in creating and maintaining an institutional framework for their implementation, monitoring and evaluation. For this, it is necessary to first identify the specific vulnerabilities and risks faced by specific children, and secondly, to adopt proactive measures to reduce those risks and take appropriate actions. Specific prevention measures are necessary for children who are at high risks such as children living on the streets, children with disabilities or mental illness, migrant children, indigenous children, children of incarcerated parents/commercial sex workers or orphans.

Early interventions: Children's vulnerability in their homes and among their own peer groups call for greater attention jointly from parents, school and the government. Proper tracking of children's behaviour is necessary to identify early signs of deviance, both as victims and as perpetuators. The Behaviour Change Communication (BCC) programmes are needed to protect children from being a victim as well as from committing any crime themselves. Besides self-defence training, a curriculum on "good" touch and "bad" touch must be taught in the schools. Sessions on anger management and sex education should be regularly carried out in schools and colleges.

Awareness generation: There is a need to orient children on all forms of abuse, exploitation, violence and build their confidence to report any such incidence to family members, child helpline, police or NGOs. Legal aspects of crime related to children and adverse life outcomes of both offenders and victims must be taught in form of documentary or play in the schools to sensitise children. Effective media campaigns, development of appropriate public advocacy tools and IEC materials should be promoted to generate awareness among the general population, parents and children towards violence against children.

Increasing surveillance: In order to increase surveillance, cities need to install street lights and surveillance cameras. Setting up of command and control centres in cities will help in reducing crime, tracing the incidence, facilitating investigations and act as evidence for framing the charges. There should be stringent monitoring of all placement agencies and their activities. Child helpline number should be responsive and accessible.

Creation of child friendly one-stop help centers: The cities with higher incidence of crime against children or involvement of children in crime should create child friendly one-stop help centers to respond to cases of sexual abuse against children and other forms of crime and violence. These centers should provide guidance and referral services. They should have professionally trained counsellors to provide appropriate counselling and support to children dealing with physical or emotional stress. They should ensure full recovery, development, and social reintegration of victimised children.

Capacity building: Develop a cadre of professionally trained counsellors and appoint them at all police stations, children's homes/orphanages, and one-stop help centers. To prevent abuse and exploitation, it is important to train officials to respond to child protection needs during natural or man-made disasters. Similarly, sensitisation of stakeholders such as the police, hospitals, urban local bodies, and the railways/roadways about child protection is necessary to facilitate their rescue and rehabilitation.

Effective implementation of the POCSO Act, 2012: POCSO Act calls for people, systems and procedures to be sensitive and respond to the needs of children. There is a need for effective implementation of POCSO Act, which includes establishing special courts in all districts to ensure speedy disposal of trials; appointment of a Special Public Prosecutor for every special court; imparting periodic training to all stakeholders (police, judiciary and medical authorities) on how to deal and communicate with victim children and their families during investigations, prosecution and medical examinations. It clearly mentions that the child need not be taken to the police station to report a case of sexual offence, rather it directs the police (to be not in uniform and as far as possible a woman officer not below the rank of sub inspector) to reach out to the child, based on the child's preference and convenience.

8

Conclusion and Policy Recommendations

"There can be no keener revelation of a society's soul than the way in which it treats its children."
— Nelson Mandela

8.1 Introduction

The well-being of children has a positive impact on society. The Sustainable Development Goals (SDGs) of the United Nations recognise early childhood and adolescence as a significant phase of development in the lifespan of an individual, as it forms the basis of later life outcomes. In fact, SDGs on poverty (goal 1), zero hunger (goal 2), good health and well-being (goal 3), quality education (goal 4), gender equality (goal 5), access to clean water and sanitation (goal 6), reduced inequality (goal 10), sustainable cities and communities (goal 11) are all directly linked to the holistic development of children and adolescents. Achievement of these goals would be a positive move towards implementation of the 'New Urban Agenda' (Habitat III, 2016) leaving no one behind in the process of development.

