

Approaching Data Sources

A Gender Lens



Health Status

Education Status

Economic Status

Violence Against Women

Demographic,
Social and Political Status





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Neetha N. and Dimple Tresa Abraham





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LIST OF ABBREVIATIONS

AHS	Annual Health Survey
AICTE	All India Council for Technical Education
AIDIS	All India Debt and Investment Survey
AISES	All India School Education Survey
AISHE	All India Survey on Higher Education
ANC	Antenatal Care
ASER	Annual Status of Education Report
ASFR	Age Specific Fertility Rate
ASHAs	Accredited Social Health Activists
ASI	Annual Survey of Industries
ASMFR	Age Specific Marital Fertility Rate
AWI	Agricultural Wages in India
BCG	Bacille Calmette-Guérin
BMI	Body Mass Index
BSR	Basic Statistical Returns
CBLY	Children Born Last Year
CDS	Current Daily Status
CEDAW	Convention for the Elimination of All Forms of Discrimination against Women
CGHS	Central Government Health Scheme
CPF	Central Provident Fund
CPR	Contraceptive Prevalence Rate
CRS	Civil Registration System
CSO	Central Statistical Organisation
CWDS	Centre for Women's Development Studies
CWS	Current Weekly Status
DGET	Directorate General of Employment and Training

DISE	District Information System for Education
DLHS	District Level Household and Facility Survey
DPEP	District Primary Education Programme
DPT	Diphtheria Pertussis Tetanus
EAG	Empowered Action Group
EC	Election Commission
EMW	Ever Married Women
EPI	Expanded Programme of Immunization
ESIS	Employee State Insurance Scheme
EUS	Employment Unemployment Survey
FIR	First Investigation Report
GDI	Gender-related Development Index
GEI	Gender Equality Indices
GEM	Gender Empowerment Measure
GER	Gross Enrolment Ratio
GPF	General Provident Fund
HBW	Home Based Work
HDI	Human Development Index
HH	Household
HIV/AIDS	Human Immunodeficiency Virus Infection and Acquired Immune Deficiency Syndrome
HPI	Human Poverty Index
ICDS	Integrated Child Development Services
IFA	Iron Folic Acid
IIPS	International Institute for Population Sciences
ILO	International Labour Organization
IMR	Infant Mortality Rate
INB	India Nutrition Profile
IPC	Indian Penal Code
ITC	Industrial Training Centre
ITI	Industrial Training Institute
IUD	Intra Uterine Device
JSY	Janani Suraksha Yojana
KHAS	Karnataka Household Asset Survey
LFPR	Labour Force Participation Rates
MCCD	Medical Certification of Cause of Death
MCH	Mother and Child Health

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MCI	Medical Council of India
MDGs	Millennium Development Goals
MHRD	Ministry of Human Resource Development
MM	Maternal Mortality Rate
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MPCE	Monthly Per Capita Expenditure
NABARD	National Bank for Agriculture and Rural Development
NACO	National AIDS Control Organization
NAR	Net Attendance Ratio
NAS	National Achievement Survey
NCAER	National Council of Applied Economic Research
NCERT	National Council of Educational Research and Training
NCEUS	National Commission for Enterprises in the Unorganized Sector
NCO	National Classification of Occupations
NCRB	National Crimes Record Bureau
NFE	Non-formal Education
NFHS	National Family Health Survey
NGO	Non-Governmental Organization
NIC	National Industrial Classification
NNMB	National Nutrition Monitoring Bureau
NRHM	National Rural Health Mission
NSS	National Sample Survey
NSSO	National Sample Survey Organization/Office
NUEPA	National University of Educational Planning and Administration
OBC	Other Backward Class
OPD	Out Patient Department
ORGI	Office of the Registrar General, India
PAP	Proportion of Ailing Persons
PF	Provident Fund
PhD	Doctor of Philosophy
PG	Postgraduate
PPF	Public Provident Fund
PPS	Probability Proportional to Size
PS	Principal Status
PSU	Primary Sampling Unit
PWPR	Paid Work Participation Rate
RBD Act	Registration of Births and Deaths Act

RBI	Reserve Bank of India
RLE	Rural Labour Enquiries
RSBY	Rashtriya Swasthya Bima Yojana
RTE	Right to Education
RTI	Reproductive Tract Infection
SBA	Small Borrowal Account
SC	Scheduled Castes
SGSY	Swarnjayanti Gram Swarozgar Yojana
SHG	Self-Help Group
SLL	Special and Local Laws
SRB	Sex Ratio at Birth
SRS	Sample Registration System
SS	Subsidiary Status
ST	Scheduled Tribes
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infections
TB	Tuberculosis
TFR	Total Fertility Rate
TT	Tetanus Toxoid
TUS	Time Use Survey
UA	Urban Agglomerations
U5MR	Under Five Mortality Rates
UDISE	Unified District Information System for Education
UG	Undergraduate
UGC	University Grants Commission
UIP	Universal Immunization Programme
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UPR	Usual Place of Residence
UPS	Usual Principal Status
UPSS	Usual Principal and Subsidiary Status
UTs	Union Territories
VIP	Ventilated Improved Pit
WHO	World Health Organization
WPR	Work Participation Rates



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Neetha N.

Chapter

1

INTRODUCTION

1. OVERVIEW

This report is the outcome of a desk review, of various macro level data sources on women's status based on select themes. The review was carried out by the Centre for Women's Development Studies (CWDS) with support from the United Nations Population Fund (UNFPA).

The objective of this exercise is to document the availability of data on key indicators which can be used to analyse the status of women in India. It provides detailed information on key indicators and related data sources, and gives the specificities and limitations of selected sources from a gender perspective in terms of coverage, methods and concepts used. The report also identifies a set of critical indicators for which data are non-existent, inadequate or of poor quality.

Additionally, it offers guidelines and suggestions for improving the present status of statistics on women and on the possibilities of developing new data collection mechanisms and surveys. The selected themes for the study are Health Status; Educational Status; Economic Status; Violence against Women; and Demographic, Social and Political Status.

1.1. THE BACKGROUND

Ensuring gender equality has been an articulated commitment and priority of many governments since independence. The goals for gender equality have been defined, redefined and refined over time and there is now clarity on what has to be measured to check the progress made in this area. At present, there are several data sources which provide information on the diverse sets of variables that enable measurement of these goals.

Many initiatives have been taken both at the national and international level focussing on gender equality in terms of equal opportunities in accessing health and education and participation in different walks of social, economic and political life without discrimination. India has been one of the pioneering countries which ratified the Convention for the Elimination of All Forms of Discrimination against Women (CEDAW) and the Beijing Platform for Action. Affirmative policies and programmes have facilitated important changes with crucial implications for the status of women. However, it has been difficult to

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arrive at definite conclusions on the impact of these interventions towards the attainment of a gender-equitable social, economic and political order due to contradictory trends and patterns. For example, while literacy among women has increased considerably across the country, many states still continue to struggle with the challenges of adverse child sex ratio and increasing incidents of violence against women. Contributions of women to their families are still overlooked and they continue to be largely viewed as economic burdens. These patterns and trends suggest that development interventions have not been fully successful in bringing about the needed social transformations.

The first challenge faced by those who want to specifically assess and address women's status or advocate for gender-sensitive policies is the lack or inadequacy of gender specific statistics. These statistics are essential for providing a base for research and policy development. These are required to analyse the relative positions of women and men in various contexts and to understand whether and how their condition is changing; to raise awareness and provide the impetus for informed public debates; and, finally, to monitor and evaluate the efficacy of various policy interventions. Gender statistics also help to foreground issues in the areas where presently gender is not a primary concern. Furthermore, a gendered analysis of available statistics can play an important role in improving the comprehensiveness of the statistical system, by expanding its scope to hitherto unaddressed gender dimensions in social development.

Despite the fact that the importance of gender statistics is now well-acknowledged, the limited data available to study women's issues and gender dynamics is still often overlooked and remains under-analysed. The main reason for this under-utilisation is lack of knowledge about the availability of data sets, coupled with poor quality and unavailability of data on critical variables.

However, mere knowledge of the sources of data will not increase its use or utility and appropriateness for deeper analysis. For any concrete insights to emerge from the data analysis, it is important to know the underlying definitions or concepts, the methodology followed in data collection, and, more importantly, the limitations of data sets. Information on periodicity of data available reveals the temporal dimensions of issues/variables under scrutiny. Such time series data sets are also of immense help in analysing long-term trends and patterns.

It is also important to be aware of other aspects such as the sample size, the details of sampling methods used, the coverage of samples across various locations and categories (such as rural/urban, male/female) and the possibility that there may be a revision in the methodology and concepts followed in different rounds. Lack of clarity on these aspects may lead to wrong comparisons and faulty conclusions.

An overview of different data sources related to gender statistics, outlining their specificities, is therefore of utmost relevance to any effort aimed at monitoring and assessing women's status in India.

However, till now there have been few efforts to collate and disseminate such information in the public domain in a systematic manner. Such information is vital to facilitate the work of data collecting agencies, policymaking bodies, decision makers, groups and individuals striving for the advancement of gender equality. It may also facilitate further research on different aspects related to the life conditions and relative status of women in society.

It is in this context that the present study on gender statistics has been undertaken by CWDS with support from UNFPA.

1.2. OBJECTIVES

This exercise aims to provide an overview and undertake critical analysis of various macro sources of data on women through a set of gender indicators that represent various facets of women's lives.

More specifically, the objectives of the exercise are to:

- a. Identify critical themes related to gender equality and key in on the various dimensions, and indicators across these themes.
- b. Critically examine the availability of macro level statistics on measuring these indicators from different data sources, and the possibilities of disaggregate analysis; and also capture the conceptual and methodological issues and limitations of each of these data sources.
- c. Identify data gaps and inadequacies by pinpointing areas for which data are either unavailable or are of poor quality.

1.3. IDENTIFIED THEMES

Right from conception and birth, girls face discrimination because of strong parental preference for sons, and this discrimination is accentuated as they transition into adolescence. The discrimination is often visible in terms of inequalities in nutrition, access to health-care facilities, education, employment and other opportunities for development. Women also lag behind in terms of decision-making, both within the household and in the public sphere.

The first step of the desk review was to identify some central themes to construct suitable indicators which adequately capture the various facets and phases of women's lives. Existing literature on gender indicators and their measurement was reviewed from a gender perspective alongside available statistical data from various sources, such as the Census of India, National Family Health Survey (NFHS), Sample Registration System (SRS), National Sample Survey Organization (NSSO) and the National Crime Records data. This process helped gain an overview of the critical dimensions of women's status and various sources of data on women.

The information and insights gained from the above exercise were discussed subsequently in a Brainstorming Workshop of experts held on April 3, 2014. On the basis of the suggestions

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in the workshop and the insights from the literature review, the following five themes were then identified for the detailed desk review:

- ➔ Health Status
- ➔ Education Status
- ➔ Economic Status
- ➔ Violence Against Women
- ➔ Demographic, Social and Political Status

Indicators related to these themes can be assumed to broadly capture the gender gap in development by highlighting the critical areas of disparity between men and women. These indicators also highlight the specific issues and needs of women which differ from those of men.

Considering the multiple dimensions within each of the above themes, sub-themes were identified, and standard, monitorable, gender-sensitive indicators within each sub-theme were used to critically examine the availability of statistics in each area. Furthermore, since multiple layers of identity exist within a broader gender identity, an attempt was made to disaggregate the focus on these indicators in terms of region, religion, caste or class and age group.

1.4. METHODOLOGY

Assessing the status of women through indicators has been a widely used method for understanding gender discriminatory practices and their impact, and has also been applied in the present review of existing data sources. Many indicators on gender equality are standard and are based on outcomes. Within the outcome indicators, the question on which measure to select is a matter of informed choice determined by the availability of data.

The UN Human Development Report at the time of its launch in 1990 did not include any index of gender inequality. The Gender-related Development Index (GDI), and the Gender Empowerment Measure (GEM) were introduced in 1995 to include a gender-sensitive dimension in consideration of the Human Development Index (HDI). Since then, there have been a number of debates on the scope and applicability of these indices¹. Experts also argued that the GDI and GEM missed out the perspective of the South because of their orientation to the Northern perspectives of development and gender relations. To address these limitations, alternate country-specific GDIs and GEMs were developed by many countries. In India the Planning Commission² and the Ministry of Women and Child Development have recast GDI

¹It has also been argued that Gender-related Development Index (GDI) or the Gender Empowerment Measure (GEM) are not measures of gender equality per se (Schüler, 2006). The GDI is only an index that measures the overall development levels in a given country corrected by the existing gender inequalities. On the other hand, GEM is a measure of the extent to which women have access to certain levels of power of which two indicators are highly related and the third is heavily biased by income levels (Dijkstra, 2002).

²In 2002, the Planning Commission prepared the first National Human Development Report for India (National Human Development Report 2001), in which it computed the Human Development Indices (HDI), Gender Equality Indices (GEI) and Human Poverty Indices (HPI).

and GEM in the Indian context. Notably, these attempts broadly followed the UNDP approach to facilitate international comparison³.

The efforts to select or develop gender indicators to assess the status of women have to confront some inherent challenges: First, there is the challenge of attempting to reflect the many dimensions of living conditions through a limited number of objective measures. Second, for a country as large as India, steep variations in demographic, social and economic processes are inevitable in the face of the vast spatial diversity in physical, social, and economic dimensions. Data collection and analysis processes should also take into account diversities among women through disaggregation by broad age cohorts, location and socio-economic groups. Such disaggregation can counter the highly abstract and potentially misleading statistics that describe the average characteristics of an entire population and can provide more meaningful and analytically useful data.

This review uses the Individual Indicator Approach as against a Composite Index. It has often been argued that individual indicators serve as a far better method for both the identification and evolution of effective intervention strategies compared to a composite index which hides many dimensions under a number. The Individual Indicator Approach allows for consideration of a number of indicators to study a particular aspect of women's life. Further, such an approach does not set an upper limit on the number of variables used or indicators constructed while the number of indicators may need to be limited in the context of composition into indices, as a large number of indicators can make the index incomprehensible. While it needs to be accepted that only few indicators can be used for computing an index, there is a need to track other gender-based indicators as well to get a comprehensive understanding of women's status. There is also a need to constantly revise some of the usual indicators to bring in newer dimensions and complexities, which arise due to social and economic change.

The process of understanding, analysing and monitoring women's status requires the unpacking of different aspects of their lives. In the discussions on indicators, this review follows a life cycle approach as this helps in tracing inequalities at various stages of women's lives. However, we realise that women's status is a complex and dynamic process and hence many indicators, which may seem to represent a particular phase of a woman's life, may well influence other indicators which could be identified with earlier or later stages of her life cycle. For example, nutritional intake during childhood could influence maternal mortality rates; a girl's ability to perform in schools or higher education could explain labour market discriminations. Many indicators are thus linked to or are outcomes of a continuous, interlinked, entwined process. Hence, though each of these indicators may reveal specific realities at a given point of time, they are also part of a larger dynamic process. While

³The 2009 exercise followed the same three dimensions that were used by UNDP to measure GDI and GEM with one marginal change. The dimensions for GDI were (1) A Long and Healthy Life, (2) Knowledge and (3) A Decent Standard of Living; and for GEM these were (1) Political Participation and Decision-making Power, (2) Economic and Social Participation, and (3) Decision-making Power and Power over Economic Resources. Though a number of indicators were identified under each dimension, the final analysis used only a limited number of indicators. This was to maintain international comparability, manage data analysis and avoid issues of data reliability.

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accepting that there cannot be a well-defined common path, there are merits in following a life cycle approach. It helps in underlining the criticality of certain periods in women's lives and thus is an asset in leading and guiding interventions for policies as well as gender-sensitive programmes.

Any evaluation of the situation and status of women must be based upon information that reflects their particular needs and conditions as well as those that they share with the opposite sex. Thus, this report considers both attainment levels and gender gaps as they refer to different dimensions of gender inequality and biases against women. For instance, the low literacy or high mortality rate among females depicts a poor achievement status whereas the gap between men and women in literacy levels or mortality rates signifies gender-based discrimination in society.

Yet another discussion in the context of indicators is with regard to their classification into input and output (outcome) indicators (Rajivan, 1998). For example, under-five mortality rates (U5MR) of girls could be seen as outcome indicator of the survival of girls, while immunisation or nutritional gaps among boys and girls could be viewed as input indicators. However, the relationship between the input and outcome indicators is complex and given the varied ways that each of these interact with other social, cultural and economic variables such a classification of indicators sometimes becomes meaningless. Therefore, no such distinctions are made in the framework of indicators that is used in this report.

The review analyses the status of data availability for identified indicators against the following criteria: periodicity of data availability, conceptual and methodological dimensions, quality of data in terms of reliability, and possibilities of disaggregate analysis across age and socio-economic groups in each of the data sources identified. A discussion against these criteria, for all the indicators under a sub-theme is followed by a review of the gaps and limitations of existing data sources from a gender perspective. This section also provides suggestions for improving some of the existing data sources and developing new ones.

1.5. FRAMEWORK OF THE REPORT

The five themes that are taken up in the study to review existing data sources are Health; Education; Economic Status; Violence against Women; and Demographic, Social and Political Status. Each theme is further subdivided into sub-themes for review. Within each sub-theme, specific indicators are identified for further discussion. The various themes, sub-themes and the related indicators are listed in Table 1.1.

Table 1.1: SELECTED INDICATORS ACROSS SUB-THEMES

Theme	Sub-Theme	Indicators
1. Health Status	<i>Survival of Girls</i> [Sec 2.1]	<ul style="list-style-type: none"> • Infant Mortality Rate (IMR) [Sec 2.1.1] • Under Five Mortality Rate (U5MR) [Sec 2.1.2] • Immunization Immunisation Gap [Sec 2.1.3] • Nutrition Gap [Sec 2.1.4]
	<i>Maternal Health</i> [Sec 2.2]	<ul style="list-style-type: none"> • Maternal Mortality Ratio (MMR) [Sec 2.2.1] • Age-Specific Fertility Rate (ASFR) [Sec 2.2.2] • Total Fertility Rate (TFR) [Sec 2.2.3] • Maternal Morbidity Rate [Sec 2.2.4] • Maternal Care Indicators: Antenatal and Postnatal Care [Sec 2.2.5] • Proportion of Institutional Deliveries [Sec 2.2.6] • Access to Support/Beneficiary Schemes for Deliveries [Sec 2.2.7]
	<i>Sexual and Reproductive Health</i> [Sec 2.3]	<ul style="list-style-type: none"> • Prevalence of Early Pregnancy and Motherhood [Sec 2.3.1] • Contraceptive Prevalence Rate [Sec 2.3.2] • Prevalence of Sexual and Reproductive Health Problems [Sec 2.3.3]
	<i>Women's General Health</i> [Sec 2.4]	<ul style="list-style-type: none"> • Age Specific Mortality Rates [Sec 2.4.1] • Morbidity Rates of Women [Sec 2.4.2] • Women Affected with Life Threatening Diseases (TB, Cancer and HIV) [Sec 2.4.3] • Proportion of Women Seeking and Receiving Health care [Sec 2.4.4] • Gender Gap in Hospitalisation [Sec. 2.4.5] • Gender Gap in Out-of-pocket Healthcare Expenditure [Sec 2.4.6] • Reasons for Death among Women [Sec 2.4.7] • Prevalence of Surrogacy [Sec 2.4.8] • Access to Healthy Living Facilities [Sec 2.4.9]
	<i>Women's Access to Healthy Living Facilities</i> [Sec. 2.5]	<ul style="list-style-type: none"> • Proportion Using Traditional Cooking and Lighting Methods [Sec. 2.5.1] • Availability, Time and Distance Travelled for Drinking Water [Sec. 2.5.2] • Proportion of Women Having Access to Toilets [Sec. 2.5.3]
	<i>Women with Distinct Needs and Vulnerabilities</i> [Sec. 2.6]	<ul style="list-style-type: none"> • Proportion of Disabled Women and Distribution across Nature of Disability [Sec. 2.6.1] • Disabled Women Covered by State Welfare Schemes or Provisions [Sec. 2.6.2] • Proportion of Women with Mental Health Issues [Sec. 2.6.3] • Proportion of Women with Mental Health Issues Seeking and Accessing Health care [Sec 2.6.4]
2. Education Status	<i>Gender Gaps and Biases in Schooling</i> [Sec 3.1]	<ul style="list-style-type: none"> • Literacy Rates [Sec 3.1.1] • Adult Literacy Rate [Sec 3.1.2] • Gross Enrolment Ratio [Sec 3.1.3] • Net Attendance Ratios [Sec 3.1.4] • Dropout Rates at Primary Level [Sec 3.1.5] • Primary Completion Rate [Sec 3.1.6] • Dropout rates at Secondary Level [Sec 3.1.7] • Completion Rates of Secondary Education [Sec 3.1.8]
	<i>Enabling Factors</i> [Sec 3.2]	<ul style="list-style-type: none"> • Availability of Separate Toilets for Girls [Sec 3.2.1] • Usability of Girls' Toilets [Sec 3.2.2] • Distance Travelled to Schools [Sec 3.2.3] • Proportion of Female Teachers [Sec 3.2.4]