According to the Population Census of India, 2011, urban India is the home of 135.5 million (36% of the urban population) children and adolescents within the age group of 0-19 years. Several child-specific programmes were launched during the Five Year Plans to address the growing challenges faced by this age-cohort, which were compounded in their implementation by the growing population and lack of adequate investment. A review of policies and programmes reveals that the progress in the holistic development of cities has been far from satisfactory, especially with regard to children from the poor and marginalised communities. In particular, children and adolescents in slums are forced to live in filthy environments without proper basic services such as drinking water, improved sanitation, a well developed drainage system, adequate street lighting, quality schools and health centres with proper healthcare facilities. These areas also lack safety and security and are more prone to crime and violence against children.

The early decades after Independence, when free market liberalism coexisted with government intervention for social welfare, witnessed direct government intervention in the provision of housing and basic amenities. With ad hoc measures of structural adjustment and neo-liberal reforms initiated since the late eighties, the Indian political economy was transformed by liberalisation, privatisation and globalisation policies (Kundu, 2020 and Thapliyal, 2016). In this neo-liberal moment, the social sector was granted no exception in the move for privatisation. In fact, government expenditure on the sector came down. This led to a deterioration in the quality of social sector services delivered in public institutions. Though several programmes were launched during this period to improve the infrastructure of cities, both physical and social, to transform them into 'global cities', the process of development was exclusionary (Kundu and Saraswati, 2012; Dupont, 2008).

This exclusionary process led to exclusionary urbanisation in the country, which resulted in the accentuation of inequalities at the state, city and ward levels. The exclusion of small towns and urban poor neighbourhoods from infrastructural development and the big city bias in infrastructural investments further strengthened the exclusionary process. Also, the lack of adequate capacity of urban local bodies (ULBs) to govern cities, the over-dependence on grants on the one hand, coupled with under-utilisation of grants under various government schemes on the other, poses significant hurdles in the equitable and sustainable urban growth of the country.

In view of the above, the present study has analysed the trends and patterns which prevail in the socio-economic conditions of Indian children and adolescents, and attempted to identify the determining factors that result in the existing scenario. It has tried to determine the status of children and adolescents in terms of access to health, nutrition, water, sanitation and hygiene (WASH), education, and protection or safety of children (0-9 years) and adolescents (10-19 years) in urban India. It has taken cognisance of slum/non-slum and poor/non-poor disparities at disaggregated levels and determined the reasons for the same using statistical tools. This evidence-based research would act as a significant input for preparing programmatic interventions for urban India as the country strives to achieve Agenda 2030 and the New Urban Agenda.

8.2 Main Findings

8.2.1. Health and Survival

- The study brought out the fact that high infant and child mortality, diarrhoea, anaemia and malnutrition still plague children living in poor urban settings. Several studies have argued that urban areas have a survival advantage over rural areas. The analysis showed a substantial gap in neonatal and infant mortality rates in both rural and urban areas. Also, the pace of decline in neonatal mortality rates (NNMR), infant mortality rates (IMR) and under-5 mortality rates (U5MR) was notably higher among the urban poor in India compared to their rural counterparts. As is evident from the findings, the NNMR among the urban poor declined from 40.3 in 2005-06 to 29.2 in 2015-16, while the IMR and U5MR declined from 63.3 and 85.8 in 2005-06 to 37.2 and 53.8, respectively. However, even at the current pace of decline, it is not sufficient to attain the SDG targets by 2030.
- The study corroborates that there is still a substantial inter-state inequality in the level of infant and child mortality in urban India. These disparities are the consequences of lack in universal, affordable, equitable and effective health coverage and healthcare facilities across states. Besides, the inadequacy in financial resources at various levels of intervention has widened the inter- and intra-state health inequalities. Urban poor children of Uttar Pradesh, Madhya Pradesh and Chhattisgarh need more attention with regard to child survival. More than 63 per 1,000 urban poor children in these states die before reaching the age of five years. It is also noted that the prevalence of diarrhoea among the urban poor was also higher in these three states, where more than one in every ten children was reported to be suffering from it. The analysis of overall urban and urban poor indicates that Uttar Pradesh is the worst performing state in India. It is characterised by the higher prevalence of diarrhoea, acute respiratory infections, and the lowest immunisation coverage.
- It is worth noting that the usage of modern methods of contraception has doubled from 11.5 per cent in 2005-06 to 23.1 per cent in 2015-16. A similar increase is also observed in the slums of eight million-plus cities, where the use of modern methods has gone up from 17.6 per cent in 2005-06 to 28.8 per cent in 2015-16. A huge state-level disparity in the usage of modern methods was seen in urban India. Reportedly, it was highest in urban Kerala, where nearly 41 per cent of adolescents have used modern methods of family planning against 4 per cent in urban Bihar. Surprisingly, the unmet need for family planning is still high among all-urban and urban poor adolescent girls in India—about more than one in every five has this unmet need. In slums of the eight million-plus cities this study has shown a substantial increase in the unmet need for family planning and teenage pregnancies in the past decade.

8.2.2 Nutrition

The study brought out the fact that attaining SDG-2 is impossible without making progress in improving nutrition and poverty reduction.

The key findings of this section are as follows:

- It is observed that more than one in every three urban poor children had a height and weight-inappropriate age in 2015-16. In addition, one in every five urban poor children was reported to be wasting. Therefore, the significant decline in infant mortality in urban areas over the past ten years does not actually reflect the well-being of children and adolescents.
- The study indicates the coexistence of undernutrition both among children and adolescents in several Empowered Action Group (EAG) states and Gujarat, especially among the urban poor. States such as Uttar Pradesh, Madhya Pradesh, Jharkhand, Bihar, Rajasthan and Gujarat have a high clustering of micro- and macro-level undernourishment such as anaemia, stunting, wasting and being underweight in children. These indicators are positively and significantly related with early childhood feeding deprivation.
- About one in every two adolescents in urban India was found to be anaemic. The decline in the level of anaemia among adolescents living in slums is higher compared to overall urban and rural counterparts. On the contrary, anaemia levels among adolescent girls increased in the slums of eight million-plus cities in the last decade.
- Three in every five adolescent girls from poor urban households of Telangana, Jharkhand, Andhra Pradesh and West Bengal were found to be anaemic.
- Early childhood breastfeeding and complementary feeding practices are essential components of positive change in the nutritional well-being of children.

8.2.3. Water, Sanitation and Hygiene (WASH)

- Coverage of basic water has significantly increased in urban poor households. However,, a considerable share of the urban poor households is still deprived of piped water. Especially in West Bengal, Assam and Odisha the coverage of piped water among urban poor households is very low. .
- Urban poor households in Bihar, Uttar Pradesh, West Bengal and Delhi have the least access to safely managed water (SMW). Nearly less than seven per cent of urban poor households in Bihar and Uttar Pradesh have coverage of SMW against 80.9 per cent in Kerala.
- The gap in utilisation of basic sanitation between the urban poor and overall urban is high in states with a high proportion of slum population. Maharashtra, Delhi, Gujarat and West Bengal fall in this category.
- The coverage of basic handwashing practices is low in schools in urban areas. The shortage of access to hygienic practices has been argued as a severe impediment to continued school attendance, especially among girls in India. This results in high school drop-outs for adolescent girls from poor families.

8.2.4 Education

- Urban India has been able to increase the Gross Enrolment Ratio, although a considerable share of school-age children (6-17 years), especially children from economically poor households, are found to be not attending school. The share of children who are not attending schools has increased with the increase in children's age. Among several reasons for a child not attending school, the most often reported has been 'failure and lack of interest in studies', followed by 'costly education', 'engagement in work' to support households economically, or 'to look after their families while their parents are away for work'. Among these reasons, it was seen that the majority of children who have not attended school belong to economically poor households who found education costly and whose children were required to work to support their families.
- The instance of drop-out increases during transition from one stage of education to another when students need to change schools. The secondary level of education has reported the lowest transition rate with a higher incidence of drop-outs. On the other hand, over-age school attendance has been most prevalent in the states of Bihar, Uttar Pradesh, Jharkhand, Rajasthan and Assam.