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Theme	Sub-Theme	Indicators
	<i>Gender Gaps and Biases in Higher Education [Sec 3.3]</i>	<ul style="list-style-type: none"> • Level of Higher Education Completed [Sec 3.3.1] • Participation in General Stream of Higher Education [Sec 3.3.2] • Participation in Technical and Professional Courses [Sec 3.3.3] • Participation in Vocational Education [Sec 3.3.4]
3. Economic Status	<i>Economic Opportunities [Sec 4.1]</i>	<ul style="list-style-type: none"> • Labour Force Participation Rates (LFPR) [Sec 4.1.1] • Gender Gap in Work Participation Rates (WPR) [Sec 4.1.2] • Women in Unpaid Economic Work or Paid Work Participation Rate (PWPR) [Sec 4.1.3] • Proportion of Women Workers with Higher Education/Skill Levels [Sec 4.1.4] • Proportion of Migrant Women in Employment [Sec 4.1.5] • Short-term/Temporary Migration among Women [Sec 4.1.6] • Gender Gap in Sharing Domestic Work Burden [Sec 4.1.7]
	<i>Quality of Work [Sec 4.2]</i>	<ul style="list-style-type: none"> • Informality Ratio (Women in Informal Employment) [Sec 4.2.1] • Proportion of Women in Home-based Work [Sec 4.2.2] • Share of Women in Feminine Jobs [Sec 4.2.3] • Gender Wage Gap [Sec 4.2.4] • Distance Travelled to Workplace [Sec 4.2.5]
	<i>Support Services at Workplaces and Access to Social Security Schemes [Sec 4.3]</i>	<ul style="list-style-type: none"> • Proportion of Women Having Access to Long-term Employment and Paid Leave [Sec 4.3.1] • Percentage of Women with Crèche Facilities at Workplaces [Sec 4.3.2] • Percentage of Women with Social Security Benefits [Sec 4.3.3]
	<i>Financial and other Forms of Economic Independence [Sec 4.4]</i>	<ul style="list-style-type: none"> • Proportion of Women having Access to Bank Accounts [Sec 4.4.1] • Control over Own Income [Sec 4.4.2] • Control over Consumption Expenditure [Sec 4.4.3] • Proportion of Women Having Freedom to support Natal Family [Sec 4.4.4] • Ownership of Land/Agricultural and by Women [Sec 4.4.5] • Access to Property other than Land (House/Dwelling)[Sec 4.4.6]
4. Violence against Women	<i>Crimes against Women [Sec 5.1]</i>	<ul style="list-style-type: none"> • Rate of Crimes against Women [Sec 5.1.1] • Nature of Crimes against Women [Sec 5.1.2] • Conviction Rates of Crime against Women [Sec 5.1.3] • Crimes in the name of 'Honour' [Sec 5.1.4] • Complaint Rates of Crime against Women [Sec 5.1.5] • Incidence of Crimes in the name of 'Honour' [Sec 5.1.6]
	<i>Domestic Violence [Sec 5.2]</i>	<ul style="list-style-type: none"> • Rate of Domestic Violence against Women [Sec 5.2.1] • Nature of Domestic Violence [Sec 5.2.2] • Perpetrators of Domestic Violence [Sec 5.2.3] • Proportion of Women with Alcoholic Partners [Sec 5.2.4] • Sharing and Assistance Rates [Sec 5.2.5]
5. Critical Demographic, Social and Political Status	<i>Male Bias [Sec 6.1]</i>	<ul style="list-style-type: none"> • Sex Ratio at Birth [Sec 6.1.1] • Child Sex Ratio [Sec 6.1.2] • Male Child Preference [Sec 6.1.3] • Adolescent Sex Ratio [Sec 6.1.4]

Theme	Sub-Theme	Indicators
	<i>Vulnerable Women</i> [Sec 6.2]	<ul style="list-style-type: none"> • Proportion of Women in Houseless Households [Sec 6.2.1] • Proportion of Women in Old-age and Destitute Institutions [Sec 6.2.2] • Proportion of Women in Prisons [Sec 6.2.3] • Proportion of Women among Displaced Migrants [6.2.4] • Number of Women Trafficked [Sec 6.2.5]
	<i>Women with Special Needs</i> [Sec 6.3]	<ul style="list-style-type: none"> • Proportion of Female-Headed Households [Sec 6.3.1] • Percentage of Elderly Women Living Alone [Sec 6.3.2] • Proportion of Women Availing any Welfare Scheme [Sec 6.3.3]
	<i>Institution of Marriage and Family</i> [Sec 6.4]	<ul style="list-style-type: none"> • Percentage of Women Married below the Legal Age of Marriage [Sec 6.4.1] • Age at Co-habitation [Sec 6.4.2] • Percentage of Divorced Women [Sec 6.4.3] • Proportion of Remarried Women to Total Married Women [Sec 6.4.4] • Proportion of Polygamous Marriages [Sec 6.4.5] • Proportion of Divorced/Separated or Widowed Women Married [Sec 6.4.6] • Proportion of Women Having Access to Modern Family Planning [Sec 6.4.7] • Proportion of Women Having Freedom to Visit Natal Family and Public Places [Sec 6.4.8]
	<i>Participation in Political and Collective Space</i> [Sec 6.5]	<ul style="list-style-type: none"> • Participation in Women's Collective Institutions [Sec 6.5.1] • Proportion of Women in Total Voter Turnout [Sec 6.5.2] • Participation as Candidates and Elected Representatives [Sec 6.5.3]

Note: Section numbers, which cover individual sub-themes and indicators, are included in brackets.

The report is organized into seven chapters, including the introduction. Individual themes are taken up in five chapters in the order of the themes listed in Table 1.1. The last chapter summarises the status of existing data sources across selected themes and highlights the possibilities for improving data collection and analysis. Some critical dimensions of women's status for which there is an apparent gap data are also identified, along with suggestions for developing newer sources of data.

1.6. CAVEATS

Generating indicators to cover various phases of women's lives is not an easy task given the complexity of our social and economic situation. Thus, the range of possible gender equality related indicators are numerous. The list presented in the report is based on a review of existing literature and the suggestions from experts. However, this is not a definitive or all-encompassing list – and we accept the possibility of new and innovative indicators being developed.

The feasibility of calculating or measuring some of the indicators quantitatively is limited by the availability of data. The discussions in the report are restricted to macro-level official data sources⁴; and data collected by different ministries and departments are not covered

⁴Annual Status of Education Report (ASER) is the only non-official source which is discussed in the report as the data is collected regularly and is the only source of alternate data on schooling.

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unless these are regularly published. Also, this review does not cover data from individual agencies/organisations.

Not every aspect of women's lives can be captured purely in quantitative terms. Some experiences are better captured qualitatively and are not amenable to quantification. However, since this report is looking at data sources and indicators where measurement is the key, qualitative variables are beyond the scope of this review.

Chapter 2

HEALTH STATUS OF WOMEN

In India, advancement or improvement in health status in general has been slow over the last many decades, even during periods of high economic growth. Gender differentials mark this poor overall status, as is clearly evident from the high maternal mortality rates which are much above that of countries in the South and East Asian region with similar income levels and rates of economic growth (Baru et al., 2010).

There are regional, class and caste dimensions of inequality in the health status of women. In the past two decades, there have been some quality shifts in the state policy regarding public health with far-reaching implications for the health of women in particular. The fact that structural changes can create newer dimensions of gender-based inequality may demand going beyond standard indicators or looking at a composite set of indicators.

Under the theme of Health, five sub-themes have been identified:

- Survival of Girls
- Maternal Health
- Sexual and Reproductive Health
- Women's General Health
- Women with Distinct Needs and Vulnerabilities

The review of each of the indicators under these sub-themes pays due attention to definitions, methodology of data collection and estimation procedure. The review begins with a discussion of the different data sources that are relevant to the health status of women.

DATA SOURCES

In India, vital statistics, such as fertility and mortality, are collected through four major sources: at the national level by the Sample Registration System (SRS); the Civil Registration System (CRS) operated by the state governments; estimates from the decennial census; and estimates from National Family Health Survey (NFHS). The first three sources are operated by the Office of the Registrar General of India (ORGI) under the Ministry of Home Affairs, while NFHS is coordinated by the International Institute for Population Sciences (IIPS) under the aegis of the Ministry of Health and Family Welfare (MOHFW).

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Additionally, data on health care and utilisation indicators are also collected at the district level by the District Level Household and Facility Survey (DLHS) by MOHFW with IIPS as the nodal agency. The Annual Health Survey (AHS) was a relatively recent initiative undertaken by ORGI to collect data on core vital and health indicators at the district level in the Empowered Action Group (EAG) states and Assam for a period of three years beginning in 2010–11¹.

A brief comparison of these sources is illustrated in Appendix Table 1.2.

The Sample Registration System was initiated by ORGI in 1964/65 on a pilot basis (and on full scale from 1969/70), to generate reliable and continuous data on births and deaths. The SRS since then has been providing annual data as a three year moving average on a regular basis. The data are collected through surveys conducted at individual and household (and village) levels. The field investigation under SRS consists of continuous enumeration of births and deaths in a sample of villages/urban blocks by a resident part-time enumerator, and an independent six monthly retrospective survey by a full-time supervisor. The data obtained through these two sources are matched. The unmatched and partially matched events are re-verified in the field to get an unduplicated count of correct events. Sampling units are retained for about ten years, making it a panel household survey. The sampling unit in rural areas is a village or a segment of it (if the population is 2000 or more). In urban areas, the sampling unit is a census enumeration block with population ranging from 750 to 1,000. The SRS sample² is replaced every ten years based on the latest census frame.

The Civil Registration System, popularly known as the birth and death registration system, is the recording of vital events, i.e., live births, still births, and deaths under the statutory provisions (RBD Act, 1969) on a continuous, systematic and permanent basis. It is not based on any sample as it captures registration of all births and deaths. The data are managed by the ORGI, and various state-level bodies (Department of Public Health, Statistics, etc.)

CRS gives data on registered births, deaths and infant deaths based on civil registration records. It makes the data available at the district or taluk level, disaggregated by sex and region (rural/urban). Most of the states send the annual information on births and deaths to ORGI.

The National Family Health Survey has completed four survey rounds till now: NFHS-1 (1992/93), NFHS-2 (1998/99), NFHS-3 (2005/06) and NFHS-4 (2015/16) covering all existing states at the time of the survey. In NFHS-1, interviews were conducted with a nationally representative sample of 88,562 households and 89,777 ever-married women in the age group 13–49 years, from 24 states and the then National Capital Territory of Delhi using a uniform questionnaire, sample design and field procedures. In the second survey, NFHS-2, interviews were conducted with a representative sample of around 91,000

¹EAG states: Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh, Uttarakhand

²SRS is operational in 7,597 sample units (4,433 rural and 3,164 urban) spread across all states and Union Territories and covers about 1.5 million households and 7.44 million population.

ever-married women aged 15–49 years from 26 states. NFHS-3 interviewed women aged 15–49 years (not just the married ones as was the case in NFHS-1 and 2).³ Till NFHS-3, data was available at state level (with rural/urban differentials). NFHS-4 (2015/16), which was conducted after a gap of ten years, interviewed a total of 699,686 women, and 103,525 men across all states. Data is published at state level (with rural/urban differentials) and raw data of all rounds are available for further analysis and research. In addition to the 29 states, NFHS-4 also included all six union territories for the first time and also provides estimates of most indicators at the district level.

The **District Level Household and Facility Survey** was initiated for the assessment of district level reproductive and child health (RCH) indicators, and to get a perception of quality of health services by the Government of India. Four rounds of survey have been carried out: 1998/99 (DLHS-1), 2002/04 (DLHS-2), 2007/08 (DLHS-3) and 2011/12 (DLHS-4). The first round of the survey was conducted in 1998 in 252 districts from 25 states and five union territories (excluding Dadra and Nagar Haveli and Lakshadweep Islands). The second phase of the first round was conducted in 1999 in all the remaining 255 districts from 25 states and five union territories (excluding Delhi and Chandigarh). There were 593 districts during the 2001 Census which were covered in the second round. DLHS-3 covered 601 districts in 28 states and six union territories of India using the census sampling frame. Unlike the other two rounds in which currently married women aged 15–44 years were interviewed, DLHS-3 interviewed ever-married women (EMW) (aged 15–49 years) and unmarried women (aged 15–24 years). DLHS-4 (2011/12) did not include the EAG states and Assam (since they were covered in the AHS). The reference periods for DLHS 2, 3 and 4 are periods after the previous survey until the current survey date. The number of households covered in each round of the survey varies. Data are published at the state level (with rural/urban differentials) and raw data are available for further analysis and research.

The **Annual Health Survey** was conceived during a meeting of the National Commission of Population held in 2005 where it was decided that “there should be an Annual Health Survey of all districts which could be published/monitored and compared against benchmarks”. The objective was to monitor the performance and outcome of various health interventions of the Government, including those under the National Rural Health Mission (NRHM), at closer intervals through these benchmark indicators⁴. The AHS has been implemented by ORGI in all the 284 districts (as per the 2001 Census) of the selected states. It is stated to be the largest demographic survey in the world and is two-and-half times larger than the SRS. AHS has completed three rounds including a base line survey till now. The base line survey was conducted in 2010/11, the first updation round in 2011/12 and second in 2012/13. Four schedules were administered in all the rounds: (i) House-listing Schedule, (ii) Household Schedule, (iii) Woman Schedule, and (iv) Mortality Schedule.⁵

³In the individual survey apart from women it also covered men in 15–54 years age categories.

⁴AHS Factsheets

⁵AHS also provides the confidence interval for some of the indicators like IMR and U5MR across all districts and for the state as a whole.

Table A1: AN OVERVIEW OF SOURCES OF HEALTH STATISTICS IN INDIA AND THEIR USABILITY

Source	Periodicity	Major Estimated Parameters	Area/ Availability	Usability
SRS	Annual: Since 1970, Data presented as a three year moving average	Fertility (ASFR, TFR) and mortality indicators (Of the 8 MDGs: IMR, U5MR, and MMR, also ASMR); proportion of institutional deliveries	India and State level estimates for bigger states.	Representative sample; regular availability and reliable source of fertility and mortality statistics
Census	Ten years: Since 1881	Population count by age, sex, and area. Child mortality, fertility; population with mental and physical disabilities	Population counts: Down to village level. Mortality: District level	Population data, reliable and valid, available for analysis within about two years of data collection. Fertility and indirect mortality estimates have about eight years time lag. Comparable data on many indicators available later (for some since 1981)
CRS	Annual: Since 1958	Fertility and Mortality Indicators (IMR, ASMR); proportion of institutional deliveries, distribution across reasons of death	District level and large cities with more than 1,00,000 population	Less than 50% of deaths are registered; wide interstate variation; average time to publication is about 45 months until 1994 after which regular reports were missing for some years. Now regular and available from ORGI from 2009
NSSO	Eight years (though periodicity not fixed): Since 1986 42 nd (1986/87) 52 nd (1995/96) and 60 th (Jan–June 2004) 71 st (Jan–June 2014)	Immunisation gap, morbidity, hospitalisation gap, women with mental and physical disabilities	State level estimates; also for all UTs	Representative sample; though not conducted at shorter and regular intervals as the EUS surveys, health aspects are covered in detail and regularly as part of NSSO's social consumption survey (35 th round) but comparable data from 42 nd round
NFHS	5–6 years*: Since 1992 NFHS-1 (1992/93), NFHS-2 (1998/99), NFHS-3 (2005/06) NFHS-4 (2015/16)	Mortality (IMR, U5MR, MMR) Fertility (ASFR, TFR), Immunisation, maternal care indicators, institutional deliveries, access to toilets, modern fuel use, early child bearing, contraceptive prevalence rates, etc.	State level estimates. Sample size is large but not enough for district level estimates. NFHS-2 gave estimates additionally for three metro cities of Chennai, Kolkata, and Mumbai and separately for slum areas of Mumbai. In NFHS-3 & 4 gave estimates of indicators for slum and non-slum population for 8 cities.	Sample only had women of ages 13–49 and 15–49 years (ever-married) in NFHS-1 & 2. The third and fourth rounds also give estimates for more than 50 key indicators on health, family welfare, and nutrition. Quick estimates are available within a year of the survey. IMR and fertility indicators, cross tabulated by socio-economic variables.

Source	Periodicity	Major Estimated Parameters	Area/ Availability	Usability
DLHS	4–5 years: Since 1998/99	Maternal morbidity, immunisation gap, contraceptive prevalence rates, proportion of institutional deliveries, access to toilets, modern fuel use, etc.	District level estimates; 611 districts in DLHS-3	DLHS-2 (2002/04) and 3 (2007/08) have more comparable data. First two rounds were part of reproductive and child health project. Some aspects like reproductive morbidity covered in detail only in the 3 rd round.
AHS	Annually: Since 2010/11 (has been discontinued since 2014, in line with MOHFW's plan to converge NFHS, DLHS, and AHS into a comprehensive survey)	161 indicators are available; some of the critical indicators are fertility, mortality and morbidity, antenatal and postnatal care indicators, access to support, immunisation, early child bearing, contraceptive prevalence rates, proportion with disability, etc.	284 districts in 8 States (Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan) and Assam. District level rural/urban estimates possible.	2010/11 baseline survey, first updation round in 2011/12, second in 2012/13 gave comparable data.
<p>(a) SRS: Sample Registration System, operated by the Registrar General, India (RGI); (b) Census: Population Census from the Office of RGI; (c) CRS: Civil Registration System, operated by local bodies, managed by state governments, tabulation, publication and national coordination by the RGI; (e) NFHS: National Family Health Survey and (f) District Level Household and Facility Survey by the International Institute of Population Sciences, Mumbai; (g) AHS: Annual Health Survey from the Office of RGI.</p> <p>(b) The above Table has been modified from P. Mahapatra (2010), An Overview of the SRS in India, paper presented at the Prince Mahidol Award Conference & Global Health Information Forum 2010.</p>				

2.1. SURVIVAL OF GIRLS

2.1.1. INDICATOR 1: INFANT MORTALITY RATE

The infant mortality rate is usually understood as the number of infant deaths during the year per 1,000 live births. IMR comprises two parts: Neonatal mortality rate (number of deaths of infants at age less than 28 days, for every 1000 live births in a given year) and post-neonatal mortality rate (number of deaths of infants at ages between 28 days to 1 year, for every 1000 live births in a given year).

The macro data sets that give information on IMR are SRS, CRS, NFHS and AHS.

SRS provides us annual data on infant mortality rate for every calendar year⁶ and for all states. IMR is also estimated by gender and rural/urban areas for bigger states (population of 10 million and above). But regular gender-disaggregated data are available only from 1989 onwards.

CRS data on births are available from 1958, but states have not been regular with their reporting. Gender-disaggregated data on a regular annual basis on IMR are available from CRS only since 2000.

NFHS records the IMR for the five-year period (0–4 years) preceding the survey in rural and urban areas across all states surveyed. It also covers background characteristics like education of mother (no education, <5 years complete, 5–7 years, 8–9 years, 10–11 years, and 12 or more years complete), religion (Hindu, Muslim, Christian, Sikh, Buddhist, other), caste/tribe (SC, ST, OBC, others), wealth index (lowest, second, middle, fourth, highest). Furthermore, data on IMR is also given by selected demographic characteristics like sex of the child, mothers' age at birth (<20, 20–29, 30–39, 40–49 years), birth order (1, 2, 3, 4, 5, 6, 7+), and birth interval (<24 months, 24–47 months and above 48 months), etc.

The **AHS** gives the infant mortality rate and various related mortality rates (neonatal and post-neonatal) across all districts surveyed in the eight EAG states and Assam, for both male and female children.

2.1.2. INDICATOR 3: UNDER-FIVE MORTALITY RATE

U5MR denotes number of children (0–4 years) who died before reaching their fifth birthday per 1,000 live births. U5MR is an important indicator (along with infant mortality rate) for improving child health under goal-4 of the Millennium Development Goals (MDGs), and goal-3 of the recently adopted Sustainable Development Goals (SDGs). The U5MR is influenced by high female infant mortality rates and the general neglect of girls relative to boys, in terms of their diet and their access to, and utilisation of, health care facilities. The SRS, NFHS and AHS are the major sources of U5MR data.

⁶The national figures exclude Jammu & Kashmir from 1991 to 1997.

The **SRS** provides U5MR by sex and residence for all of India, as well as individually for the bigger states. It gives estimates of child mortality rates since 1971, but clear age specific mortality rates (0–4 age group) are available only since 1998 and as U5MR in later SRS reports (since 2008). Gender segregated data are available for all years.

All three rounds of the **NFHS** record the U5MR for the five-year period (0–4 years) preceding the survey. The NFHS records U5MR for both rural and urban areas across all the states surveyed according to background characteristics.

The **AHS** gives U5MR across all districts surveyed in rural and urban areas in the eight EAG states and Assam disaggregated by sex. It also gives the confidence interval (95 per cent) for U5MR for all states and for each of the districts.