8.2.5 Employment and Migration

- It is noted that, at the national level, the work participation rate has decreased for children (5-14 years), and young adolescents (15-17 years), especially among the urban poor. Nevertheless, there are more than a million urban children and young adolescents (5-17 years) still found to be economically active. Uttar

Pradesh and Gujarat have the highest share of children and young adolescents who are working.

- Although inactivity among children declined, it increased among young and older adolescents between 2011-12 and 2017-18. This seems to be a concern, indicating the exclusionary nature of the urban labour market where unskilled poor urban adolescents get limited opportunities for employment.
- It is noted that states such as Uttar Pradesh and Gujarat had higher work participation and inactivity among children and young adolescents (5-17 years). Poor educational infrastructure, a high rate of poverty, and a vast market for child labour are characteristics of Uttar Pradesh.
- Despite more than 40 per cent of the working children and young adolescents being employed as regular salaried workers, a considerable share of them are engaged in various hazardous industries. In 2017-18, 55 per cent of overall urban working children and 62 per cent urban poor working children were employed in hazardous industries. Nearly 20 per cent of urban working young adolescents were engaged in hazardous work. Also, 87.7 per cent urban children, 83.6 per cent urban young adolescents, and 77.4 per cent of older adolescents were employed in the informal sector and hazardous industries, where the working conditions are deplorable. This is particularly so in states like Uttar Pradesh, West Bengal and Gujarat where such avenues of employment need strict monitoring. Also, the fact that more than 90 per cent of older adolescents are in informal employment is a matter of concern, as they lack a decent work environment and safety nets.
- It is seen that more than 99 per cent of children (5-14 years) migrate to urban areas for non-economic reasons and, only 5 per cent adolescents (15-19 years) migrate to urban areas for work. States like Maharashtra and Gujarat receive a high share of such children and adolescents. Though the share of employment-related migration is low among children and adolescents, many, however, join work at the destination they are already living in. The work participation rate is high among migrant children in Uttar Pradesh and migrant adolescents in Delhi. The situation of seasonal migrant children and adolescents is more vulnerable as more than half of them are engaged in economic activities.
- Though the average urban child is at an advantageous position compared to his/her rural counterpart, urban areas are characterised by a high rich-poor disparity. Children from poor and migrant families report high work participation as they join the labour market at a very early age.

8.2.6. Child Protection

- Taking into account the specificities of crimes, findings from this study indicate the growing vulnerabilities of children. One obvious reason could be an increase in the reporting of the crimes which goes along with the worsening of the atmosphere in which children are brought up.
- The crime rate against children below 18 years of age has increased from 5.4 per lakh population in 2009 to 28.9 per lakh population in 2017. The crime rate for children aged below 18 years was 21 per lakh child population in 2015, which increased to 29 per lakh child population in 2017 in India. Crime rates for Delhi had the highest share (52.9%) in 2017, respectively for crimes committed against children as well as by children.
- Girls are more vulnerable to sexual assault and abduction, while boys are highly prone to kidnapping and murder.
- Crimes against children are mostly committed by acquaintances, which means partial or full awareness of interpersonal gaps and vulnerabilities attached to the victims. This situation is the outcome of the dogmatic social environment where sex education within the household is rarely imparted, and in most families it is strictly forbidden to talk about it. Therefore, the hesitation of children and juveniles in reporting sexual exploitation to parents, teachers and the police not only affects their mental, psychological and social growth but creates a vicious circle of recurrent crimes around them. Also, lack of interpersonal communication between children and parents deepens the isolating tendency, leading to suicide in many cases.
- Another facet of vulnerability is seen in poor households where the incidence of crime occurs when parents are out for work. Therefore, the socio-economic environment in which children grow up is significantly important for their well-being.
- Girls are especially subjected to various forms of discrimination, such as elimination of unborn female foetus, post-birth discrimination in the access to nutrition and education, child marriages and early motherhood, as well as domestic violence. The content analysis brought out a severe form of discrimination where an unwanted girl was subjected to infanticide by her own parents. Many such cases remain underreported in official statistics.