2.1.3. INDICATOR 2: IMMUNISATION GAP

Immunisation Gap refers to the difference between immunisation rates between males and females, with immunisation rate defined as the number of children immunised per 1,000 children of age 0–4 years. There are many micro level studies which establish the existence of a considerable immunisation gap in India, due to the general neglect of girl children (Borooah, 2004; Kishore, 2007). It is possible to work out the immunisation gap from secondary data sources like NSSO, NFHS and AHS.

The **National Sample Survey** considers a child to have received immunisation if she/he has received any one of these vaccinations: Bacille Calmette–Guérin (BCG), measles, diphtheria pertussis tetanus (DPT) (any of the three doses), polio (excluding polio 0 which is given at the time of birth), hepatitis vaccine (A or B), MMR, pneumovax (for pneumonia) and oral typhoid.

In the first NSSO all-India Survey on Social Consumption in 1980/81, information on immunisation was also collected. However, the results of the survey were not brought out owing to some issues with the data. NSSO collected information related to immunisation in its 60th (2004/05) round on morbidity and health care. NSSO has recorded the number of children per 1,000 children (0–4 years) receiving any type of immunisation in the last 365 days, and average expenditure incurred by sex for each monthly per-capita expenditure (MPCE)/expenditure class (a proxy for economic status) and social group in rural and urban areas of all major states surveyed. Since raw data are available, it is possible to do a disaggregate analysis across a number of household characteristics.

As per **NFHS**, children who have received one dose each of the BCG and measles vaccines and three doses each of the DPT and polio vaccines are considered fully vaccinated or immunised. The NFHS records the percentage of children aged between 12 to 23 months who have been vaccinated at the time of the survey (according to the vaccination card or as reported by the mother). The reports publish limited disaggregation across socio-economic characteristics but analysis across a number of background characteristics and mother's

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personal information is possible as the raw data are available for analysis. The NFHS also gives trends in vaccination in both rural and urban areas.

The **AHS** gives district-wise immunisation information separately for children receiving polio dose at birth (per cent), children aged 12–23 months who have received three doses of DPT vaccine (per cent), measles vaccine (per cent) and those fully immunised (per cent). Fully immunised children (referred as full vaccination) are those children who received complete vaccination (BCG + three doses of polio + three injections of DPT + measles). The data are collected through the woman schedule which is administered to all EMW aged 15–49 years. Though, it collects background information, related data are not available in the public domain.

DLHS provides statistics on immunisation of children between 12 to 23 months: per cent children who received a) complete vaccination (BCG + three doses of polio + three injections of DPT + measles); b) no vaccination; c) only BCG vaccine; only d) three doses of DPT vaccine; e) only three doses of polio vaccine; f) only measles vaccine; and g) children (age nine months and above) who received at least one dose of vitamin A supplement. Background information of children vaccinated in DLHS-1 and 2 rounds covered residence (rural/urban); caste (SC/ST/other); mother's education; type of house (kachcha, semi pucca, pucca); and sex of child. DLHS-3 also included birth order, religion (Hindu, Muslim, Christian, Sikh, Buddhist, Jain and wealth index and OBC was added to the caste listing. However, DLHS does not provide data on immunisation disaggregated by sex.

2.1.4. INDICATOR 4: NUTRITION GAP

The nutrition gap between boys and girls can be ascertained through nutrition assessment surveys using the three standard indices of physical growth for assessing the nutritional status of children: height-for-age (stunting), weight-for-height (wasting), and weight-for-age (under-weight). A gap in these between girls and boys may indicate a nutrition gap due to differences in intake of key food ingredients like cereals, proteins, micronutrients, etc. The major sources of data on nutrition are NFHS, the National Nutrition Monitoring Bureau (NNMB) and DLHS.

In **NEHS**-1 and 2, anthropometric measurements were restricted to children born to women interviewed and so did not represent all children. To overcome the problem, NFHS-3 and 4 included height and weight measurements for all children born in the five years preceding the survey who were listed in the Household Questionnaire. NFHS-3 and 4 report the percentage of children (for India and individually for the states) under five years classified as malnourished according to three anthropometric indices of nutritional status: stunting, wasting and underweight, by background characteristics of the mother, sex of the child, birth interval in months, size at birth, mother's nutritional status and child's living arrangement. Each of the three nutritional status indicators is expressed in standard deviation units (Z-scores) from the median of the reference population.

The **NNMB** and the **India Nutrition Profile** (INB) make available nutrition data based on household surveys disaggregated by region/states. NNMB was set up by the Indian Council of Medical Research in 1972 in ten Indian states. Data on time trends in dietary intake in rural areas and urban slums in nine states are available from NNMB surveys. For rural areas data are available for 1975/79, 1988/90, 1996/97, 2000/01, 2004/05 and for urban areas for 1975/79 and 1993/94. NNMB adopted its own sampling procedure till 1990 but took a sub-sample of the NSS sample in the later rounds to obtain better spatial distribution and representativeness.

NNMB surveys provide data on time trends in dietary intake (by 24-hour recall) and the nutrition status of the population in major states. It also generates data periodically on the diet and nutritional status of socially vulnerable groups like tribals and population at-risk physiologically, such as the elderly and adolescents, in collaboration with various agencies. An attempt was made by the Department of Women and Child Development of the Ministry of Human Resources Development⁷ to bring out somewhat comparable data for 1995/96 for the states not covered by the NNMB. In fact, INB provides data on nutrient intake in all non-NNMB states of the country in urban and rural areas. Since both these surveys collect data for every individual in a household and age and sex are recorded, gender bias can be easily captured.

DLHS covered data on nutritional status in the second round, when it tested the blood of children (ages below 72 months), adolescents and pregnant women to check the level of anaemia and measured the weight of children. The report (2004/06), 'Nutritional Status of Children and Prevalence of Anaemia among Children, Adolescents Girls and Pregnant Women in India' gave district level age-wise gender-disaggregated information on under-nutrition. DLHS-2 also provided data on prevalence of under-nutrition (WHO [2006] ≤ 2 SD Weight for Age) in relation to standard of living (wealth quintiles). Other subsequent rounds of the DLHS did not capture information on nutritional status.

The **AHS** in 2014 introduced a supplementary component – Clinical, Anthropometric and Bio-chemical (CAB) survey to collect data on nutritional status, life style diseases like diabetes and hypertension and anaemia in the EAG states and Assam. This component was administered on a sub-sample of AHS. For assessing nutritional status, the survey collected information on wasting (below 2 SD and 3 SD), stunting (below 2 SD and 3 SD), underweight status (below 2 SD and 3 SD) and information on the Body Mass Index (BMI) for age, among girls and boys, women and men.

2.1.5. DATA SOURCES ON SURVIVAL OF GIRL CHILD: LIMITATIONS AND COMMENTS

The most reliable annual data source on infant mortality and child mortality (U5MR) is the sample registration system, even though it covers less than one per cent of India's population. Its representative character and consistency in definitions of terms and data

⁷Women and Child Development became a separate Ministry in 2006.

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collection methods allows for estimation of vital statistics for the country and major states and enables comparability over time.

However, sex-wise age specific mortality rates (0–4 age group) are available only from 1998 and for U5MR from 2008. Completeness of registration of events has however not been sound with interstate variations and there is not much information on the missing data. Given the social context of gender-based differentiation, there should be information on the number of births for which sex disaggregation is not available. Missing data on sex information is most likely an outcome of gender bias as many may not report the birth or, for that matter, death of girls.

Further, as in the case of all SRS-based statistics, information is not available across social groups or economic categories, both of which are important variables in the analysis as well as formulations of policy intervention.

Many studies have observed that death of the child during the first few months of birth could be due to many factors other than gender. But infant/child deaths during higher age cohorts, or that below five years, are determined by a host of exogenous socio-economic or behavioural factors, which are not captured in the SRS data. This is compounded by the fact that the raw data are unavailable, which limits any level of possible disaggregation.

SRS gives estimates on age-specific death rates by sex only for large states (with population exceeding ten million). Another major limitation of the SRS is that the sample design permits estimates only at the state level and disaggregation to lower levels is not possible though the administrative district is recognised as a planning unit in the country. SRS cannot provide small area statistics at the district and sub-district level as the sample frame and small sample size do not allow for such calculations.

The IMR figures from CRS are dependent on the level of registration and hence have a lower value in comparison to SRS or NFHS figures. Levels of registration vary from state to state and are particularly low in states like Uttar Pradesh and Bihar. There are, however, 18 states/union territories (UTs) where the coverage of birth registration is more than 95 per cent and 11 states/UTs where the coverage of death registration is more than 90 per cent. As registration is based on reporting, given the social situation there is a higher probability of underreporting of a girl's birth which needs to be addressed for improved sex disaggregated reporting. Thus overall, given the incomplete coverage of the registration system, it is not an appropriate data source for statistical purposes at the national level.

Underestimations of deaths are noted to be severe in the neonatal stages in NFHS. Besides, the quality of data varies across different rounds as surveys are carried out by different agencies in different locations. The sampling error for key indicators is small at the national level but the relative error reaches a level of ten per cent even in large states (Kulkarni, 2011). As in the case of SRS, a major limitation of the NFHS data (till NFHS-3) has been that the sample design did not permit estimation below the state level. However, this limitation

has been addressed in NFHS-4 that now includes district level estimates. Even at the state level, since age-specific mortality data are limited to a few samples, there could be issues of comparability and consistency.

The most important advantage in the use of NFHS data is that it allows for analysis across social and economic aspects. The indicator can also be correlated with demographic characteristic of the mother and the child. The availability of raw data permits additional analysis such as the influences of proximate and socio-economic determinants. This would clearly help in assessing the net impact of various factors on the risk of infant mortality, providing valuable guidance for policy formulation and interventions. Unlike NSS, AHS and DLHS, and now NFHS allow for district level analysis. AHS, has a large enough sample size and provides information on infant mortality, U5MR for all districts, region-wise (rural/urban) disaggregated by sex. But this survey covers barely half the country and the data are available only for two years apart from the baseline survey data. Since the raw data are not available, no further disaggregation is possible though the survey collects background information.

Similarly, though DLHS provides for district level data, it too does not allow for disaggregating the disparity that may exist across households and individuals since raw data are not easily available. Good background information is collected in the surveys, which needs to be fully analysed regularly. However, while using and comparing the DLHS indicators over time and with other surveys, it should be borne in mind that the sample selection has differed in various rounds of DLHS. The sample size among districts varied according to their performance in terms of antenatal care (ANC), institutional delivery, immunisation, etc. and it was fixed based on information related to such indicators from DLHS-2: 1,500 households (HHs) for low-performing districts; 1,200 HHs for medium-performing districts; and 1,000 HHs for good-performing districts. As mentioned earlier, sample respondents also varied from currently married (in DLHS-1 and 2) to ever married and never married in DLHS-3.

The lack of gender-informed infant and U5 mortality indicators for regions within states is a major handicap in carrying out analysis and making interventions. There is an urgent need to strengthen CRS and ensure that all births and deaths (disaggregated by sex), the registration of which is mandatory by law, are captured. Alongside this, with the NFHS now generating disaggregated data at the district level, these two data sources could definitely give a clear gender-sensitive picture of infant mortality.

Shifting the focus to sources of data on immunisation, the NSSO definition of immunisation is limiting as it counts all those children who have received any one of the vaccines listed in the survey as being immunized. Since the demand on economic and other resources may vary across different vaccines, there could be a difference in its administration among boys and girls: vaccines that are free and easily available may be administered to girls and boys may be given costlier vaccines. Similarly, the extra effort of travelling a long distance or spending more time in the hospitals for vaccination could be acceptable for boys, but not considered worthwhile for girls. Vaccination against common and serious diseases needs to

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be seen as a package and hence any data that does not provide for such an approach is of limited use. In the latest NSS Health Survey (2014), data on immunisation was not collected.

Due to this partial definition of immunisation, NSSO does not provide sufficient scope for comparison with other data sets such as NFHS or AHS. Nor does it allow for time series comparison as it is one-time data. The quality of NSS data needs to be improved by redefining immunisation. Since raw data of NSS surveys are available, disaggregate analysis (across various household and individual characteristics) will also be possible which will make this data set a source of rich information.

Furthermore, vaccination performance or immunisation gap is always presented in terms of average coverage rates, which raise serious issues. Averages often mask the wide disparity between extremes, which could be either across regions, social groups, economic categories, or within boys and girls. Since indicators are developed for monitoring and interventions, there is a need to identify groups at the highest risk of not receiving immunisation and bridge gaps/imbances as far as possible. This information on vaccination needs to be related to the region; the household circumstances of the children, as well as mothers; the occupation, literacy levels, caste and religion of parents; and the quality of relevant infrastructure available, with particular reference to healthcare facilities and Anganwadis. In this regard, the NFHS survey is the only data source that provides a vast body of data on immunisation across individual, family and social characteristics. But as with the other indicators, up till NFHS-3 its small sample size renders any analysis below the state level problematic.

In terms of the data sources on child nutrition in India both the two major sources NNMB and INP have inherent challenges. Besides the problem of inter-temporal comparability, due to a change in the scientific procedure in 1982, NNMB data provides incomplete coverage as all the states are not covered. Further, it has not conducted any large scale survey after 2004/05. The INP survey was a standalone exercise and not repeated. Thus, an inter-temporal study of the extent of under-nutrition among girls for all the Indian states cannot be carried out with NNMB and INP data.

After DLHS-2, the subsequent rounds did not capture nutrition status thereby limiting its use for data on nutrition. The DLHS could be fine-tuned as a source for consistent data generation on the theme, with the benefit of projecting a district-level picture too.

The AHS module for collecting data on nutritional status in 2014, adopted a clinical approach to obtain measurements and collect data on nutritional status. However it was conducted only for a sub-sample of the total AHS sample, and did not collect data on associated variables. Furthermore the possibility of further replicating this tool is not clear, as the AHS has since been discontinued from 2014.

Nutritional data provided by NFHS is the only consistent source of data for all states on nutritional status over time. NFHS data is also available on variables that are often correlated with nutrition, such as awareness among mothers/women and social and economic conditions.

However, getting data for exactly identical variables that cover the same states for different rounds remains elusive. Overall, the NFHS data emerges as the most useful resource for all the four indicators of survival of girls, as it provides for many levels of disaggregation.

Similarly, if DLHS could solve its consistency and comparability issues, it could serve as a good data source. However, since it does not provide background characteristics, it is important to design periodic household surveys. NSS health surveys could be modified appropriately in this regard to capture specific issues for instance immunisation gaps.

The four indicators of survival of the girl child capture different aspects of possible deprivation and neglect which, taken together as a composite index, could give insights into the condition of girls. There are definitely reliable data sources on infant mortality and U5MR but data on immunisation and the nutrition gap is still limited and comparability across data sets is problematic. District-level data is an issue with all the identified indicators though AHS and DLHS do give some insights into these dimensions.

2.2. MATERNAL HEALTH

2.2.1. INDICATOR 1: MATERNAL MORTALITY RATIO

The maternal mortality ratio in India continues to be very high although, it has declined over time. Different socio-demographic factors are responsible for the high ratio, besides various medical factors.

The Maternal Mortality Ratio (MMR) depicts the risk of maternal death relative to the frequency of childbearing and is defined as the number of maternal deaths for 100,000 live births.

The maternal mortality rate, is different from MMR, and is found by dividing the average annual number of maternal deaths in a population by the average number of women of reproductive ages (typically those aged 15–49 years) who are alive during the observation period. The MMR reflects not only the risk of maternal death per pregnancy or per birth but also the level of fertility in a population. The macro data sources that give estimates of MMR are the SRS, NFHS and AHS.

SRS has been providing data on maternal mortality since 1997⁸. The mortality measures are based on the number of maternal deaths that occurred during childbirth or within two months after a pregnancy or childbirth.

SRS gives both MMR and the maternal mortality rate. It provides three-year averages as maternal death is a rare event and the sample size may be inadequate if annual numbers are taken. It presents distribution by age (15–19, 20–24, 25–29, 30–34, 35–39, 40–44,

⁸Verbal autopsy instruments are administered for the deaths reported under the SRS on a regular basis to yield cause-specific mortality profile in the country since 2004.

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45–49 years) for maternal deaths and non-maternal deaths but there is no socio-economic disaggregation.

NFHS in its first two rounds provides data on maternal mortality. MMR is based on the annual number of female deaths that occurred during childbirth or within two months after the end of a pregnancy or childbirth. The annual number of female deaths is calculated from the total number of such deaths reported and occurring in the two years preceding the survey. Since the data include background information on individual women, a disaggregate analysis is also possible. However, the small size of the sample reduces its value.

AHS through its Mortality schedule collects details of the deaths which have occurred to the residents of sample households during the reference period. It includes information on name and sex of the deceased, date of death, age at death, registration of death and source of medical attention received before death. In case of deaths associated with pregnancy, it asks questions on factors leading/contributing to death, symptoms preceding death, time between onset of complications and death to yield data on various determinants of maternal mortality.

The AHS gives district-wise data on both MMR as well as maternal mortality rate for all EAG states and Assam. For the AHS survey data 2010/11, the reference period is 2007/09; while for 2011/12 and 2012/13 the reference period is 2010 and 2011, respectively. The AHS also gives the confidence interval (95 per cent) for the values of both MMR and maternal mortality rate for all districts. Since the data are collected from a larger sample at the district level, they are reliable with a reasonable reference period.

2.2.2. INDICATOR 2: AGE SPECIFIC FERTILITY RATE

The Age Specific Fertility Rate (ASFR) is the number of births per woman in a particular age group in one year expressed per 1,000 women in that age group. The ASFR enables the assessment of adolescent fertility (births to women aged 15–19 years), which is of special concern. Early childbearing, particularly before the age of 18, entails greater risks to the mother. In addition, children born to very young mothers also have higher levels of morbidity and mortality. The Population Census, SRS and NFHS are major sources of ASFR data.

Population Census provides age-specific fertility levels of the population since the 1951 Census, though comparable estimates are available only since 1981 (with information collected on 'children born alive during last one year' to currently married women). From 2001, this information has also been tabulated by sex (sex of the child born alive during last one year and sex ratio at birth). Based on Children Born Last Year (CBLY) and the number of women in various age groups, the Census computes direct estimates of ASFR. The ASFR data are available by age groups (15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–59 years) for total population and also separately for Scheduled Castes, Scheduled Tribes and also for religious communities (Hindu, Muslim, Christian, Sikh, Buddhist, Jain, other religious communities) up to the district level apart from national and state level data.

SRS not only gives annual estimates of age-specific fertility rates by residence (rural/urban) and major states since 1993 but also by literacy, a variable that has a significant impact on fertility. Since 1996, it also provides fertility indicators by different levels of education (illiterate, without formal education, below primary, primary, middle, class X, class XII, and graduate or above).

NFHS gives age-specific fertility rates for all states across the four survey rounds. The rates are for the period 1–36 months preceding the survey (approximately, 1990/92 for NFHS-1, 1996/98 for NFHS-2, 2003/05 for NFHS-3 and 2013–15 for NFHS 4). ASFRs are expressed per woman. The age cohorts are 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49 years. It provides the ASFR for three years preceding the survey by background characteristics.

2.2.3. INDICATOR 3: TOTAL FERTILITY RATE

The Total Fertility Rate (TFR) refers to the average number of children a woman would bear over the course of her reproductive life (or lifetime) if she experienced throughout her life the ASFRs prevailing during the reference period. The TFR is the cumulative value of ASFR at the end of child-bearing ages and it is five times the sum of all the ASFRs for the five-year age groups. Thus, TFR indicates the average number of children expected to be born per woman during her entire span of reproductive period assuming that the ASFR continues to be the same and that there is no mortality.

Micro level studies show that low fertility rate has potential health benefits for women. Achieving a TFR of 2.1 is a desirable as it indicates replacement level fertility. The Population Census, SRS and NFHS are the major data sources giving estimates of TFR, which is expressed per woman.

Population Census estimates of the total fertility levels of the population are based on 'children born alive during last one year' to currently married women (as stated for ASFR earlier). Based on CBY, the TFR for the population, for social groups (Scheduled Castes and Scheduled Tribes) and for religious communities (Hindu, Muslim, Christian, Sikh, Buddhist, Jain, other religious communities) is computed. Comparable data on TFR is available from the 1981 Census (for India, states and districts).

SRS is considered to be the most reliable source of TFR. SRS also gives marital fertility rate. It gives estimates of TFR from 1993 for rural and urban areas for India and major states.

NFHS gives data on TFR for all states across its three rounds and thus gives useful information on trends in fertility. It gives the TFR for three years preceding the survey by background characteristics. TFR (15–49 years ages) by residence (rural/urban) is available for all states and India across the three rounds.

DLHS does not give estimates of total fertility but of completed fertility. DLHS-1 gives the estimate of the completed fertility for states and UTs, measured by average children ever born to women aged 40–44 years; DLHS-2 gives data on mean children ever born to currently

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married women age 15–44 years by selected background characteristics (ages: 15–19, 20–24, 25–29, 30–34, 35–39, 40–44 years; place of residence; education; religion; caste and wealth index); DLHS-3 records average children ever born to ever-married women in age group 15–49 years and 40–49 and separately for currently married women between 40–44 years by background characteristics (age: 15–19 years....; place of residence; education; religion; caste and wealth index).

2.2.4. INDICATOR 4: MATERNAL MORBIDITY RATE

Maternal Morbidity relates to any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's well-being. The illness or disability may not necessarily be life-threatening but can have a significant impact on the quality of life. The possibility of not receiving adequate delivery and post-partum care is high for many women, particularly those from weaker economic and social categories. Some macro data on the incidence of maternal morbidity is available from NSSO and DLHS.

AHS does not provide any detailed information on morbidity though it collects some information on this issue. Questions on morbidity of female members are included in the household schedule and those relating to infant deaths as well as deaths associated with pregnancy in the mortality schedule. This indicates that data are available but are yet to be presented in AHS reports.

Although NFHS includes a section on morbidity and health care but it does not discuss morbidity in relation to pregnancy and childbirth.

NSS covered health and morbidity issues for the first time during the 28th round (October 1973–June 1974), and later in its different rounds. NSS data gave estimates of morbidity in the 42nd (1986/87) and 52nd rounds (1995/96). It provided data on diseases relating to pregnancy and childbirth (including natural abortion) and related problems under short-duration ailments by age (0–14, 15–39, 40–59, above 60 years) in rural and urban regions. In the 52nd round (July 1995–June 1996), it covered the curative aspects of the general health care system in India and also the mother and child health (MCH) care programmes. In the 60th round, it gave hospitalised cases of gynaecological disorders during the last 365 days by nature of ailment for different age groups by sex for rural and urban areas. NSSO does not cover reproductive related ailments separately under prevalence of chronic (long-term) ailments and these are captured as part of 'other diagnosed diseases'. In the 71st round, there were some changes in the concepts and definitions. The survey like the earlier rounds captured only self-reported morbidity conditions. However in this round, unlike the earlier surveys, all medication including self-medication was considered as medical treatments. Childbirths were given a dummy ailment code and details of treatment and expenditure of childbirth were recorded. Childbirths as has been the case before were not considered in generating estimates of prevalence rate of ailments. A more detailed and updated code list for ailments was also adopted and the nature of treatment (by different systems of medicine) was also collected.

DLHS is the first national level large-scale survey that has recorded information on reproductive morbidity. DLHS-1 (1998/99) and DLHS 2 (2002/04) recorded percentage of women who had pregnancy, delivery, and post-delivery complications for births in three years preceding the survey for all districts. The pregnancy complications included paleness, bleeding and visual disturbances, by background characteristics (age group: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44 years; children ever born, residence, standard of living index, received any ANC). Apart from the above variables, DLHS-3 also captures data on occurrence of obstetric fistula across states.

2.2.5. INDICATOR 5: MATERNAL CARE INDICATORS: ANTENATAL AND POSTNATAL CARE

Maternal care includes both care during pregnancy before childbirth (antenatal care or ANC) and post-childbirth (postnatal care). The NFHS, AHS and DLHS are the major sources of information on maternal care indicators.

NFHS provides information on various aspects of antenatal and postnatal care, place of and assistance during delivery, delivery characteristics, and post-partum complications. All data are based on self reports by women respondents. NFHS in later rounds expanded its scope to include information on all births to women in the last five years, with detailed information on antenatal, delivery and postnatal care (the last information collected only the woman's most recent birth). NFHS-2 (1998/99) gives similar information but the reference period is for three years preceding the survey.

NFHS also has the number of ANC visits, the timing of the first visit, and details of medical care, according to the source of ANC (public sector; private/NGO sector; or public, private and NGO sector). For ANC received only at home there are details of the care provider doctor, auxiliary nurse midwife (ANM), lady health visitor (LHV); dai or traditional birth attendant (TBA); anganwadi/Integrated Child Development Services (ICDS) worker; others. NFHS treats postnatal check-ups as checks on the woman's health within 42 days of the birth. It records women who received a postnatal health check-up after their most recent live birth and the timing of the first postnatal check-up (less than 4 hours, 4-23 hours, 1-2 days, 3-41 days), and also those who did not receive any such check-up. Details about the postnatal care provider and post-partum complications (massive bleeding, very high fever) are also recorded. The data could be disaggregated by background characteristics, birth order and place of delivery.

AHS gives district-wise data with respect to almost all maternal care indicators collected through its woman schedule from ever-married women aged 15-49 years in respect of their last two outcomes of pregnancies which have resulted in live births/still births during the reference period in all EAG states and Assam.

It records number of antenatal check-ups received, months of pregnancy at the time of first ANC, main source of ANC, type of tests performed during ANC, number of TT injections received, and number of days of consumption of Iron/Folic Acid (IFA) tablets/syrup.

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AHS also records postnatal care indicators across all districts in the surveyed states. It provides percentage of mothers who received postnatal check-up within 48 hours of delivery; within one week of delivery; and those who did not receive any postnatal check-up. In case of institutional delivery where the woman had stayed there for at least 48 hours, it was presumed that the postnatal care was given within 48 hours. These indicators are based on the last outcome of pregnancy which resulted in live/still birth during the reference period.

DLHS gives district-wise data by residence (rural/urban) with respect to both prenatal and postnatal care from ever-married women aged 15–44 years in DLHS-1 (1998/99) and DLHS-2 (2002/04) and ever-married women aged 15–49 years in DLHS-3 and DLHS-4 with respect to their last two outcomes of pregnancies which have resulted in live births/still births.

DLHS presumes that a pregnant woman has full ANC if she had at least three visits for antenatal check-up, one TT injection and consumed 100 IFA tablets or adequate amount of syrup. DLHS rounds give proportions of mothers who have received any antenatal check-up; antenatal check-up in first trimester; three or more check-ups; those who had at least one TT injection; whose blood pressure (BP) was checked; who consumed 100 IFA tablets; and who had full antenatal check-up to all mothers covered in the survey. It also provides data on mothers who received postnatal care within two weeks of delivery.

NSS has collected detailed information on antenatal and postnatal care in the 42nd round (July 1986–June 1987), and later in the 52nd and 60th rounds. From the 60th round, it also provides information on expenditure for availing antenatal and postnatal care by source of service (government/private).

NSS also gives information for age groups 15–49 who were pregnant any time during the last 365 days and who availed antenatal and postnatal care services. Particulars of prenatal care include, age, if registered for prenatal care, type of hospital/doctor, number of times attended, reason for seeking prenatal care, whether injected with TT/received IFA (if yes, from public or private health facility), if hospitalised due to complications in pregnancy, whether food supplements given during pregnancy, source of food supplements, etc.

2.2.6 INDICATOR 6: PROPORTION OF INSTITUTIONAL DELIVERIES

Government of India's RCH programme encourages deliveries in proper hygienic conditions under the supervision of trained health professionals to ensure safe motherhood. The major data sources for this indicator are SRS, CRS, NFHS, AHS, DLHS, and NSSO.

SRS has been recording the percentage of women who delivered in health institutions like hospitals, maternity/nursing homes, health centres, etc., by residence (rural/urban), since 1988. It also records delivery conducted in the home by doctor, trained dai, trained midwife, trained nurse, untrained village dai or other untrained professional functionary, and by relatives. The data are available for all major states.

CRS provides data on live birth by type of medical attention received at the time of delivery from 21 states/UTs and also whether live births had occurred in an institution (government or private hospital). Information on whether non-institutional births were attended by physicians/nurse/midwife/dai or others are recorded, but do not allow possibilities for further disaggregation.

NFHS records the percentage of women who delivered in a health facility or the place of delivery (health facility or institutions: public sector, NGO/trust, private sector; home: own home, parents' home, other home; other). NFHS-3 and 4 also covered the reasons for not delivering at a health facility (costs too much; facility not open; too far/no transport; do not trust facility/poor quality of service; no female provider at facility; husband/family did not allow; not necessary; not customary; other). The information can be disaggregated across many background characteristics.

AHS gives details about place of delivery, source of transport provided and availed for reaching the institution, length of stay in the institution after delivery, type of delivery (normal/caesarean/assisted) and the personnel conducting delivery. Data are collected from ever-married women aged 15–49 years for their last two pregnancy outcomes resulting in live births/still births during the reference period.

Indicators with respect to institutional delivery available from AHS are percentage of deliveries that have taken place in institutions and their distribution into government and private institutions. It also gives district-wise data on percentage of deliveries at home; percentage of home deliveries conducted by skilled health personnel; and percentage of safe deliveries (safe delivery comprises institutional deliveries and home deliveries conducted by doctor/nurse/ANM/LHV but does not include those attended by trained dais separately as they are included under skilled health personnel).

DHLS provides information on institutional delivery (based on women whose last pregnancy outcome was live/still birth during reference period) for each of its survey rounds. It provides data on percentage of women in each district (rural and urban areas) who had institutional delivery, delivery at home, delivery at home by skilled personnel and safe delivery.

NSS from its 42nd round onwards has been collecting detailed information with respect to childbirth such as medical attendance at childbirth; place; type of delivery; if the delivery is at home or other places (reason for not going to the hospital); for deliveries in hospital: type of hospital, type of ward, duration of mother's stay at the hospital, whether required more than normal stay for postnatal complications, postnatal care (whether registered, type of hospital/doctor, number of times attended, whether received food supplementation and free medicine, etc.). The average expenditure for childbirth by place of delivery (government hospital/private hospital/home) was also recorded for urban and rural areas. The data are available for all major states.

2.2.7. INDICATOR 7: ACCESS TO SUPPORT/BENEFICIARY SCHEMES FOR DELIVERIES

The Government of India has initiated schemes for providing state support for deliveries, thus enhancing safe motherhood. Janani Suraksha Yojana (JSY) is one of the most important programmes under the overall umbrella of the National Rural Health Mission and is aimed at reducing Maternal Mortality Ratio and Neonatal Mortality Rate by promoting institutional deliveries. The major macro sources giving data on the proportion of women availing a beneficiary scheme are AHS and DLHS.

AHS gives information on whether ever-married women aged 15–49 years had availed the maternity financial assistance for safe motherhood under the JSY scheme during the reference period. It gives percentage of mothers who availed financial assistance for delivery; for institutional delivery; and for government institutional delivery under JSY, all in respect of the last delivery resulting in live/still birth.

DLHS-3 provides information on mothers who received financial assistance for delivery under JSY in respect of their last two outcomes of delivery resulting in live/still births during the reference period.

ICDS gives information on pregnant and lactating mothers who availed supplementary nutrition from ICDS for all states and union territories.

2.2.8. DATA SOURCES ON MATERNAL HEALTH: LIMITATIONS AND COMMENTS

Until the early 1970s, there were no major efforts to estimate maternal mortality ratio. As noted above, the only sources of long-term data on this indicator are SRS and NFHS, as AHS data is limited to a few recent years. Estimates of maternal mortality and its consequences are built on relatively limited data. An important issue with this indicator is that even the large-scale surveys could not provide the estimate of maternal mortality at sub-national/regional levels owing to sample size.

The maternal mortality data from SRS is available since 1997. Despite being one of the largest continuous demographic household sample surveys in the world, its estimates of maternal mortality have large sampling fluctuations due to inadequate sample size. (It revised its sampling frame and increased the sample size in 2004). In many such cases, one has to execute indirect techniques, which may not fully capture the various dimensions of the indicator. Since maternal mortality is a rare event, to enhance the SRS sample size, the results have been derived by following the practice of pooling the three year data to yield reliable estimates of maternal mortality. Two limitations of SRS data are that they provide information only for a limited set of associated factors and the sample design does not permit estimation below the state level.

NFHS-1 gave the first national estimate of MMR in India in the early 1990s. However, the national MMR estimates of both NFHS-1 and 2, despite their large sample size, are not

consistent and have large sampling errors. Therefore, NFHS data cannot be used to make reliable MMR projections for individual states or specific population groups. Because of relatively high sampling errors in the first two rounds, NFHS-3 and 4 did not collect information on maternal mortality. Also, as the data is largely based on household reporting, estimates on maternal mortality is bound to have problems unless cross checking and careful canvassing of questionnaires are carried out. These methods suffer from misclassification and under reporting since persons giving information on a death may not know the pregnancy status of the deceased or the cause of death.

The sample size of AHS at the district level has been derived taking the IMR as the decisive indicator. This may provide a better measure of maternal mortality as these two indicators are closely linked.

The existing maternal health literature focuses primarily on maternal death rather than maternal health. While the estimates of maternal mortality and its consequences are built on relatively limited data, women who suffer from direct obstetric complications are estimated to be far higher in number (compared to maternal deaths), yet not well-documented. Even less is known about the numbers and description of the consequences women may suffer as a result of pregnancy and childbirth and other life threatening obstetric complications. Maternal morbidity is an overarching term that refers to any physical or mental illness or disability directly related to pregnancy and/or childbirth. These could range from various acute maternal morbidities to milder but chronic conditions, all of which could impair quality of life. Since large sections of women still remain outside the coverage of basic reproductive programmes of safe birthing and related care, data on morbidity is a crucial indicator of maternal health, and may be of greater relevance than mortality.

An important issue with maternal morbidity is the lack of reliable and accurate data. None of the surveys capture the complex dimensions. All of them are governed by a limited understanding of maternal morbidity and are largely restricted to physical health dimensions. The vulnerability of certain subgroups of women to pregnancy-related mortality and morbidity is based on other health conditions, such as income, caste and age. These dimensions need to be understood to assess the risks in specific populations as the average value may give an erroneous picture. Aspects like education are also important as educated women are more likely to delay childbearing, have a greater say in pregnancy decisions and are less likely to resort to unsafe abortions, all of which may alter maternity and morbidity chances. Though such information is collected in both AHS and DLHS, it is rarely looked into in this context. Such critical indicators are not developed as the raw data are unavailable.

The most common causes of maternal mortality and morbidity are widely known and include a range of economic, social, medical, and health system-related factors. These indicators on maternal health need to be correlated with dependent factors which are important for assessing both the current situation as well as progress over time.

Currently, morbidity data is gathered mostly through sample surveys. The inconsistent, and sometimes incorrect, use of terminologies to describe various maternal morbidities

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and disabilities is a major source of confusion in interpreting the available data. Further, investigators gathering information on maternal complications are most likely to have differing levels of training and supervision, leading to further inconsistencies. In addition, the reliability and validity of these assessments and their comparability are also concerns. For instance, NSS (1986/87) excluded expenditures related to abortions and miscarriages. The later survey rounds were to include complications around pregnancy and childbirth but how well it did so is not clear. Neither did they make any special attempt to ensure that information on reproductive ill-health was systematically collected from women. Methodological and definitional changes introduced in the 71st round of NSS makes it difficult to compare it with data from earlier rounds.

At present, none of the surveys provide estimates of core vital indicators on fertility and mortality at the district level. The DLHS, conducted every five years, focuses mainly on indicators pertaining to maternal health and child welfare programmes. Thus, the only way to address this limitation is to widen the scope of the DLHS survey by including the variables mentioned above.

The Census does provide fertility data which permits analysis up to the district level. However, the Census is conducted every ten years; the last census was in 2011. As a result, the census data refer to time points spaced by ten years, which is too long a period for a country that has witnessed sharp changes. This is a handicap especially for urban areas that experience rapid growth. Another limitation is with regard to completeness and accuracy since data on births during the last year is based only on currently married women. The births that occurred to women other than currently married (which could be small in number) are, therefore, bound to be left out. If the mother did not survive as on the date of enumeration, then such children may also get excluded. In addition, because of its retrospective nature, there are chances of omissions of births during the years preceding the Census due to inaccuracies in date of births and distortion in age reporting.

The Census enumeration suffers from both coverage and content errors, the estimates of which are made available through post-enumeration surveys. The coverage error has been quite small in the Indian Census, generally below two per cent. The Post-Enumeration Survey of Census 2011 has shown that while there was no gender bias in coverage, the overall omission rate was 23 per 1,000 persons, which is higher than Census 1991 (17.6 per 1,000) and almost the same as that of 2001 Census (23.3 per 1000). Omission is much higher in urban areas than rural and this is a matter of concern. The content errors are small except that age reporting suffers from digit preference.

SRS surveys are the most reliable data source on fertility since their estimates make it possible to detect changes over short periods, an essential requirement in the context of rapid fertility transition that has happened in India during the past four decades. However, this too has limitations when one looks at estimates over time. Mahapatra (2010) states that in SRS fertility indicators, the broad age groups have differed according to current policy interest: until 1990 age groups were 0–14, 15–49, and 50+ years. From 1991, the broad age

groups were expanded to 0–4, 5–9, 10–14, 0–14, 15–59, and 60+ years. In 1994, another two broad age groups were added: 15–64, and 65+ years. Another major shortcoming is that these indicators relate to states and not to lower levels of disaggregation such as districts.

The four rounds of the NFHS have been a major source of data on fertility since the early 1990s. Since the indicators have a reference period of three years, it gives a clear picture of changes. Besides, as the surveys collect fertility histories of women in reproductive ages, fertility trends for up to 15 years prior to the survey are available. An important advantage with the data is that the availability of raw data permits additional analysis allowing an assessment of the influences of proximate and socio-economic determinants on fertility. Comparison of TFR values of Census reports, NFHS and SRS shows that they are not consistent for the same period, raising serious concerns of data reliability.

The NFHS is the only source giving data on maternal care indicators for the country as a whole and comparison across periods is also possible. But, since the target population in each round has been differently defined to include more categories in later rounds, comparison can be made only between groups which are covered in all the rounds.

The maternal care indicators available from DLHS (2007/08) are: percentage who received ANC, percentage who received ANC within the first trimester and percentage of births delivered in a health facility. In DLHS, though the overall sample size is large, the size within each district is in the range of 1,000–1,500 households. Studying differentials with such a sample creates the possibility of relatively large sampling errors.

The vital registration system is an important source to estimate maternal mortality. The health delivery system in India is expected to record deaths in institutions; however, many maternal deaths take place at home and these do not necessarily get recorded by the health functionaries. Besides, as explained earlier, the registration system is poor and the quality of data differs across states. Some of the issues in the context of maternal mortality are underreporting of deaths and misclassification of maternal deaths as non-maternal. Another problem is that private providers cater to a large section of population and the compilation of events that occur in this domain is difficult. Estimates of MMR from hospital records are not reliable or representative of the general population. The fact that hospital admission is high during emergency indicates that obstetric cases could give a higher rate if only hospital records are looked at.

The most important way to improve the quality of data on maternal mortality is to improve the legal registration of deaths. This, along with SRS and AHS data, could give a macro picture. Since SRS and AHS collect some background information of the household, the possibility of correlating this indicator with other dimensions should also be explored. To capture the maternal health status of women, maternal morbidity is the most critical variable.

Maternal mortality and morbidity clearly denote the maternal health status of women. Other indicators discussed above focus on specific issues which indirectly or directly may have

contributed to this outcome. Though, rough estimates on maternal morbidity are available from SRS and AHS, the quality of maternal morbidity data is a cause of concern, which needs immediate attention. NSS health surveys could be modified to include reproductive and maternal health related questions covering both physical and psychological dimensions of maternity. The scope of the DLHS survey could also be modified to capture issues related to morbidity at the district level.

2.3. SEXUAL AND REPRODUCTIVE HEALTH

Sexual and reproductive health (SRH) is a significant parameter determining the well-being of women. The indicators under this are: prevalence of early pregnancy and motherhood, contraceptive prevalence rate, and prevalence of sexual and reproductive health problems.

2.3.1. INDICATOR 1: PREVALENCE OF EARLY PREGNANCY AND MOTHERHOOD

Adolescents and young women who become mothers may experience relatively high levels of health complications because of physiological immaturity, in addition to social, economic and emotional difficulties. Women or girls who attain motherhood in the age group 15–19 are considered to have had an early childbirth. SRS, NFHS, AHS and DLHS are data sources for information on this indicator of women's status.

SRS gives annual estimates of age-specific marital fertility rates (ASMFR) by residence (rural/urban) for India and major states since 1993. ASMFR and age specific fertility rates provide data on birth of children to married women in age group 15–19 years. Age groups for which ASFR and ASMFR are currently available are 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49 years.

NFHS-1, 2, 3, and 4 give data on early childbearing through information on age at first birth as well as at teenage pregnancy and motherhood. NFHS gives the proportion of women aged 15–19 years who had a live birth; are pregnant with first child; and have begun childbearing. The data are available for India and states and can be disaggregated by background characteristics.

AHS also collects and makes available district-wise data on early childbearing by recording the 'percentage of women aged 15–19 years who were already mothers or pregnant at the time of survey' in all EAG states and Assam. AHS gives the percentage of women who had begun childbearing among all ever-married women aged 15–19 years.⁹

DLHS-2 and 3 have records of childbirth to women in the age group 15–19 years, which indicate the extent of early childbearing in rural and urban areas across districts surveyed. The data include average number of children ever born by selected background characteristics (place of residence, education, religion, caste, and wealth index) of currently married women.

⁹The ever-married sample denominator for the age group 15–19 years has not been adjusted by the all-women factors for the same age group. This factor should be taken into consideration for interpretation.