8.3 Policy Recommendations

This section outlines the major policy recommendations that emerge from this study. The discussion has been attempted theme-wise. However, one important policy recommendation that cuts across all sectors and emerges from this study is the need to create a granular database with an adequate representative sample. This needs to be updated on a regular basis. Programmatic interventions should be construed based on the evidence gathered from data. Also, GIS based and open data platforms should be created to guide policy. These include but are not restricted to health, nutrition, water, sanitation, employment, education and crime.

8.3.1 Health and Survival

- **Universal, affordable, and effective health facilities across states:** The inter-state disparities in the survival rate of children are the consequence of lack of universal, effective and affordable health coverage. Besides, inadequacy in financial resources at various levels of service delivery has widened the inter- and intra-health inequalities. A special focus should be given to states like Uttar Pradesh, Madhya Pradesh and Chhattisgarh, where mortality rates of urban poor children are high.
- **Requirement of holistic analysis of adolescent health:** A significant emphasis is needed to develop evidence-based knowledge on nutritional challenges faced by children and adolescents aged 6-14 years, especially those among the urban poor. Unfortunately, due to lack of data and adequate research on various aspects of health and well-being of adolescents, the assessment of vulnerabilities, and thus, the needed interventions, remain out of the policy focus.

8.3.2. Nutrition

- **Promotion of breastfeeding to reduce micro- and macro-level undernourishment:** There is a strong association between early childhood feeding (breastfeeding) deprivation and micro- and macro-level undernourishment among urban children. Therefore, the practice of exclusive breastfeeding should be promoted, especially in low-income urban households.
- **A focus on nutrition of urban poor children and adolescents:** Early childhood nutritional deprivation acts as an impediment to the cognitive and learning growth of a large section of the urban poor children and adolescents. Therefore, vulnerability mapping of urban poor children and adolescents is important in meeting the nutritional deficiencies.
- **Strengthening of Poshan Abhiyan in EAG states:** It is very evident that the EAG states need more strategic interventions for the elimination of undernutrition under the National Nutrition Mission. Poshan Abhiyan, which aims to bring down anaemia among children and adolescents, especially from the most disadvantaged and vulnerable sections of the country needs encouragement and support.

8.3.3 Water, Sanitation and Hygiene

- **Strengthening of 'Nal se Jal' programme:** The study recommends strengthening of the 'Nal se Jal' programme, especially in states where coverage of piped water is low.
- **Improved sanitation and hygiene in urban areas:** Besides poor infrastructure, several factors like proximity to open garbage-dumping grounds, lack of use of community toilets, presence of uncovered drains, practice of open defecation and low coverage of potable water increase the exposure of the urban poor towards multiple morbidities. These morbidities, at times, lead to mortalities. Along with addressing all these issues, universal access to individual toilets and garbage collection facilities, especially in the slums and small towns, are imperative.
- **Promotion of handwashing practices:** The prevailing gaps in the outreach of knowledge of safe practices, such as handwashing, and the circumstances under which handwashing should be carried out are challenges that need immediate attention, especially in light of unforseeable health crises such as the current Covid-19 pandemic, as regular handwasing with soap has been proved to be one of the key measures in containing the virus. Therefore, awareness campaigns at the community level as well as in schools must be organised on a routine basis for promoting a culture of safe and hygienic practices, for treatment of clean water, for knowledge of coping strategies against ailments borne out of the contaminated environment, and for educating adolescents and young women in menstrual hygienic methods (MHM).

- **Focus on urban peripheries:** Adequate attention must be given to extension of facilities and services to urban peripheries, where several census towns have come up. These peripheral areas are characterised by lack of adequate water and sanitation facilities.
- **Provision of urban housing:** Lack of access to proper housing facilities with inadequate coverage of water, sanitation and hygiene, coupled with acute shortage of healthcare facilities adds a multi-dimension deprivation to the urban poor. Their needs must be addressed. Provision of tenure security encourages poor households to invest in basic amenities which improve their micro-environment and impacts positively in reduction of morbidities among children.