2.3.2. INDICATOR 2: CONTRACEPTIVE PREVALENCE RATE (CPR)

The current level of contraceptive use among currently married women is referred to as the contraceptive prevalence rate. Contraceptive prevalence rate is an important indicator of women's decision-making capacity. In several regions and communities, women do not have the freedom to decide how many children to have, or when to have them.

NFHS across all four rounds has brought out information on both the level of knowledge as well as adoption of various family planning methods, including usage of contraceptives. It gives details about both knowledge and usage among women according to background characteristics. Data is available for all states and the country.

AHS gives the CPR among currently married women aged 15–49 years for all districts in EAG states and Assam. The survey asked all currently married women (except those who had already attained menopause, were currently pregnant, had undergone hysterectomy, or had never menstruated) whether they or their husbands are currently using any traditional or modern method(s) of family planning. Modern methods include tubectomy, vasectomy, copper-T/IUD, pills (daily), pills (weekly), emergency contraceptive pills and condoms (nirodh). Traditional methods include contraceptive herbs, rhythm/periodic abstinence, withdrawal and lactational amenorrhoea method. AHS also gives the percentage of currently married women reporting use of various types of family planning methods and the most used method. In addition, percentage of currently married women using any method (CPR), any modern method and any traditional method is also tabulated.

DLHS gives the CPR for all states and also the progress and trends in contraceptive prevalence (any method, modern method) across its three rounds. The two earlier rounds covered some aspects like knowledge of family planning methods as well as CPR by method of use by background characteristics. DLHS-3 dealt with family planning methods in more detail. It covered all contraceptive methods (any method, any modern method, male sterilization, female sterilization, Intra Uterine Devices (IUD), emergency contraceptive pill, condom, rhythm method, withdrawal, other) by place of residence and other background characteristics for all states. Ever use and current use of contraceptive methods are available by background characteristics such as age group, number of living children, residence, education, religion, caste/tribes and wealth index. In addition, aspects like duration of spacing methods and age at the time of sterilization by background characteristics are also available from DLHS.

2.3.3. INDICATOR 3: PREVALENCE OF SEXUAL AND REPRODUCTIVE HEALTH PROBLEMS

People generally, and women especially, are reluctant to disclose information about reproductive tract/sexually transmitted infections (RTI/STI) and therefore surveys may not be able to give true estimates of its prevalence.

NFHS covered reproductive health problems only in its second round. It provided data on ever-married women (%) reporting abnormal vaginal discharge or symptoms of urinary tract infection during three months preceding the survey and currently married women

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reporting painful intercourse or bleeding after intercourse by background characteristics. It also gives some information on those with such problems who accessed health care.

DLHS-1 and 2 provides data on the percentage of women who had symptoms of RTI/STI, vaginal discharge, and menstruation-related problems. The third round gives extensive data on various reproductive and sexual health problems, particularly on infertility and RTI/STI prevalence across all districts. In all its rounds, the prevalence was judged by self-reporting by the respondents (after they were made aware of common symptoms associated with RTI/STI) even if they reported the presence of any one symptom. It also gives details on whether treatment was sought or not.

Prevalence of RTI/STI is available according to background characteristics. This covers percentage of ever-married women aged 15–49 years who had reported abnormal vaginal discharge as well as specific RTI/STI symptoms like itching, boils, warts, swelling, blisters, and pain during/spotting after sexual intercourse. The prevalence of RTI/STI, as well as number of women who sought treatment is given for all states.

DLHS-3 also gives data on infertility and related aspects. It makes a distinction between primary (those who have never been able to conceive) and secondary (difficulty in conceiving again after having conceived earlier) infertility. There is data on percentage of ever-married women aged 15–49 years who had infertility problems (primary, secondary) as well as percentage of childless women according to their background characteristics.

NSS data from the 42nd, 52nd, 60th, and 71st survey rounds provide gender-disaggregated statistics of those affected with sexually transmitted diseases (STD) in different age groups for rural and urban areas. Disaggregate data are available across many demographic, social and economic variables.

2.3.4. DATA SOURCES ON SEXUAL AND REPRODUCTIVE HEALTH: LIMITATIONS AND COMMENTS

There may be high levels of underreporting in early childbearing/adolescent pregnancy as surveys are only looking at early childbearing among all ever-married/currently married women. There is no data on pregnancy and childbearing out of marriage across all sources. It would be difficult to collect such information due to the stigma associated with children born to unmarried girls.

In the case of CPR, AHS data are limited to currently married women and provides only rural-urban disaggregation. NFHS and DLHS have use of contraceptive methods by background characteristics, with the third round of DLHS giving CPR data across districts according to sex and number of living children, which is significant for policymaking and targeted interventions.

With respect to prevalence of SRH problems, data are available only in NFHS-2 so comparison is not possible across time. But DLHS has brought out rich data in its third round, which has extensively covered various SRH problems, particularly infertility and RTI/STI prevalence.

It should continue to cover these parameters in its future rounds. NSS only looks at STDs. It gives prevalence of STDs by age and sex in rural and urban areas, and allows comparison across time on this aspect.

Overall, data on reproductive and sexual health is unreliable because of underreporting, particularly among women because of the stigma associated with such diseases. This is a cause of concern as data on SRH is needed to meet the challenge of increased prevalence of HIV/AIDS among females. Age-specific information on its prevalence is critical as sexual health of adolescent women impacts maternal mortality and morbidity. Since large surveys are bound to under-report prevalence of sexual health issues, there is a need to design smaller surveys targeting different segments of the population taking into account social, demographic and economic aspects.

2.4 WOMEN'S GENERAL HEALTH

2.4.1. INDICATOR 1: AGE-SPECIFIC MORTALITY RATES (ASMR)

Age Specific Mortality Rate (ASMR) is defined as mortality limited to a particular age group. ASMR indirectly gives an idea about the survival rates across age groups. Data on ASMR is given by SRS and CRS.

SRS has been providing estimates of ASMR since 1971; however, gender differentiated data appeared only from 1996. The mortality rates are given across all age groups (0-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+ years) for males and females, for all states and UTs. No further disaggregation is possible.

CRS provides medically certified deaths by age groups (less than 1 year, 1-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-69, 70 and above years) for males and females. It has been publishing Medical Certification of Cause of Death (MCCD) Reports since the mid-1970s. No further disaggregation is possible.

2.4.2. INDICATOR 2: MORBIDITY RATES OF WOMEN

Morbidity is the relative incidence of any one or more diseases and morbidity rate may be defined as the proportion of ailing persons (generally for a specified number of days) in a population. Morbidity data is available from the NSS, NFHS and AHS survey rounds.

NSS defines morbidity rate (proportion of ailing persons or PAP) as the estimated proportion of persons reporting ailment during the last 15 days per 1,000 persons. Morbidity could be as a result of some acute/short duration or chronic/long duration (or lasting for more than 30 days) ailment. The chronic diseases listed by NSSO include tuberculosis, epilepsy, leprosy and piles; acute diseases include measles, dysentery, diarrhoea and accident injuries.

NSS first collected information on morbidity in the 7th round (October 1953-March 1954) and subsequently in exploratory surveys during its 11th to 13th rounds. A full-scale survey

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on morbidity was conducted for the first time in the 28th round (October 1973–June 1974). Since then, there have been no separate surveys on morbidity and the collection of data on morbidity became a part of the decennial surveys on social consumption carried out in the NSS 35th round (July 1980–June 1981), 42nd round (July 1986–June 1987) and 52nd round (July 1995–June 1996). However, there was a separate survey on Morbidity and Health Care in the 60th round (January–June 2004). In the 71st round (January – June 2014), every selected household are asked two questions: (1) whether they were ill in the last 15 days and if so what were they ill with? and (2) whether they were hospitalised in the last 365 days and if so, why? The response in terms of the nature of ailment or cause of hospitalisation is then coded into one of the 60 codes which then is used to define both morbidity rates and patterns.

The NSSO surveys provide morbidity rates by age (0–14, 15–29, 30–44, 45–59, 60 and above years) and sex for each type of acute and chronic ailment for rural and urban areas. In addition, it separately gives the prevalence of number of chronic and incidence of number of acute (short duration) ailments per 100,000 persons by age. NSSO also records the number of persons reporting an ailment during a period of 15 days per 1,000 persons by MPCE fractile group and social categories (SC, ST, others) and gives estimates across all states and UTs.

The estimates of morbidity rates are based on self-reported morbidity data during a specific reference period. Reference period has also differed across survey rounds (in the 17th and 42nd it was 30 days, while in the 52th round it was the last 15 days). In the 60th round, for each person aged 60 years or more, (up to three) ailments existing on the date of survey and the nature of treatment of such ailments, were recorded in addition to information on ailments suffered during the reference period of last 15 days. In the 71st round information on ailments as on the date of survey was not collected.

NFHS provides data on prevalence of certain diseases like TB and anaemia (ascertained by testing haemoglobin levels through blood tests in NFHS-3 and 4) among women according to background characteristics. Percentage of women with anaemia (mild to severe) is recorded for all states.

In addition, women in the age group 15–49 years (per 100,000) who have TB, diabetes, asthma and goitre (or any other thyroid disorders) are also recorded by background characteristics. Data relating to the prevalence of these diseases among target women across all states are available.

AHS gives gender-disaggregated data on morbidity, both acute and chronic. If a member (usual resident) of the surveyed household suffered from any acute illness (diseases like diarrhoea/dysentery, acute respiratory infection, jaundice with fever, reproductive tract infections and all types of fever) during the past 15 days prior to the date of the survey he/she was recorded as suffering from acute illness. The data for chronic illness has been collected based on the symptoms pertaining to a particular disease persisting for more than one month or diagnosed. For both cases, the reference period was one year preceding the date of the survey. AHS gives the number of persons diagnosed with such chronic illnesses

per 100,000 population. Chronic illnesses include diseases of the respiratory, cardiovascular, central nervous, musculoskeletal, gastrointestinal and genitourinary systems, and also skin diseases, goitre, elephantiasis and different types of cancers. In addition, prevalence of diseases such as diabetes, hypertension, tuberculosis, asthma/chronic respiratory disease, and arthritis per 100,000 population has been individually presented. Data on the source from where the treatment was taken has also been included both for acute and chronic illness (per 100,000) in rural and urban areas of all districts.

2.4.3. INDICATOR 3: WOMEN AFFECTED WITH LIFE-THREATENING DISEASES (HIV/AIDS, CANCER AND TB)

There are a number of life-threatening diseases of which the most important are: HIV/AIDS, Cancer and TB. Out of these data sources, CRS gives the number of deaths succumbing to the above diseases, while the NFHS provides gender-disaggregated data on prevalence of TB in the population. NSS, AHS and NACO also give data on these specific diseases.

CRS provides data on deaths that occurred due to AIDS, TB and Cancer in the Report on MCCD, which is based on medically certified deaths occurring in hospitals (whether public or private). The statistics from the report provide information on cause-specific mortality cross-classified by sex and broad age groups. Gender-disaggregated data across states and UTs are available.

NFHS-3 (2005/06) for the first time ascertained HIV prevalence (through blood testing) NFHS 3 and 4 provided national estimates of HIV in the household population of women aged 15-49 years and men aged 15-24 years. Separate HIV estimates for each of the six highest HIV prevalence states (Andhra Pradesh, Karnataka, Maharashtra, Manipur, Nagaland and Tamil Nadu) and one HIV low prevalence state (Uttar Pradesh) is available in NFHS 3 and in NFHS 4 states are clubbed into groups and estimates are available for 11 groups of states¹⁰.

NFHS-3 and 4 give national level estimates of HIV positive people (%) (excluding Nagaland in NFHS 3) (%) among women and men age 15-49 years who were tested, by background characteristics.¹¹ HIV prevalence in all the states and also by background characteristics is also available. The state-level data from HIV high prevalence states is available for couples and youth separately. NFHS also gives data on occurrence of TB among women across states and according to background characteristics and also tries to establish causes of TB.

DLHS-3 (2007/08) has recorded aspects related to AIDS (awareness, prevention of transmission) among the population at district levels. But there are no estimates of prevalence rates of HIV/AIDS.

¹⁰Group 1: Andhra Pradesh and Telangana; Group 2: Bihar, Jharkhand, West Bengal, and Andaman & Nicobar Islands; Group 3: Gujarat, Dadra & Nagar Haveli, and Daman & Diu; Group 4: Himachal Pradesh and Jammu & Kashmir; Group 5: Karnataka; Group 6: Maharashtra and Goa; Group 7: Mizoram, Manipur, and Nagaland; Group 8: Odisha and Chhattisgarh; Group 9: Punjab, Haryana, Delhi, and Chandigarh; Group 10: Tamil Nadu, Kerala, Puducherry, and Lakshadweep; Group 11: Uttar Pradesh, Madhya Pradesh, Uttarakhand, and Rajasthan.

¹¹It also gives information on HIV positive persons on the time away from home in the preceding 12 months, male circumcision, sexual behaviour, current pregnant status and ANC for past pregnancy (in the last three years of HIV positive), prevalence of STI or STI symptom (in the 12 months preceding the survey).

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NSS has age group-wise (0–14, 15–39, 40–59, 60 years and above) gender-disaggregated data on the prevalence rate of TB (per 100,000) in its 28th round (1973/74), and in subsequent rounds (42nd and 52nd) separately in rural and urban areas. NSSO also gives similar data for cancer and sexually transmitted diseases, but not for HIV/AIDS.

National AIDS Control Organization (NACO) gives data generated through annual sentinel surveillance from its sentinel sites and also makes estimates of prevalence (separately for males and females) since 2002. The HIV sentinel surveillance obtains HIV prevalence data from ANCs and STD clinics as well as from high-risk groups (female sex workers, injecting drug users and others like those with STDs). The data are available at the state level but there is little possibility of further disaggregation due to limited background data collected as well as small sample size.

AHS collects district-wise data (all EAG states and Assam) on occurrence of different types of cancer (of respiratory system, gastrointestinal system, genitourinary system, breast). It also has information on occurrence of TB.

2.4.4. INDICATOR 4: PROPORTION OF WOMEN SEEKING AND RECEIVING HEALTH CARE

There is adequate evidence to show that prevalence of gender biases in access to health care, has an adverse impact on women's health. Furthermore, women often suffer ill-health silently, particularly when it is related to sexuality or reproduction (Bang et al., 1989).

A person is considered to have received medical treatment if he/she consults a doctor anywhere (Out Patient Department (OPD) of a hospital, community health centre, private residence) and obtains medical advice for the ailment. Self-doctoring or acting on the advice of a non-medical person is not considered as medical treatment.

NSS has data of those who received hospitalised and non-hospitalised treatments from a medical practitioner/institution (public and private). This indicates the proportion of those who received health care. As discussed earlier, in the 71st round, unlike the earlier surveys, all medication including self-medication were considered as medical treatments.

NSSO also gives the number of persons reporting 'medical treatment of ailment' during a period of 15 days per 1,000 ailing persons by age (0–14, 15–39, 40–59, 60 years and above), disaggregated by sex and region (rural/urban) across all states and UTs. It also makes available data on medical treatment of ailment across MPCE and social group (SC, ST, others), sex and across rural and urban regions of all states and UTs. NSS used the last 15 days reference period in the 52nd and 60th rounds while in the 42nd it was 30 days preceding the survey date.

In addition, NSSO records distribution (per 1,000) of treatments (not treated as inpatient of hospital) during the last 15 days by age and sex. It also reports the age (0–14, 15–39, 40–59,

60 years and above) and gender-specific proportions (number per 1,000) of any ailment (acute and chronic) during the reference period of 15 days preceding the date of survey, separately for rural and urban areas.

2.4.5. INDICATOR 5: GENDER GAP IN HOSPITALISATION

Gender gap and gender bias may exist if the rate of hospitalisation for males is different and higher than that for females. NSS is an important source of this data at the national level.

NSS, in its 42nd, 52nd, 60th and 71st rounds collected data across states about hospitalisation-persons in the household who availed medical services as an indoor patient in any medical institution. Hospitalisation of women for childbirth was not considered to be hospitalisation for the survey.

NSSO records the number (per 1,000) of persons hospitalised and their distribution across the MPCE groups during the previous year (last 365 days) separately for male/female/total population in rural and urban areas. The 42nd round did not publish any gender-specific estimates on the rate of hospitalisation, but the 52nd and the 60th rounds gave the gender differentiated estimates of hospitalisation; that is hospitalised cases (per 1,000) during last 365 days by nature of ailment (gastrointestinal, cardiovascular, gynaecological, neurological) for different age groups (0-14, 15-29, 30-44, 45-59, 60 years and above) and sex in both rural and urban areas. In the 71st round special attention was given to hospitalisation, or medical care received as in-patient of medical institutions. The ailments for which such medical care was sought was recorded and the extent of use of Government hospitals as well as different (lower) levels of public health care institutions were investigated captured in the survey. For the first time in an NSS health survey, the data collected enables an assessment of the role of alternative schools of medicine. The revised and detailed code of ailment (60 ailments) used in this round allows for ailment wise analysis, though the data cannot be compared with the earlier rounds.

2.4.6. INDICATOR 6: GENDER GAP IN OUT-OF-POCKET HEALTH CARE EXPENDITURE

Out-of-pocket expenditure in seeking and accessing health care could be incurred for hospitalised as well as non-hospitalised treatments. NSSO records average expenditures for both, incurred by both males and females separately. It also gives the average expenditure incurred for accessing health care from different sources (government/private), by region (rural and urban) in states and UTs.

NSS in its 42nd, 52nd and 60th rounds provides data related to the average hospitalisation expenditure (considering all admissions) incurred for 'hospitalised treatment during the reference period of 365 days'. It provides separate estimates for treatment of male and female patients in rural and urban areas for the country as a whole, and for all states and UTs. NSS data for 71st round also provides information on the expenditure incurred on treatment received from public and private sectors separately.

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It also gives information on the 'average expenditure for non-hospitalised treatment per ailment'. It gives the estimates of total per-ailment expenditure incurred for non-hospitalised treatment during the reference period of 15 days separately for male and female patients of rural and urban areas for the country as a whole. Data on average total expenditure (for treatment) per ailment (not treated as inpatient of hospital) during the last 15 days by age (0-14, 15-39, 40-59, 60+ years), sex, region (rural and urban), MPCE groups and social groups are also available for all states and UTs.

2.4.7. INDICATOR 7: REASONS FOR DEATH AMONG WOMEN

Reliable data on causes of death, particularly of women, is hard to come by because of lower hospitalisation, poor reporting and lack of registration of death of women.

SRS includes special surveys on causes of death to estimate deaths due to various causes. These include Survey on Cause of Deaths through Verbal Autopsy in SRS (1999/2001), Special Surveys on Maternal Mortality, Fertility and Mortality (1997/98), and Special Survey on Deaths (2001/03), all of which record causes of death. Survey of Causes of Death has been integrated with SRS from 1999 to cover all deaths in rural and urban areas. For recording of causes of death for females of ages 15-49 years, the maternal mortality survey followed the method of post-death verbal autopsy for determination of causes of death.

The maternal mortality survey made available estimates of the number of women who died every year (from 1992/98) due to various causes (abortion, toxæmia, anaemia, bleeding of pregnancy and puerperium, malposition of child, puerperal sepsis and other non-classifiable reasons). Special Survey on Deaths (2001/03), conducted during 2004/05 also provides gender-disaggregated data on various causes of deaths for different age groups (1-4, 5-14, 15-24, 25-34, 35-44, 55-69, 70+ years) for the country, regions and states.

CRS through the Medical Certification of Cause of Death reports (published since the mid-1970s) makes available statistics on causes of death obtained through the CRS under the Registration of Births and Deaths Act, 1969.

The eight leading cause-groups of deaths (87.9 per cent of total deaths) were: diseases of the circulatory system; certain infectious and parasitic diseases; injury, poisoning and certain other consequences of external causes; diseases of the respiratory system; certain conditions originating in the prenatal period; neoplasm (commonly known as cancer); endocrine, nutritional and metabolic diseases; and symptoms signs and abnormal clinical findings not elsewhere classified. CRS provides gender-wise distribution of deaths under these cause-groups; medically certified deaths by age groups for both male and females; and gender-disaggregated data across states and UTs with respect to specific infectious and parasitic diseases (tuberculosis, septicaemia, malaria, diarrhoea and gastroenteritis, and HIV) that caused death.

2.4.8. INDICATOR 8: PREVALENCE OF SURROGACY

Surrogate motherhood raises questions about gender relations, power and women's agency. In the past, surrogacy arrangements were confined to kith and kin, largely as part of a personal relationship. But, with commercialization, guided by economic inequalities, surrogacy has raised fundamental questions around women's autonomy and rights. This is particularly so, where there are inadequate legal provisions to safeguard the interests of the surrogate mother.

Though surrogate motherhood is growing in India, there is no official/national level data available. One key reason for this is the huge element of secrecy associated with it. According to data from the Indian Society of Assisted Reproduction records in 2009, there were 150 reproduction centres in the country, of which, 60 per cent were offering commercial surrogacy. However, no data is available on the number of cases handled by these centres, which is reflective of the lack of interest on the issue among policy makers. Generating data based on household sample surveys is complex as the level of secrecy involved in surrogacy is high coupled with the prevalence of few cases which such surveys cannot capture adequately. The state machinery however, could generate data based on records from hospitals/reproduction centres, which could be published periodically on a regular basis. Record maintenance may be made compulsory and it should include basic background information of the surrogate mother, which would allow gender-based interventions in terms of both regulations as well as designing programmes.

2.4.9. DATA SOURCES ON WOMEN'S GENERAL HEALTH: LIMITATIONS AND COMMENTS

Gender differentials in health can be estimated through many indicators, as discussed above. However, women's socialisation into a mindset of self-denial and the family's clear prioritization of the needs of its male members not only impacts early action on women's illness but also the quality of data generated on women's health in general.

For analysing age specific mortality, SRS surveys are useful. However, SRS cross tabulation variables have varied across years according to changing priorities, as well as contemporary perceptions. Until 1990, the broad age groups used were 0-14, 15-49, and 50+ years. From 1991, the broad age groups were expanded to 0-4, 5-9, 10-14, 15-59, and 60+ years and in 1994, another two broad age groups were added, 15-64, and 65+ years.

With improvements in general standards of living, there has been some shift in the overall health of women. However, the persistently poor status of women (girls and adult women) leads to poor outcomes in terms of food intake and timely medical attention. For girls and women therefore, poor health may well replace early death. More females therefore remain alive in the current context but they are more likely to suffer from ill health. Hence, indicators on mortality on its own fail to give any clear understanding of women's health status and its changes over time unless it is used alongside other indicators.

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The quality of the morbidity data in the NSS surveys has been criticized for its definition and methodology which leaves a lot to be desired. Both the overall morbidity rates and the rates for women are found significantly lower than that of estimates provided by field-based community-level studies. Morbidity rate as per NSS definition (PAP or proportion of ailing persons) is the estimated proportion of persons reporting ailment suffered at any time during the reference period. These are not strictly the prevalence rates as recommended by the Expert Committee on Health Statistics of the WHO. Prevalence rate is an important indicator for women in the context of increased self-denial of illness by women in general.

NSSO estimates are based on self-reported morbidity data, rather than on medical examination and therefore, the information on number of spells of different ailments suffered are not likely to reflect the objective illness-status of the patients, particularly the number of diseases a patient is afflicted with during the reference period. Under reporting of ailments is an issue, as self-reported morbidity surveys are known to under-estimate both latent illness and chronic illnesses as perception of being ill depends apart from awareness about the disease and access to care on social and cultural factors. This issue is particularly of importance for women who may under-report all or many illnesses due to their socialisation. Thus it could be concluded that the rates of female morbidity, as estimated through NSS surveys, are probably gross underestimates of the full extent of women's illness. Since an illness that is not acknowledged is unlikely to be treated, this probably means that women's untreated morbidity is also underestimated (Koenig and Khan, 2000). Field level studies have shown that non-treatment tends to be highest in the reproductive age groups (Madhiwalla et al., 2000). There could also be demographic differences in reported illness and morbidity, particularly with regard to elderly women who may not value their health condition, or who may be neglected based on the perception that they are no longer productive members.

Despite these limitations, the NSS data on untreated morbidity points to some broad trends with scope for improvement. Female morbidity is particularly sensitive to study methodologies and techniques of data collection. Women through long years of socialisation, reinforced by competing demands on their time and energy, often do not acknowledge their own health problems. It means that the full extent of women's morbidity becomes evident only when women are addressed one-to-one by women researchers/interviewers after initial rapport building. Studies have shown that such careful gender-sensitive probing is reported to have increased reporting of morbidity. NSS surveys could take a small sub-sample each round to study the underestimation and thus make corrections in its own estimations. Follow-up small studies could also be designed to probe particular issues.

The demand for health care has received relatively little attention, particularly because of the non-availability of representative household-level data sets. Out of those available, the NSS data is the most suitable. But, over the last two decades, there have been only three rounds where health care data has been collected in detail: the 42nd, 52nd, and 60th rounds conducted in 1986/87, 1995/96 and 2004/05. While the time gap of the surveys is useful in comparing changes in the utilisation rates of public and private facilities, expenditure

by households and individuals, etc., changes in questionnaire design and data collection methodology have rendered such comparative analysis difficult.

The latest rounds (60th and 71st) of the NSS included detailed questions on household characteristics, economic profile, expenditure on in-patient cases over the past year, details of diagnostic and other charges, lost income due to illness and caring for the sick, and utilisation of out-patient services due to illness with a recall period of 15 days.

However, since NSS surveys are based on the household, not much information is available on the facilities for health care. Access to quality public health institutions is a critical variable as studies have found that debilitated public health institutions may not only have a negative impact on utilisation by the poor, but may also severely impact women's access to and utilisation of care. Further for women, considerations like affordability, time, work, distances to be travelled and faith in the abilities of the health provider determine their access to and utilisation of care (Gupte et al., 1999; Shatrugna et al., 1993). However, these are not given due consideration in these surveys which is a major limitation in analysing women's access to health care.

Data on women with fatal diseases like TB, cancer, and HIV is at present limited given the poor reporting of health status of women, as has been discussed earlier. The Office of the Registrar General, India obtains data on causes of death from the Chief Registrar of Births and Deaths of different states and Union Territories. Under the system of registration of births and deaths, the scheme of Medical Certification of Cause of Death is an integral part of the procedure. The forms are filled up by the medical professionals attending to the deceased at the time of terminal illness and thereafter sent to the concerned Registrars of Births and Deaths for onward transmission to the Chief Registrar Office for tabulation as per the National List of Causes of Death based on Tenth Revision of International Classification of Disease (ICD-10). Annual reports are brought out by the CRS based on the data but the scope is somewhat limited. Only selected hospitals, mostly from urban areas, are covered at present under the scheme of MCCD, and therefore, the data may not yield a reliable pattern of cause-specific mortality prevalent in the states/country. Owing to different levels of efficiency of medical certification across the states/UTs, the number of deaths reported therein may lack the representative character in the strict sense, however, it may be sufficient to throw some valuable insights into deaths by various cause groups and their gravity.

Though sample surveys could provide good estimates of TB with its high prevalence rate across many states, estimates on diseases such as HIV and to some extent cancer would be a problem. Since there exists a gender division across types of cancer, with cancer of cervix followed by breast cancer being the common form of cancer among women, there is a need to collect information on this specificity which could then be related to specific aspects of interventions.

HIV prevalence level in India is relatively low (less than one per cent of the adult population according to the official estimate at the time), because of which very large samples would be

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required to obtain reliable estimates of HIV in individual states. Therefore, in NFHS, it was decided to design the sample to provide state-level HIV prevalence estimates only for the seven states in NFHS 3 (mentioned above—six high-prevalence and one low-prevalence) and 11 groups of states/union territories in NFHS 4.

To ensure that the state-level HIV estimates were reasonably precise, those seven states were oversampled. In the context of large-scale underreporting due to stigma, HIV incidence rates are very difficult to estimate. Further, for women, hospitalisation is not a given outcome always and hence it is difficult to arrive at any data using hospital records.

Undernutrition among women remains quite high and is a key factor in both high morbidity rates and maternal mortality rates. Though undernutrition is a function of food intake, it is also influenced by the access to basic facilities such as clean cooking fuels, toilets and safe drinking water on premises. Studies have shown a negative relationship in terms of access to these facilities and the incidence of undernutrition among women in India. Lack of access to sanitation, for instance, makes women vulnerable to infections, whereas cooking by bio-fuels exposes them to toxic pollutants and fetching drinking water from far away sources severely drain them of physical energy. Undernourishment and access to basic resources could also be a function of the household's economic situation. However, indicators on undernutrition do not give adequate importance to these variables. Access to social infrastructure should be an important indicator of women's health. Though the data on these are available, they remain underutilised in analysing the overall health status of women.

In the context of a large-scale withdrawal of the state from health sector financing and management of both infrastructure and regulations, health insurance coverage has emerged as an important component of the health system. Nationally representative survey level data on health insurance is not currently available. According to the Government (GOI 2006) public and private insurance schemes barely cover 11 per cent of the population, but gender distributions of these schemes are not known. In recent years, attempts have been made in NSS and NFHS surveys to get some data on insurance coverage. NSS is the only source of data which gives a gender-disaggregated picture. However, the data is limited as it captures only hospitalisation cases and given the poor hospitalisation rates for women in general this data is not of much use. The quality of data is also affected by the lack of knowledge on the schemes at the grass-root level. With respect to health insurance, programme level data (coverage of beneficiaries by gender across states) is available from the Rashtriya Swasthya Bima Yojana (RSBY). Though the scheme intends to cover all informal sector workers eventually, at present it is limited to certain occupations such as domestic workers, street vendors and construction workers, where there is in general a larger presence of women. Hence, this data will not provide a real picture of gender bias.

The growing importance of insurance schemes calls for regular data on its coverage not only across sex, but also other socio-economic and demographic variables. NSS health rounds could be adequately developed towards collecting such data as it already covers a large number of background information which makes required disaggregation possible.

2.5 WOMEN'S ACCESS TO HEALTHY LIVING FACILITIES

Access to basic facilities is bound to reduce women's drudgery and thus improve their health as women are either responsible for organising these or are affected badly by the outcomes. Use of traditional cooking methods with polluting fuels, poor sanitation and unsafe water has many serious health repercussions that impact women.

2.5.1. INDICATOR 1: PROPORTION USING TRADITIONAL COOKING AND LIGHTING METHODS

Access to modern sources of cooking is a gender issue since women are primarily responsible for cooking. Many households still burn wood, cow dung, coal and other traditional fuels inside their homes which are responsible for numerous health issues in women. National level data sources that give data on cooking and lighting fuel used in households are the Population Census, NSSO, NFHS, AHS and DLHS.

Census gives information on the availability of kitchen (inside the house or outside the house) and the fuel used (firewood, crop residue, cow-dung cake, coal/lignite/charcoal, kerosene, LPG/PNG, electricity, biogas and any other) for cooking.

It also provides data on availability of separate kitchens in female-headed households, as well as with respect to social groups from the 1981 Census. The 1991 Census for the first time collected information regarding type of fuel used for cooking and thereafter has continued to collect the data on type of fuel in subsequent Census years. The data is available for SC/ST separately.

NSS started collecting data on condition of the dwelling units and basic housing amenities available from its 7th round (October 1953–March 1954) to the 23rd round (July 1968–June 1969) with the exception of the 13th and 14th rounds. With bigger sample sizes, comprehensive surveys were carried out later, during the NSS 28th round (1973/74), 44th round (1988/89) and 49th round (January–June 1993). After a gap of nearly ten years, the fourth survey in the series was conducted in the 58th round during July–December 2002. The latest in the series is the 65th round (July 2008–June 2009).

The NSS gives information on whether the household has electricity facilities for domestic use. The use of the electricity for domestic use might be for lighting or cooking or for both. Number of households (per 1,000) having electricity for domestic use according to region (rural and urban) and social groups (SC/ST/OBC and others) is available for all states and UTs.

NFHS records type of cooking fuel and method of lighting (with or without electricity) used in the surveyed households. It gives the distribution of households in both rural and urban areas according to fuel used (electricity, LPG/natural gas, biogas, kerosene, coal/lignite, charcoal, wood, straw/shrub/grass, agricultural crop waste, dung cakes, and others) for cooking. In addition, NFHS also gives place of cooking (in the house in a separate room, in the house but not in a separate room, in a separate building, outdoors, etc.). In households

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using solid fuels, it also gives type of fire/stove (stove with chimney, open fire or chullah under a chimney, stove without a chimney, open fire or chullah not under a chimney).

NFHS also indicates the association between health and lighting and cooking methods, specifically by examining the prevalence of TB by type of housing and fuel/cooking arrangements. The third round included the number of persons (per 100,000) suffering from any TB and medically treated TB by fuel/cooking arrangements (cooking fuel, place of cooking, type of fire/stove among households using solid fuels).

AHS in all its rounds recorded the main source of fuel used for cooking (firewood, crop residue, cow dung cake, coal/lignite/charcoal, kerosene, LPG/PNG, electricity, biogas) for all the districts covered under the survey.

DLHS-3 (2007/08) recorded fuel used (LPG, electricity, kerosene, wood, others) for cooking both in rural and urban areas for all districts.

2.5.2. INDICATOR 2: AVAILABILITY, TIME AND DISTANCE TRAVELLED FOR DRINKING WATER

Women do most of the water collection in all households and the drudgery related to collecting drinking water is acknowledged. Census, NSS, NFHS, AHS and DLHS provide data on sources of drinking water though not all sources give information on its availability – at premises or outside and distance from home to source.

Census has been providing information on availability of amenities like drinking water in households since 1981, but details that may indicate quality (treated/untreated, covered/uncovered) as well as availability within premises (indicating increased time availability as well as reduced drudgery of water collection for women) was covered for the first time in the 2011 Census. Data is available for all states and UTs up to ward and village levels with rural-urban bifurcation.

Census 2011 gives details on source of drinking water¹² and drinking water availability (within premises, near the premises, away). However, it does not have data on who fetches water, distance, or time taken to fetch water.

NSS has collected data on drinking water beginning from the 28th round (October 1973–June 1974), followed by the 38th (January–December, 1983), 42nd (July 1986–June 1987), 44th (July 1988–June 1989), 49th (January–June, 1993) 54th (January–June, 1998), 65th (July 2008–June 2009) and the 69th (July–December 2012).

From the 54th round, more comprehensive details on the principal source of drinking water in rural and urban areas and proportion of households having a specific source (tap, tube

¹²The Census 2011 gives details on source of drinking water, which includes tap water (separately from treated and untreated source), wells (covered and uncovered), hand pump, tube well/bore hole, spring, river/canal, tank/pond/lake, and others.

well, etc.) were brought out. It also recorded households having the principal source within premises as well as distance from source for those households without a source within their premises. NSSO in the 69th round (2012) also specified the distances (less than 0.2 km, 0.2–0.5 km) that household members had to travel to reach the principal source of drinking water in rural and urban areas for all states and UTs; average time (in minutes) taken in a day; average waiting time (in minutes) by household members to fetch drinking water from outside the premises; and information on household members who fetched water from outside premises (male of age below 18 years, male of age 18 years or more, female of age below 18 years, female of age 18 years or more, non-member of the household, hired labour, others).

NFHS in all its rounds has collected information (not presented in the report) on source of drinking water¹³ available to members of the household and; time taken for one round trip for collecting water. For getting the time dimension, the question asked in NFHS-1 and 2 was: ‘How long does it take to go there, get water and come back in one trip?’. NFHS-3 and 4 also collected information on the person who usually did the task (for households that do not have drinking water within their premises).

DLHS-1 collected information on source of drinking water in households. DLHS-2 detailed data on access to drinking water with respect to percentage of households with tap (inside residence/yard/plot), with access to tap (shared/public), hand pump/bore well, well (covered), well (uncovered), river, pond, spring, and others. DLHS-3 bifurcated sources into improved (piped water into dwelling/yard/plot, public tap/standpipe, tube well/borehole/hand pump, other improved) and unimproved sources.

AHS in its baseline survey (2010/11), has region-wise (rural and urban) data on households with improved source of drinking water for all districts surveyed in the eight EAG states and Assam. Sources include piped water into dwelling/yard/plot, public tap/stand pipe, hand pump, tube well/borehole, protected dug well, unprotected dug well, tanker/truck or cart with small tank and surface water.

2.5.3. INDICATOR 3: PROPORTION OF WOMEN HAVING ACCESS TO TOILETS

Many data sources give information on whether households have access to toilet facilities, but not whether women specifically have access. For the purpose of this analysis, we assume that women have access to toilets if households have access to them. Important sources of data that provide information on whether women have access to toilets include the Population Census, NFHS, AHS and DLHS.

Census collected information on availability of toilet facility for the first time in the 1981 Census – however, it was limited to urban areas. It was extended to rural areas in 1991

¹³The sources were: piped water (piped into residence/yard/plot, public tap), ground water (hand pump in yard/plot, public hand pump), well water (well in residence/yard/plot, public well), surface water (spring, river/stream, pond/lake, dam), rainwater, tanker truck, others.

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and was further improved in the 2011 Census by giving information on whether there was 'latrine' access within the household premises. Census also gives information with regard to latrine facilities in female-headed households, as well as with respect to social groups from the 1981 Census.

NSS, as discussed earlier, started collecting data on housing condition of the dwelling units and basic housing amenities from its 7th round. This provided data on bathing and latrine facilities separately for all households surveyed across all states and UTs, with possibility of disaggregation for rural/urban as well as social groups (SC/ST/OBC/others).

In the recent rounds, data on bathroom includes type of bathroom: attached, detached and no bathroom. NSS also gives the distribution of households (per 1,000) having bathroom within premises; no bathroom by distance (less than 0.2 km, 0.2–0.5, 0.5–1.0, 1.0–1.5, more than 1.5 km) of the dwelling from the bathing place; and by use of latrine (exclusive, shared, service, public/community, no latrine).

NFHS rounds provide information on percentage of households that have access to toilet facilities in rural and urban areas. The type of toilet facility is given under two heads: improved/not shared and unimproved. Improved toilet facilities include toilet facilities with a flush or a pour flush that is connected to a sewer system, septic tank or pit latrine; a ventilated improved pit (VIP) latrine; a biogas latrine; a pit latrine with slab; and a twin pit, composting toilet. However, if a household has any of these types of toilet facilities but shares them with other households, it is considered not to have an improved toilet facility.

AHS records the type of toilet facility mainly used by households (flush/pour flush latrine-connected, pit latrine without flush/pour flush, service latrine, community toilet, open defecation) and also whether toilet facility was shared. The data is available till the district level for rural and urban areas for selected states.

DLHS-3 provides information on percentage of households that have access to toilet facilities in rural and urban areas for all districts. The DLHS bifurcates information on sanitation facilities in households in to: improved sanitation (households are using flush connected to piped sewer system, flush to septic tank, flush to pit latrine with slab, pit ventilated and others) and not improved sanitation (households are using flush not connected to piped sewer/septic/pit/twin pit; pit without slab; dry toilet; no toilet/open space).

2.5.4. DATA SOURCES ON WOMEN'S ACCESS TO HEALTHY LIVING FACILITIES: LIMITATIONS AND COMMENTS

Though women's access to social infrastructure is understood to contribute to their well-being, it has often been ignored in the analysis on women's health. Lack of basic amenities like toilets, electricity, drinking water, and modern cooking methods (and fuels) inevitably lead to extra burden on women as making these available for households (particularly fuel and drinking water) are exclusively their responsibility.

There has been a dearth in macro level data on analysing these though many micro level studies have brought out useful insights. All the available data sources on access to basic living facilities are for the household and the data is not disaggregated by sex, even for toilet facilities. All the surveys seem to assume that if a household has access to toilet, women will automatically be using these, which may not be the reality. Another important limitation of the existing data sources is that they do not take into account the use of multiple methods. Thus, for cooking and drinking water many households may rely on a combination of sources that may vary across seasons, and unless data on each of these dimensions are available any analysis would be incomplete. The Census, alongside NSS, surveys can be developed as a good source of data on women's access to basic facilities with required improvement in their methodologies.

2.6 WOMEN WITH DISTINCT NEEDS AND VULNERABILITIES

Women with disabilities (either physical or mental health issues) constitute a group with distinct needs, vulnerabilities and ability to respond. This broad sub-theme, covers two issues: (a) Women with Physical Disabilities and (b) Mental Health of Women.

2.6.1. INDICATOR 1: PROPORTION OF DISABLED WOMEN AND DISTRIBUTION BASED ON NATURE OF DISABILITY

Census brings out extensive data on disability and gives us the actual picture of both the proportion of disabled women as well as distribution across various types of disabilities. Till 1931, the Census had a question related to 'infirmities' which was discontinued during the Censuses of 1941 to 1971. There was an attempt to get information on 'disability' in the 1981 Census by asking a question on three categories of disabilities—Totally Blind, Totally Dumb, Totally Crippled; but it was dropped in 1991. The 2001 Census increased the scope of information on disability by collecting information on total or partial disability and type of disability under five heads – Sight, Speech, Hearing, Movement and Mental illness. The 2011 Census substantially increased the scope of information on disability by including information on disabled population (for rural and urban separately) by type of disability, age (0–4, 5–9, 10–19, 20–29, 30–39, 40–49, 50–59, 60–69, 70–79, 80–89, 90+ years) and sex for all districts across states and UTs. In addition, it also makes available information on disability for Scheduled Castes and Scheduled Tribes.

The types of disability covered by the 2011 Census include disability in seeing, hearing, in speech and movement; mental retardation; mental illness; any other and multiple disability. In the case of multiple disabilities, there was a provision for recording a maximum of three types of disabilities.

NSS provides extensive information on the magnitude and other characteristics of disabled persons based on its third survey (58th round) on disabled persons conducted during July 2002 to December 2002. The previous two surveys on the theme were conducted during the 36th round (July–December, 1981) and the 47th round (July–December, 1991).