8.3.4 Education

- **Shifting policy focus from 'universal enrolment' to 'universal attendance':** Shifting the policy focus from 'enrolment' to 'attendance' should be of utmost importance as a large share of urban poor children do not attend schools.
- **Providing quality free education till secondary level**: Both household and government investments in education are related, either substituting or complementing each other. Therefore, higher public investment may not reduce private (household) spending on education, but it will definitely encourage more people to opt for educating their children. Policy interventions that focus on the urban poor where universalisation of attendance is achieved should be the aim. This would mean extension of the RtE Act, 2009 to cover secondary and higher secondary education.
- **Establishing a robust system to track students in the schooling system:** A robust system to track students upon their entry in the schooling system will help in identifying the specific areas of intervention.
- **Strengthening of the teaching-learning process:** Strengthening this process for effective learning leading to higher transition and less repetition of class levels may increase the age-appropriate completion rate. There is a need to shift the focus from expanding the schooling system (since only 9 out of 100 children have reported supply-side constraints as a reason for not attending school in NFHS-4, 2015-16) to improving the quality in learning. It is most important to build teaching capacity for socio-emotional learning, deploy teachers as per the strength of students, and establish a transparent and robust system for teacher recruitment, and also remedial classes for needy students after regular class hours.
- **Systematic upgradation of government schools:** Systematic upgradation of the government school system with more support to poor households can be done through remedial classes and timely availability of materials required for education.
- **Improvement of quality of learning in government aided schools**: The lower level of learning achievement in government and government-aided schools questions the teaching quality in these schools and asks for immediate attention. Since state-sponsored schools are affordable to every section of society irrespective of economic status, poor students are easily able to attend these. Therefore, any learning deprivation in these schools will hamper their academic achievement as well as their future entry into the labour market. Failure and lack of interest in studies have been reported as the most prominent reasons for not attending schools despite the fees being minimal.
- **Focus on Information and Communication Technology (ICT):** There is a need to increase the access to information and communication technology (ICT) among adolescents to achieve SDG target 4.4 which aims to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment and entrepreneurship. Since education for every child is a joint effort of the school, household, and society, each of the stakeholders must contribute in this direction.

8.3.5. Employment and Migration

- **Abolition of all kinds of working/labour among children and young adolescents:** More than six million children and young adolescents are still involved in economic activities, which can be abolished with the strengthening of the National Child Labour Programme (NCLP). There should be a special focus on states like Uttar Pradesh, Madhya Pradesh and Gujarat, where the quantum of working children is very high.
- **Shifting policy focus to urban areas, especially children and young adolescents of the urban poor:** Notably, the NCLP policy is mainly focused on rural areas, with urban areas being neglected. The programmes run by ILO and UNICEF so far are also focused mainly on rural areas as child labour is considered mainly a rural phenomenon. Nearly three-fourths of urban working children come from poor households, and

this needs urgent policy intervention. Also, a special focus should be on urban poor children in Delhi, considering the notably high work participation rate here among poor children.