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NSSO defines a person with restrictions or lack of abilities to perform an activity in the manner or within the range considered normal for a human being as having disability. It excludes illness/injury of recent origin (morbidity) resulting in temporary loss of ability to see, hear, speak or move. NSSO gives the prevalence and incidence of different forms of disability and the distribution of disabled by cause of disability, marital status, educational level, living arrangement and activity status across sexes. NSS also makes available the number of disabled persons by age at onset of disability per 1,000 disabled persons for each age group and type of disability. Gender-disaggregated data is available separately for rural and urban areas.

AHS collected data on any type of disability as on the date of survey. The type of disability included visual, hearing, speech, locomotor, and multiple. The prevalence of any type of disability per 100,000 population by gender and residence at the district and state levels is available from AHS, but the reports do not give prevalence of each type in the population.

2.6.2. INDICATOR 2: DISABLED WOMEN RECEIVING WELFARE ASSISTANCE

Tracking the outreach of welfare schemes and provisions for people living with disability is critical for ensuring that they receive the support they need.

NSSO is the only national level data source that covers information on this and has estimated the number of persons receiving aid/help by sex and geographic location (rural and urban).

NSS calculates the number of persons who have received any government aid/help (RGAH) per 1,000 disabled persons of age five years and above (RGAH rate) and distribution of such persons (male, female, person) by type of aid/help received by sex and type of disability (mental retardation, mental illness, blindness, low vision, hearing, speech, locomotor). Type of aid/help could be from government or other sources. From the government, the help/aid recorded are: vocational training, aid/appliance, corrective surgery, government/semi-government job, or other help.

Since the raw data is available for recent rounds, it is possible to carry out disaggregate analysis across background data collected. Such data disaggregated by sex is of utmost relevance for gender-sensitive policy interventions.

2.6.3. INDICATOR 3: PROPORTION OF WOMEN WITH MENTAL HEALTH ISSUES

Many women are affected by mental health issues, but the real magnitude may be much higher than reflected in reported data and available official statistics. This is due to the nature of illness, as well as the associated shame and stigma across socio-economic categories. Both the Census and NSSO makes available data on mental health issues.

Census, as discussed earlier, for the first time in 2011 gathered extensive information on mental health issues, providing data separately for 'mental retardation' and 'mental illness'.

Sex disaggregated mental retardation and mental illness data is available for rural and urban areas according to age groups (0–4, 5–9, 10–19, 20–29, 30–39, 40–49, 50–59, 60–69, 70–79, 80–89, 90+ years) for all districts across states and UTs. In addition, it also provides mental illness and mental health status separately for males and females among Scheduled Castes and Scheduled Tribes.

NSS captures the number of persons who had difficulty in understanding routine instructions, who could not carry out their activities like others of similar age or exhibited behaviours like talking to self, laughing, crying, staring, violence, fear and suspicion without reason. NSS categorised them as mentally disabled. The ‘activities like others of similar age’ included communication (speech), self-care (cleaning of teeth, wearing clothes, taking bath, taking food, personal hygiene), home living (doing some household chores) and social skills. Mental retardation among the disabled was estimated for the first time in the 58th round.

Like Census, NSS has separated data with respect to mental retardation and mental illness, and included more detail. It provides the number of persons suffering from mental retardation and mental illness per 1,000 disabled persons for each age group (0–4, 5–9, 10–14, 15–19, 20–24, 25–29, 30–34, 45–39, 40–44, 45–49, 50–54, 55–59, above 60, 15+ years) by usual activity status (employed: self-employed in agriculture, self-employed in non-agriculture, regular employee, casual labourer; unemployed; not in labour force: attended educational institution, attended domestic duties, beggar, others) separately for male and females in rural and urban areas. It captures the number of mentally ill persons (per 1,000) by age, at onset of mental illness across background variables. It also includes data on the cause of mental retardation– pregnancy and birth related, serious illness during childhood, head injury, heredity, others, not known per 1,000 persons.

AHS includes data on prevalence of any type of disability per 100,000 population by gender and residence at the district and state levels. AHS has collected data on mental disability as on date of survey, but it is not presented separately and is clubbed along with other disabilities.

2.6.4. INDICATOR 4: PROPORTION OF WOMEN WITH MENTAL HEALTH ISSUES SEEKING AND ACCESSING HEALTH CARE

Some of those suffering from mental health issues may be accessing facilities from institutions catering to their special needs, including those of health care, but many may not be able to do so because of various reasons, including lack of family support.

NSS in its 58th round makes available data regarding the number of mentally retarded persons attending special schools (per 1,000 mentally retarded persons) as well as those who have taken treatment (consulted doctor/other) in the past or those who are undergoing treatment (consulted doctor, other) for each age group (0–4, 5–9, 10–14, 15–19, 20–24, 25–29, 30–34, 35–44, 45–59, 60 and above, 15 and above years). NSSO provides data with respect to this at the national level (separately for rural and urban), but there is no gender-wise information from the published reports; it is however possible to carry out disaggregated analysis as raw data is available.

2.6.5. DATA SOURCES ON WOMEN WITH DISTINCT NEED AND VULNERABILITIES: LIMITATIONS AND COMMENTS

Census and NSS are the two main data sources on disability. Their major limitation is the exclusion of many disability categories. There has been a change in the approach to the question of disability in these data sources over time, from a medical model to a social model. However, the entire gamut of the social model is yet to find a place as they still do not recognise disability as arising from the interaction of a person's functional status with the physical, cultural and policy environments.

Both these data sources categorize the nature of disabilities based on The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (PWD Act), which is reported to be a limiting factor especially in the context of definitions. NSS definition of disability is a person with restrictions or lack of abilities to perform an activity in the manner or within the range considered normal for a human being. It excludes illness/injury of recent origin (morbidity) resulting in temporary loss of ability to see, hear, speak, or move. In the Census, there is no one definition of disability but it is defined through various categories in different rounds as discussed previously.

Mental disability is a cause of concern across both the surveys. As per Census 'a person who lacks comprehension appropriate to his/her age will be considered as mentally disabled.' However, it clarifies that this would not mean that a person not able to comprehend his/her studies appropriate to his/her age and failing to qualify examination is mentally disabled. NSS defines mental disability as persons who had difficulty in understanding routine instructions, who could not carry out their activities like others of similar age or exhibited behaviours like talking to self, laughing/crying, staring, violence, fear, and suspicion without reason. The 'activities like others of similar age' included activities of communication (speech), self-care (cleaning of teeth, wearing clothes, taking bath, taking food, personal hygiene, etc.), home living (doing some household chores), and social skills. Both these definitions are vague and much is left to individual and social perceptions.

The method of questioning on disability in both Census and NSS is also problematic as it relies on a traditional diagnostic identification of disability. This approach is said to give the lowest estimates, as per a study conducted by World Bank (2009). Further, since the data are collected by non-medical investigators, who are untrained for such interviews, it is imperative to define disability in a very careful and guarded way to minimize the bias of the investigators and respondents.

Another issue is that there has been no continuity in terms of data available. The data collected through Censuses of 1872 to 1931 were not considered reliable and hence the question was dropped from 1941 to 1971. The definitions and categories followed in the Censuses have also varied across years, rendering any comparison over time difficult or meaningless. Many experts believe that the Census is not the appropriate medium to canvass the question on disability as the data would largely depend on the quality of canvassing

these core questions. They argue that the definitions of disabilities are too complex to be understood by the respondents and the enumerators.

In the context of NSS, the sample size is an issue. Persons with disabilities account for less than two per cent of any population, so unless the survey is very large, the sample size of persons with disabilities will be small. For women, the problem is more severe because of the issue of underreporting. Hence, unless special efforts are made to collect information on disability in general and on women in particular, NSS will not be able to provide gender-sensitive data. Though care has been taken on this aspect, it is still an issue.

Because of the above problems, the nature and quality of data provided by these two data sources is often described as limiting, despite substantial changes over time both in terms of concepts/definition and quality of data collection. Admittedly, the issue itself is riddled with complexities. Certain types of disabilities are stigmatized by many societies and so there exists a general tendency to withhold information, especially in the context of women, which affects the quality of data, though the questions canvassed are clear. Further the perception and response of respondents is taken as final without any cross-checks, resulting in biases.

Apart from the indicators listed above, there are a few specific indicators on disability that are important from a gender-sensitive perspective. The most critical is old age disability. Since women have longer life expectancies than men, inclusion of old age disabilities is very important. None of the current surveys focus on it. Another aspect that needs to be captured is the level of assistance required. This is a key gender-sensitive indicator as care giving revolves around women and hence women with disabilities in many cases do not get access to care. However, data is completely missing on this aspect.

Coverage is also poor in the context of institutionalized persons, the homeless, refugees or nomadic populations where many women may be found. These institutions need to be specially targeted for generating rich gender-sensitive data.

Data generated on welfare assistance is not adequate. Though NSS provides estimates on access, it does not give information on the details of the assistance, except the source of such help. Gender differences surely exist in terms of access to programmes of a particular kind. Basic information on the actual programme assistance could be collected by the NSS through a few additional questions which could give more insights into the gender aspect of this issue.

Apart from these large-scale surveys, which are required to provide a macro picture, there is a need to formulate regular detailed small surveys which have a clear gender component. Such surveys should be carried out by trained investigators under close supervision, and the learnings from these surveys should then feed into large scale surveys to improve their coverage and quality.

Chapter 3

EDUCATIONAL STATUS OF WOMEN

Education is a basic human right protected by the Constitution of India and the State is therefore duty-bound towards ensuring equality in educational opportunities. Though there has been significant improvement in educational development over the decades since the Constitution was adopted, the goals of universal elementary education and basic literacy for all have remained elusive, with girls and women being the most deprived. Numerous studies have substantiated the linkages between women's educational levels and their status. Women's educational opportunities and attainments are important indicators as well as instruments of gender equity.

Gender gap exists at every level of education in India, and is reflected in the low literacy, enrolment and completion rates. As one goes upwards in the education ladder, the gap widens and there is a low visibility of women in certain streams of education. It is also a matter of concern that the magnitude, form, and causes of this gender disparity are still less understood and not captured effectively in the multitude of data available.

Under the theme of Education for Women, there are three sub-themes:

- ➔ Gender Gaps and Biases in Schooling
- ➔ Enabling Factors
- ➔ Gender Gaps and Biases in Higher Education.

The indicators of each sub-theme are given in Chapter 1, Table 1.1

DATA SOURCES

The major data sources on indicators concerning education are the Population Census, National Sample Survey Organization (NSSO), and National Family Health Survey (NFHS). The Ministry of Human Resource Development (MHRD) also provides crucial information on education at different levels through reports and annual publications like Selected Educational Statistics. Other data sources on educational indicators are the All India School Education Survey (AISES), the Annual Status of Education Report (ASER) and the District Information System for Education (DISE) database prepared by the National University of Educational Planning and Administration (NUEPA).

3.1. GENDER GAPS AND BIASES IN SCHOOLING

Discrimination against girls in educational opportunities begins with enrolment in primary schools. Even if they are enrolled, chances of continuation and completion at various levels of schooling remain a concern. Indicators to capture some of the striking gaps are discussed in the following sections.

3.1.1. INDICATOR 1: LITERACY RATE

Literacy rate shows the total percentage of the population, above a certain minimum age, who can read and write. Gender gap in literacy is the difference between the male and female literacy rates. The major data sources for this indicator are Population Census, NSSO and NFHS.

Queries on literacy levels have been part of the Population Census from pre-independence times, though the questions and approach may have changed. In the 1881 Census, the uneducated were asked whether they were “able to read and write”. From 1901 to 1941, the literates were asked if they were “literate in English”. Since then the information available is more detailed and covers many aspects.

The Census gives the literacy rate disaggregated by sex separately for rural and urban areas up to ward and village levels across states and UTs¹; and, since 1961, literacy rates across both sexes among SCs and STs for both rural and urban areas. Literacy rates are also available for different age groups (5–9, 10–14, 15–19, 20–24, 25–34, 35 and above, all ages, 5 and above, 10 and above, 15 and above years). Though information on religion has been collected since independence (Bose, 2005) there was no cross-tabulation (with literacy) until 2001.

NSSO conducted the survey on participation in education and expenditure on education as part of its social consumption surveys in the NSS 35th (1980/81), 42nd (1986/87), 52nd (1994/95), and 64th (2007/08) rounds using separate survey schedule which allows for gender disaggregated analysis.

NSS also collects data on literacy in the employment/unemployment rounds. Its quinquennial surveys on employment and unemployment provide data on educational attainment and educational attendance of the population. The coverage is good as it collects information from more than 100,000 households and about 500,000 persons.

Beginning with the 38th (1983)², NSS provided gender-disaggregated literacy rate for all ages (age 0 and above); in the 42nd (1986/87), 43rd (1987/88), 50th (1993/94), 52nd (1995/96), and 55th (1999/2000) rounds, it gave literacy rate for all ages (age 0 and above) and for ages 15 and above; from the 61st round (2004/05) onwards, it included estimates for ages seven and above.

¹Some years excluded a few states: Assam (1981), Jammu and Kashmir (1991) and certain districts of Manipur (2001 and 2011).

²1980/81 data was not published by NSSO.

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Since unit-level data are available for NSS surveys since the 38th round, it is possible to do an analysis of the literacy gap across many parameters, such as household types (self-employed in non-agriculture, agricultural labour, other labour, self-employed in agriculture and others in rural, self-employed, regular wage/salary earning, casual labour, and others in urban); social groups (SC, ST, OBC, others); size/class of land possessed (< 0.01 ha, 0.01–0.4, 0.41–1.0, 1.01–2.0, 2.01–4.0, 4.01 or more in rural alone); religion (Hinduism, Islam, Christianity, Sikhism, Jainism, Buddhism, others); employment status; industrial and occupational classifications; and consumption and expenditure quintiles. Household and individual-level data are available from social consumption surveys for the latest two rounds which allows for gender-wise analysis across various parameters.

NFHS has defined basic literacy as the ability to read and write. Literates, therefore, include those who could read a whole sentence or part of a sentence and those who completed standard six or higher. It records literacy according to age groups (6–9, 10–14, 15–19, 20–29, 30–39, 40–49, 50+ years) separately for males and females in households surveyed in urban and rural areas in all three rounds for all states. In NFHS-1 and NFHS-2, categorisation of females age 6+ into literates and illiterates were based on self-reported literacy; first, respondents were asked whether they had ever attended school, and if not whether they could read or write. If they had attended school and had only completed 0–5 Grade, then they were asked whether they could read or write, based on which they were categorised into literates and illiterates. In NFHS-3 and 4 respondents who had not completed at least standard six were given a literacy test.

3.1.2. INDICATOR 2: ADULT LITERACY RATE

India has the largest number of illiterate adults in the world (about 287 million in 2012) according to UNESCO. Illiterate adults are an indication of missed schooling opportunities.

Adult literacy rate is the literacy rate with respect to population of age 15 and above. The gender gap can be calculated from the difference between male and female adult literacy rates. Adult literacy rate data is available mainly from the Census and NSSO.

Adult literacy rates from the decennial Census are available from 1961 onwards up to ward and village levels. As mentioned above, literacy rates were cross-classified according to caste groups from 1961, and according to religious groups from 2001.

NSS defines adult literacy rate as the literacy rate for population of age 15 and above years. Literacy rate of 15+ years age group by sex is available for rural and urban areas from various rounds, as discussed in the previous section.

3.1.3. INDICATOR 3: GROSS ENROLMENT RATIO

The gender gap in enrolment can be ascertained through difference between male and female enrolment ratios. The Parliament of India passed the Right to Education Act in 2009, guaranteeing free and compulsory education to all children in the age group 6–14 years. Although this implies that there should be no gender gap in enrolment in primary

to secondary education, the reality is different, as can be seen in the official statistics on enrolment available from MHRD, which gives gross enrolment ratios.

Gross Enrolment Ratio (GER) for each class-group is the ratio of the number of persons enrolled in the class-group to the number of persons in the corresponding official age group. Data on enrolment are brought out mainly by NSSO and official agencies and departments under the MHRD.

MHRD's official educational statistics are based on data collected by the Department of Education across states and UTs on an annual basis and passed on to the Ministry.³ MHRD's Statistics of School Education gives gender-wise data on persons enrolled in an educational institution from primary onwards through GER: class I-V (in ages 6-10 years), class VI-VIII (11-13 years), class I-VIII (6-13 years), class IX-X (14-15 years), class I-X (6-15 years), class XI-XII (16-17 years), class IX-XII (14-17 years), class I-XII (6-17 years). Gender-wise gross enrolment ratio for SCs and STs is available from 1980/81 to 2010/11.

The All India School Education Survey has data on primary school enrolment, class-wise (I, II, III, IV, V, and I-V) for students (boys, girls, total) across all states and UTs; and enrolment of girls as a percentage of boys across SC, ST, OBC and Muslim (minority religious group) enrolment .

The first AISES was conducted by National Council of Educational Research and Training (NCERT) in 1957. The survey is conducted with the assistance of state education departments at a gap of five years. However, the sixth round (1993) and seventh round (2002) were conducted after considerable gaps. The eighth round was conducted in 2009. Since the sixth round, the data have been computerized, making it available at school, block, district, state and national level. The seventh round also gives enrolment figures with respect to children with disability in recognised schools.

The District Information System for Education from National University of Educational Planning and Administration is a school-based computerized information system, which was born out of the need to develop a sound information system essential for successful monitoring and implementation of the District Primary Education Programme (DPEP). The first version of the software named DISE was released by NIEPA (now NUEPA) during the middle of 1995. After 2001, DISE was extended to non-DPEP states and from primary to the entire elementary level of education. By 2005/06, 604 districts across 35 states and UTs were covered under DISE providing comparable data over time. DISE is unique as it provides data aggregation at multiple levels, making possible comparable analysis at the school, cluster, block, taluk, mandal, district, state and the national level. The data are available online.

³MHRD data are collected through prescribed formats. The primary data collected from educational institutions are aggregated at the block level but the reporting is done at the district level. Unrecognised institutions are excluded for enumeration purposes.

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DISE defines enrolment in primary education (Grade I–V), regardless of age, as a percentage of the eligible official primary school-age population (6+ to 10+ years) in a given school year. NUEPA releases statistics on enrolment based on DISE which makes available grade-wise and level-wise enrolment across sex and also of children with disabilities at primary (Grade I–V) and upper primary (Grade VI–VIII) levels. It provides data on girls' enrolment in SC and ST in Grade I–V, VI–VIII and I–VIII), OBC and Muslims; and also percentage of female enrolment and ratio of girls to boys enrolment or the gender parity index.

DISE was modified in 2012/13 following the recommendations of the Expert Group on Creation of Unified System of Data Collection for School Education Statistics. Since then, all MHRD statistical publications on school education have been based on Unified DISE (UDISE) data. UDISE gives enrolment data for Grade I–V, VI–VIII and I–VIII alongside enrolment in Grade I and percentage of girls' enrolment in total, disaggregated by social groups.

NSS data on enrolment and attendance is available in the 42nd (1986/87), 52nd (1995/96) and 64th (2007/08) rounds. NSS collects information on persons in the age group of 5–24 years, except the latest round which covers the age group of 5–29 years. It thus provides data on gender disparity by current enrolment for India and states. The possibility of social group-wise analysis is limited because of the small size for a particular age category. The NSS Employment and Unemployment Survey rounds, on the other hand, have data only on “current attendance in educational institution” from early rounds like the 43rd (1987/88) and also in recent rounds: 61st (2004/05), 66th (2009/10), and 68th (2011/12), in which there are two categories: currently attending and currently not attending (currently attending is divided into two categories never attended, ever attended).

ASER brings out annual data on enrolment sourced from school-based enrolment data (from school registers) as well as on the basis of data from households. ASER data is based on annual surveys conducted since 2005 by NGO Pratham in all rural districts of India.⁴ ASER's estimates of children's enrolment are considered reliable. Since it is designed as a household-based survey so as to include all children—those who have never been to school or have dropped out, as well as those who are in government schools, private schools, religious schools or anywhere—else the coverage is complete. The data from household surveys begins right from pre-school level: children between ages 3–6 attending an anganwadi (run by ICDS), balwadi, or nursery/LKG/UKG and for all school going children (5–16 years). ASER's data on the enrolment of children in the 6–14 and 7–16 age group is available annually from 2005 for all states and India (for rural). It gives the percentage of girls and boys in different types of schools: government, private, others (like madrassas and schools run as part of the Employment Guarantee Scheme) and not in school (dropped out + never enrolled) age-wise (7–10, 11–14 and 15–16 years).

⁴In each rural district, 30 villages are sampled, the villages being randomly selected using the village directory of the 2001 Census and sampling is done using the PPS (Probability Proportional to Size) sampling technique. In each village, 20 randomly selected households are surveyed. This process generates a total of 600 households per district, or about 300,000 households for the country as a whole. Approximately 700,000 children in the age group 3–16 who are residents in these households are surveyed and information on schooling status is collected for all children living in sampled households.

3.1.4. INDICATOR 4: NET ATTENDANCE RATIOS (NAR)

Attendance refers to whether a person is currently attending an educational institution or not. Attendance is a better measure of learning (though not sufficient to ensure learning) than enrolment, though even attendance cannot guarantee learning (ASER, 2011).