- **Regulation of hazardous working among children (5-14 years) and young adolescents (15-17 years):** More than half of the children engaged in economic activities are found to be employed in hazardous work. A special focus should be given to children in states like Delhi, Uttar Pradesh, Gujarat and West Bengal, where the share of children working in hazardous industries is high. The government should also frame a special policy framework for workers aged 15-17 years employed in various non-hazardous industries.
- **Mainstreaming of 'nowhere' children and young adolescents:** A considerable share of young and older adolescents, especially from urban poor households were found to be 'neither working nor studying', which indicates a need to expand the coverage of universal and free education beyond the elementary level in order to reduce inactivity among the older age group. A more inclusive approach in the education system should be introduced in Delhi, Rajasthan, Bihar, Jharkhand and Odisha, where poor children are highly deprived of their right to compulsory and free education. A special focus should be on children and adolescent girls (5-19 years), as most of them remain invisible and burdened with household work, which hampers their schooling.
- **Reduction of unemployment and inactivity among older adolescents through the strengthening of NULM:** Rising inactivity among older adolescents needs urgent policy attention. The problem has become more prominent among urban poor adolescents, indicating a class barrier in access to market-oriented skill development. States like Delhi, Tamil Nadu, Karnataka and West Bengal should be given more priority where unemployment among this age group is very high.
- **Provision of decent employment and safety nets to older adolescents:** More than 90 per cent of such workers lack job security and social security. The Social Security Bill, 2008, provides guidelines for the provision of social security coverage for workers. However, to protect these workers, a special section comprising the needs of older adolescents should be added to the existing bill.
- **Special focus on migrant children and adolescents:** Work participation among migrant children and adolescents is high, especially in states like Uttar Pradesh, Bihar and Delhi. The majority of them are in hazardous industries working under poor conditions. Besides, seasonal migrants comprise the most vulnerable section as they belong to the poorest socio-economic stratum. However, data limitation is a major challenge in locating those spatial pockets with severe seasonal migration among these groups.

8.3.6 Child Protection

- **Behaviour Change Communication (BCC) Programmes:** BCC programmes through information, education and communication (IEC) are needed not only to save children from violence against them but also to save them from becoming criminals. Proper sex education provided to young children may help in attending to their curiosity apart from equipping them to judge when they are being violated. Adequate tracking of children's behaviour is necessary to identify early signs of deviance, both as victims and perpetrators. Making them aware of their legal rights will empower them too in protecting themselves. Suggestive measures are needed for increasing social interaction among the children and parents living in urban areas, especially urban poor areas and slums, so that the dogmatic social impediments to communication can be addressed in a family. The scaling up of such programmes is needed across urban India so that the identification and reporting of crimes can be made.

8.4 Holistic Development of Urban Children and Adolescents: Way Forward

This report has tried to focus on the vulnerabilities of urban children and adolescents. It is evident that children and adolescents of urban poor households are in a more vulnerable condition. There is a persistent gap between poor and non-poor urban households in all aspects of their well-being. It is noted that children and adolescents of urban poor households face more problems than others in their age group related to poor health, nutrition and access to quality education, and that they are often forced to join work. They are also exposed to various crimes that impact their physical and mental health.

The National Family Health Survey for the first time covered 640 districts with 699,000 households in India. The empirical investigation of indicators of health and survival posited significant challenges for children living in poor economic conditions in urban areas. For example, estimation of neonatal mortality rates for the urban poor at the state level was fairly impossible due to the small sample size. Thus, it is impossible

to make an assessment of SDG-3 concerning NNMR for urban low-income families in different states in India. Similarly, investigation of vector-borne diseases, disabilities, TB and AIDS was not possible for urban poor children and adolescents, due to the small sample size of urban poor households. Adding to these limitations, the sample size for adolescent reproductive health in urban areas was also too small to conduct any state-level evaluations. However, findings from this study indicate that the use of modern contraception has increased at the state and city levels. But the degree of adoption of modern contraception among urban poor adolescents and the corresponding gap between the urban poor and non-poor cannot be determined, again due to limitation of sample size. It is worth mentioning that the analysis of the situation of children and adolescents in slum areas is possible for eight million-plus cities only. Furthermore, in India, there is an absolute absence of surveys which can capture three crucial aspects of health and survival, nutrition and WASH for all slums.

Unfortunately, the existing policy framework is unable to address these issues in a holistic manner as it is more focused on building physical infrastructure. Also, the big-city bias in resource allocation and poor financial strength of the ULBs leads to poor provision of affordable services to the urban poor households. Therefore, a series of different approaches to inclusiveness is needed for small urban areas which have lagged behind others in terms of socio-economic progress due to incompetence in the generation of matching funds. Also, an incentive mechanism should be designed for monitoring and rewarding communities and corresponding ULBs who successfully achieve national targets with regard to various SDGs before the tentative timeline of 2030.

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Annexures

A.1: Description of Indicators and Data Sources

Outcome Variable	Data Sources
Infant Mortality Rate	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Stunting	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Underweight	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Demographic Indicators	
Total Fertility Rate	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Sex Ratio at Birth	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Modern Contraceptive Use	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Socio-economic Status Indicators	
Female Age at Marriage	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Female Mean Year of Schooling	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Logarithm of NSDP	RBI, Handbook of Statistics on Indian Economy, Govt. of India (1990-91 to 2015-16)
Female Workforce Participation Rate	Population Census of India (1991-2011), NSS (64th round)
Poverty Ratio	RBI, Handbook of Statistics on Indian Economy, Govt. of India (1990-91 to 2015--16)
Net Migration Rate	Population Census of India (1991-2011), NSS (64th round)
Urbanisation	Population Census of India (1991-2011), NFHS-IV (2015-16)
Full Immunisation	NFHS-I, NFHS-II, NFHS-III, and NFHS-IV (1992-93 to 2015-16)
Programme Factors Indicator	
Public Health Expenditure	Family Welfare Statistics, 1991-2015

A.2. Descriptive Statistics of Variables Included in the Pooled Analysis

Outcome Variable	Sample	Mean	Std. Dev	Min	Max
Infant Mortality Rate	61	43.26	18.84	5.80	84.48
Child Stunting	57	34.49	7.50	18.60	50.40
Child Underweight	56	33.20	9.77	15.20	52.80
Socio-Demographic Indicators					
Sex Ratio at Birth	61	931.36	97.98	709.00	1239.00
Total Fertility Rate	61	2.16	0.53	1.43	3.58
Modern Contraceptive Use	61	49.85	9.19	29.60	68.10
Female Age at Marriage	61	19.12	1.62	16.66	23.60
Female Mean Year of Schooling	61	7.35	1.54	4.08	11.50
Logarithm of NSDP	64	9.60	1.38	6.92	12.37
Female Workforce Participation Rate	61	14.43	4.58	6.19	24.80
Poverty Ratio	61	32.29	13.75	2.40	60.00
Net Migration Rate	61	3.41	34.17	-56.00	242.00
Urbanisation	62	32.37	19.60	10.40	97.50
Full Immunisation	61	57.18	16.11	21.50	96.20
Programme Factors Indicator					
Public Health Expenditure	58	2,032.47	2521.71	41.58	12,209.00

A.3 List of Excluded Hazardous Industries

Processes could not be identified from Part A

a. Part of chemical processes (19):chromites and dichromates; phosphorous; halogen
b. Manufacturing, handling and use of benzene and substances containing benzene (28)
c. Manufacturing and processes and operations involving carbon disulphide (29)
d. Processes involving handling and processing of hazardous and toxic chemicals as per Part II of the Schedule I to the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989: partial coverage due to lack of definitional clarity (32)

Occupations which could not be identified from Part B

a. Cinder picking, clearing of an ash pit or building operation in the railway premises (2)
b. A port authority within the limits of any port (Partial) (5)
c. Work in a catering establishment at railway station, involving the movement of a vendor or any other employee of the establishment from one platform to another or into or out of a moving train (3)
d. Diving (11)
e. Circus (12)
f. Caring of Elephant (13)

Processes which could not be identified from Part B

a. Manufacture of products from a gate (9)
b. Partial coverage of no. 23
c. Manufacturing or processing and handling of corrosive and toxic substances (27): partial coverage due to lack of definitional clarity
d. Graphite powdering (41)
e. Gymnasium, recreational centres and medical facilities (52): partial coverage due to lack of definitional clarity

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National Institute of Urban Affairs

National Institute of Urban Affairs
1st Floor, Core 4B, India Habitat Centre,
Lodhi Road, New Delhi - 110003, INDIA
Phone: (+91 11) 24617517, 24617543, 24617595
Fax: (+91 11) 24617513
Website: www.niua.org