The Population Census collects information on “status of attendance”. Surveys by NSSO, NFHS and ASER also emphasize on attendance and give indicators of attendance—for example, gross attendance ratio, net attendance ratio, etc. In this section, we restrict our discussion to attendance ratios.

The Census makes available attendance in educational institution for all ages, by gender for rural and urban areas up to village and ward levels across all states and UTs from which gender gap can be calculated.⁵

The Census started collecting information on “attending school/college” from 1981. In 2001, “vocational”, “other institute”, and “literacy centre” were added to type of education institutions attended. In 2011, data on attendance in “special institutions for disabled” was collected under “status of attendance in educational institution”. In addition, for those who were not attending any educational institution, provisions were made for collecting information on those who have either “attended any institution before” and also for those who have “never attended” any institution. The Census also provides school attendance by social and religious groups (from 2001). For age group 5–19 years, there is also cross-classification by work participation.

“Current attendance”, according to NSSO, refers to whether a person is currently attending any educational institution or not. While every person who is attending an educational institution is necessarily enrolled in that institution, it may so happen that a person who is enrolled is not currently attending the institution. It collects data on current attendance from the 52nd round (1995/96). Net attendance ratio for a particular level of education has been defined by NSSO as the ratio of number of persons belonging to a particular age group with current attendance in that particular level and estimated persons in that specified age group. Since raw data are available, disaggregation across male and female for different categories of educational level is possible across locations. Though further segregation across household characteristics is also feasible, given the small sample size such analysis is difficult. Comparatively, the 64th round (2007/08) with its focus on education, allows more detailed analysis of level of current attendance by household’s monthly expenditure, and also for each social (SC, ST, OBC, others) and religious groups (Hindu, Muslim, Christian, etc.) at the national level.

⁵Population attending ‘school’ include all persons attending educational institutions from Kindergarten/Nursery/Montessori level to XII standard and also those receiving school level education through correspondence/open school as well as reformatory/certified schools. Even in states and UTs where the Plus 2 classes are referred to as ‘Junior College’ are treated as school; A person attending ‘college’ or university or any such private (recognised or unrecognised) institution that ultimately resulted in award of Graduate or Postgraduate Degree recognised by the government or university or any other agency authorized by government were considered as attending college (also included correspondence course of a recognised university/open university or institute). Those attending ‘vocational training’ or attending vocational/professional courses was under ‘vocational’ category. (ORGI 2011:58–59).

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Comparative analysis on attendance can be made for both male and females according to region (rural/urban) using the 52nd (1995/96), 64th (2007/08), 66th (2009/10) and 68th rounds through NAR.

ASER has data on attendance through “per cent enrolled children present” annually since 2005. Thus, it provides annual data on attendance for Standard I–IV/V as well as for I–VII/VIII and attendance of children (and separately for boys and girls) in the school going age group 6–14 and 7–16 years.

The NFHS, since its first round (1992/93), reports the percentage of population aged 6–14 years attending school by sex, residence (rural, urban) for all states. It also gives attendance by age groups (for 6–14, 6–10 and 11–14 years). NFHS-2 also gives data on attendance by age groups in a similar manner. NFHS-3 and 4 give more detailed information including attendance ratios like the NAR as well as gender parity index for primary, middle, secondary and higher secondary levels. NFHS-3 and 4 make available gender-disaggregated attendance by age groups (6–10, 11–14, 15–17 years) for rural and urban areas.

3.1.5. INDICATOR 5: DROPOUT RATES AT PRIMARY LEVEL

A student who has enrolled in an educational institution but stops attending it after a while for any reason is labelled a dropout. Dropout rates at primary levels are brought out in MHRD and ASER surveys.

MHRD defines dropout rate as the percentage of students who drop out from a given grade or cycle or level of education in a given school year. It gives gender-wise data on dropouts at various levels through annual publications like Selected Educational Statistics.

The data on dropout rates of students in all categories (girls, boys, total) in primary level (I–V) are available from 1960/61 onwards, up to 2010/11 and for SC and ST (level-wise) with gender disaggregation from 1990/91 onwards to 2010/11.

NSSO defines dropout to include: (i) one who has discontinued education before completing the last level of education for which he or she was enrolled or (ii) one who has discontinued education before attaining a specific level.

NSSO does not give dropout rates separately for the primary level (though it gives for the middle level in later rounds) because of the methodology that it follows.

But in all its education rounds it gives the distribution of dropouts by level of education and proportion of dropouts from all levels, separately for males and females in rural and urban areas across all states and UTs. It also has distribution (per 1,000) of dropouts by reason for dropping out for states and UTs, separately for males and females in rural and urban areas. The listed reasons are: no tradition in the family, children not interested in studies, parents not interested in studies, inability to cope with or failure in studies, unfriendly atmosphere at school, education not considered useful, schooling/higher education facilities

not conveniently located, has to work for wage/salary, has to participate in other economic activities, has to look after younger siblings, has to attend to other domestic activities, financial constraints, completed the desired level, awaiting admission to the next level, others. Though analysis across household characteristics is feasible since the 52nd round, the small sample size is a major issue.

ASER brings out data of children not in school. This includes those who dropped out and those who have never enrolled. For age group 6–14, if the child had never been enrolled in school she/he is marked as “never enrolled”. A child who has dropped out, is listed as a “dropout” and the level/class in which the child was studying was also recorded, irrespective of passing/failing, along with the year of leaving school, which could be used to estimate dropout rates for the primary level.

3.1.6. INDICATOR 6: PRIMARY COMPLETION RATE (PCR)

Progress in universal primary education can be judged by enrolment ratios, but effectiveness of education imparted may be ascertained through primary completion rates. Primary education corresponds to the first four or six years of education. Therefore, if enrolment had taken place when a child is between six and nine, the completion of primary education (class V) should take place by the time the child is 12–15 years (Husain and Chatterjee, 2009).

PCR is the percentage of students completing the last year of primary school. It is calculated by taking the total number of students in the last grade of primary school, minus the number of repeaters in that grade, divided by the total number of children of official graduation age.

Data on PCR are brought out by MHRD. NSSO gives completed educational level. NFHS and Census also give related information but not completion rates.

MHRD gives the gross completion rates at primary level (Grade V) where the official graduation age is 10+. MHRD has primary completion rates from 1971 onwards, annually, but it does not have gender-disaggregated PCR.

While NSS does not provide primary completion rates, it gives completed educational level (the highest level a person has completed successfully or the “stage of educational attainment”) from which it may be possible to calculate PCR by making relevant assumptions. A person is considered to have attained that level of education only if he/she has successfully passed the final year of a given level. NSSO gives ever-enrolled persons aged 5–29 years by age group (5, 6–10, 11–13, 14–15 years,...) for each completed level of education. The data are available for males and females in rural and urban areas. Educational levels disaggregated by caste and religious groups are also available from the 42nd round (1986/87) and in subsequent rounds on education like the 52nd and 61st. Studies have used NSSO rounds to understand primary completion rates across time (Husain and Chatterjee, 2009)

The NFHS has recorded education levels of household population across its three rounds through its household and women’s questionnaires, which ask if the respondents have

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ever attended school and about the highest grade completed, and highest degree obtained. According to NFHS, “primary school complete” means 5–7 completed years of education; it gives distribution (per cent) of population in rural and urban areas who have completed primary school according to sex and age groups (6–9, 10–14, 15–19, 20–29, 30–39, 40–49, 50+ years).

The Census does not give primary completion rates, but provides data on the highest educational level attained and the number of males and females in the population who have completed primary level in the population, cross-classified by age groups across rural and urban areas. The highest educational level attained by a person who is still studying in a particular class, is the one that she/he has actually passed and not the one in which she/he is studying.

3.1.7. INDICATOR 7: DROPOUT RATES AT SECONDARY LEVEL

Successful completion of secondary level (class IX–X) or class X board examination is considered a milestone in life as it is the gateway to higher education and opportunities for technical and professional education. But many may discontinue or drop out without completing this level due to reasons like failure, difficulty of subjects, and, in the case of girls, responsibilities at home or early marriage. MHRD is the only source that gives dropout rates at the secondary level.

MHRD provides gender-wise data on dropouts at the secondary level through its Selected Educational Statistics publication. Data on dropout rates of students in all categories (girls, boys, total) in secondary level are available from 1960/61 onwards, up to 2010/11 and for SC and ST with gender disaggregation from 1990/91 onwards.

3.1.8. INDICATOR 8: COMPLETION RATES OF SECONDARY EDUCATION

Passing class X indicates completion of the secondary level. Data regarding completion of secondary education in terms of actual numbers passing are brought out officially by MHRD, and also by survey-based sources like NSSO and NFHS. There is no data on completion rates but it may be indirectly estimated from dropout rates at the secondary level.

As mentioned earlier, NSSO gives ever-enrolled persons aged 5–29 years by age group (5, 6–10, 11–13, 14–15, 16–17, 18–24, 25–29 years) for each completed level (primary, middle, secondary and higher secondary) of education, and is available for males and females in rural and urban areas disaggregated by caste and religious groups from the 42nd round (1986/87).

The Census does not give completion rates; but data on highest educational level attained with the number of persons (male, female) who have completed matric/secondary education level in the population.

NFHS across rounds gives data on “high school complete”, which according to NFHS is 10–11 completed years of education. It gives distribution (%) of household population in

rural and urban areas who have completed secondary education according to sex and age groups (6–9, 10–14, 15–19, 20–29, 30–39, 40–49, 50+ years).

3.1.9. DATA SOURCES ON GENDER GAPS AND BIASES IN SCHOOLING: LIMITATIONS AND COMMENTS

Education data collected before the 1950s and 1960s is generally regarded as being of a more superior quality and with wider coverage compared to recent data (Mehta, 1996). In the last few decades, there has been a progressive decline in the scope, coverage and reliability of education data. If this is the assessment of education data in general, the situation is worse in terms of data on women's education. There is grave concern about the education status of women – but the data recording this are inadequate. A number of challenges and problems continue to constrain data on women's education which are more complex in the context of overarching changes in the sector with increased privatisation.

The most important source of educational statistics is the data provided by MHRD which is an administrative outcome. The major advantages of this database are that it provides data on a regular basis over a long period time, covers all of India and the data are tabulated based on comparable classification. However, private unrecognised educational institutions are not included in the official collection of statistics. With the growing privatisation of education, both in rural and urban areas, especially at lower levels of schooling, excluding this vast body of schools gives an incomplete picture of the status of women's education. Gender biases and gaps are known to be pronounced in these private schools which are market driven. There is a high probability of low enrolment of girls, high dropouts, and low completion rates among girls in these schools.

As is evident from the discussion above, there are two main sources of data to understand gender dimensions of school education: (i) data collected from educational institutions (MHRD, DISE, NCERT survey.) and (ii) household surveys (NSS, Population Census). The data from institutional sources do not shed light on student and household socio-economic characteristics such as caste, religion, occupation, and income while the household surveys do not contain information pertaining to educational institutions. ASER is the only data source that collects information from both sources, but its data is limited to rural areas.

It is well established that the status of girls' education is an outcome of social and cultural factors which vary across locations and social groups. Many background factors which affect general enrolment and dropout rates in school, are magnified in the case of girls. General household characteristics like income, caste, occupation and educational level of parents, continue to determine access, attendance, completion and learning achievements (Ramachandran and Saihjee, 2002). Caste and religion are also important determinants of schooling.

Most of the data sources give only a generalized picture and are inadequate in exposing the complexity of gender biases intersected by other determinants. The only data source that could provide the various dimensions of gender difference is NSS data, but it is limited by

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its focus on households and by its sample size. Quality and reliability of data collected is an issue given the wide discrepancy across sources of data. Indicators on enrolment, attendance, and dropouts vary considerably between the official source and NSS, clearly reflecting the methodological, definitional and conceptual issues in these surveys. Since Census and NSS collect data from the households, concepts, scope and coverage of the data are different. The diversity of educational systems further complicates data generation and analysis.

To address these, there is a need to enlarge the data collected from the institutions by collecting additional information on students' socio-economic characteristics. A system of 20 per cent sample data collection along with collection of education data can be introduced.

The sampling design and sample size of the NSS household surveys relating to education and employment and unemployment also need improvement. Household stratification based on social groups and age groups will further enrich the usefulness of these surveys. NSSO may consider pooling central and state samples within a single sampling framework so that the sample size can be increased to arrive at reliable estimates by social groups at the state level.

The decennial Population Census is yet another source of data that provides enrolment and educational attainment of the population. Though it is wider in coverage and collects data from all households in the country, one has to depend on published tables and information, as unit-level data are not available for generating information across various sub-groups.

The level of participation in primary education is difficult to determine as the number of students in various types of schools is not completely known. As a result, the GER and NER do not reflect the true picture. The practice of over reporting of enrolment to meet targets, which has always been an issue, has got a boost for the increased focus on girls' education at the policy level and the subsequent raising of targets..

The above issues, apart, the data is also unreliable because there is no cross-checking or validation. Misreporting by schools is an issue even for DISE, which is a computerized data or information system. For unrecognised schools, since it is left to their discretion whether or not they choose to share information with the officials, there is no real incentive for them to be part of the DISE assessment. The large number of private schools that have come up in rural and backward areas, as well as the schools are under various schemes of central/state governments, have failed to evolve a sound reporting and monitoring system. No enrolment and attainment data is available for the growing number of non-formal education (NFE) centres. Nor do they provide gender-wise data on a regular basis.

Pre-primary education or early childhood education is yet another area where availability of data is highly inadequate. In addition to government interventions, there are a growing number of centres in the private informal sector. A large number of private schools have come up at pre-primary levels with varying scales, facilities and fees, especially in urban areas, for which no data is available. Gender-wise data on enrolment, years of continuation,

expenditure, and related aspects of these pre-primary schools could reveal interesting dimensions of discrimination.

Even if girls are enrolled and are attending schools, given the low priority to girls' education at a general and social level (even by teachers and girls themselves) it is possible that girls may take more years to complete a particular level of education. Completion rates are available from different sources, though the quality of data is definitely an issue. Alongside completion rates, repetition rates and grade transition rates are important variables that are not captured but are needed for a gendered analysis of schooling.

Yet another dimension that needs attention is the distribution of students by medium of education. In many parts of the country, girls are sent to vernacular medium schools while boys are put in English medium schools. Except for DISE, no information is available on the gender-wise distribution across medium of education. Gender-wise expenditure by level and medium of education across social groups are critical aspects that can be part of a regular sample-based study.

It is important to understand the magnitude of out-of-school children. While some data is available from sources like NSS, Census, Education department, and other household surveys, reliable data on the division between dropout and never-enrolled is not available. This is an important gender indicator to reveal how many girls never get enrolled.

Enormous delays accompany the release of data collected by many agencies. Therefore, the practical utility of the data collected, collated and tabulated is reduced due to large time lags in its availability. At present, it takes three to five years to finalize national data for all states; the indifferent attitude of states to participate in the national data collection system is an issue often highlighted in this context. The central government normally relies on state governments for data collection and reporting, but the response has not been uniform. Efforts should be made to ensure timely, regular and accurate reporting of information.

Quality of education is an underlying factor that defines and determines gender outcomes in education. However, this is rarely looked at in many data sources except ASER, which is limited by its coverage. Even from ASER while it is clear that the quality of learning is poor no information is available on the differential quality levels of children. The National Achievement Survey (NAS) conducted by NCERT among class V students to assess grade-level competencies of children enrolled also give some data on quality of education but is limited to government and government-aided schools. Collection of regular data on achievement is still not part of the national official data system even now.

3.2. ENABLING FACTORS

There are many factors that influence both enrolments of girls as well as whether they will stay in schools after they attain certain ages. The indicators for these enabling factors are: availability of separate toilets for girls, 'usability of girls' toilets, distance travelled to school/education institutions, and the proportion of female teachers.

3.2.1. INDICATOR 1: AVAILABILITY OF SEPARATE TOILETS FOR GIRLS

Access to education does not only mean providing schools but also ensuring basic facilities at various levels of schooling. From a gender perspective, these basic facilities, especially toilets, are a critical factor. Availability of toilets and separate girls' toilets are part of the Right to Education (RTE) norms (along with drinking water, building aspects, midday meals and library facilities in schools). ASER surveys have data on facilities in school, including separate toilet facilities for girls, but the information is limited to schools in rural areas. Since 2004, DISE is a major source of data on basic facilities in the school. NSSO does not collect information on availability of separate toilets for girls, but from the 64th round it has included "non-availability of ladies toilet" as a reason for dropping out/discontinuity/non-enrolment.

ASER's information on schools surveyed includes whether it has a common toilet, a separate toilet for girls, a separate toilet for boys and a separate toilet for teachers. ASER gives data on 'availability of separate toilet facilities for girls' only from 2010.

Published reports of DISE give district-wise information on facilities in schools, including percentage of schools having boys' toilets, as well as schools with separate toilets for girls (in primary schools and all schools).

AISES from its seventh round (2002) onwards provides information on availability of separate toilets for girls in schools across various levels/stages (primary, upper-primary, secondary and higher secondary).

3.2.2. INDICATOR 2: USABILITY OF GIRLS' TOILETS

As important as providing separate toilets for girls in schools, is ensuring that they are fully functional. A usable toilet is one with water available for use (running water/stored water) and a basic level of cleanliness. Only ASER surveys (since 2010) have brought out data on whether the toilets in schools had locking facilities and water and were usable.

NUEPA's reports (since 2013) based on UDISE have data on facilities in schools, including percentage of schools having functional girls' toilets and percentage of schools with hand wash facility available near toilet/urinal.

3.2.3. INDICATOR 3: DISTANCE TRAVELLED TO SCHOOLS

Access to education and attendance to a very large extent is dependent on the distance the child has to travel to schools. NSSO has covered this in its recent survey rounds while the AISES gives data on habitations having educational facilities within it and those which have educational facility within certain distances.

Since its 64th round, NSSO has collected information on distance from sample households (in both rural and urban areas) to nearest school (those imparting primary, middle and secondary level education). It gives the percentage of rural and urban households having such schools within a certain distance (less than 1 km, 1-less than 2 km, 2-less than 3 km, 3-less than 5 km, more than 5 km). The data could be classified across each decile class of

MPCE, for each social group (SC, ST, OBC, others) and for each religious group (Hinduism, Islam, Christianity, Sikhism, Buddhism, others).

The first survey of AISES in 1957 (which was then called the All India Education Survey) looked at the number of habitations (or population centres) which had an educational facility, the distances between habitations and the distance students had to travel to reach an educational facility if their own habitation did not have one.

The surveys that have followed since then, including most recent one (the Eighth AISES), have brought out data on the availability of schooling facility (for primary, upper-primary, secondary and higher secondary stages) within habitations, and also distances to reach them for habitations without it, including for those predominantly populated by SC/ST for all states and UTs. The distances listed were different for each education level. For instance for primary it was upto 0.5 km, 0.6–1.0 km, up to 1.0 km, 1.1–2.0 km, upto 2.0 km or more than 2.0 km; for higher secondary it was upto 2 km, 2.1–4.0 km, 4.1–6.0 km, 6.1–8.0 km, upto 8.0 km, more than 8.0 km.

Across time there have been changes. For instance, the second AISES brought out percentage of rural population who either had primary education facility within their own habitations or within a walking distance of one mile. From the third round onwards, it recorded percentage of rural populations served by primary education facility within their habitations or within walking distance of one kilometre. There has also been change with respect to various levels of education. While the first and second round had percentage of rural population who either had upper primary education facility within their own habitations or within a distance of five kilometres, from the third round onwards, it was within a distance of three kilometres.

3.2.4. INDICATOR 4: PROPORTION OF FEMALE TEACHERS

The presence of female teachers in schools may lead to higher levels of girls' enrolment, as sociocultural considerations may influence parents who would prefer female teachers for their girl children. This hypothesis may be the basis for the 50 per cent female teacher stipulation in all new teacher recruitments in the National Policies on Education (1986 and 1992).

Data on female teachers (%) is available from MHRD, DISE and AISES.

MHRD's Selected Educational Statistics has data on number of female teachers per 100 male teachers from 1950/51 across all levels (primary, middle, and intermediate/secondary/senior secondary) for all states and UTs. In recent years, data is available across primary (pre-primary also in a few states), upper primary, high/secondary and intermediate/senior secondary schools. .

NUEPA's reports based on DISE data (like Elementary Education in India, one of the eight publications of NUEPA based on DISE data) give percentage distribution of female teachers in

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various levels (primary only, primary with upper primary, primary with upper primary and higher secondary, upper primary only, upper primary with higher secondary) for India and states. DISE has data on single-teacher schools (for primary schools and all schools). The proportion of female teachers is also available for all states and UTs from 2005/06 according to caste groups, age groups and professional qualifications (Raw data is available online for districts across most states and UTs from 2002/03.). AISES collected data on number of female teachers in the first round (1957) itself, but a few states did not provide the data. The second round (1965) had level-wise data on female teachers across all states and UTs. The third round was more detailed and gave distribution of teachers in primary, middle and secondary/senior secondary levels according to management (government, local body, private aided, private unaided), sex, caste (SC, ST) according to rural/urban for India and states. In the fourth round, it gave state/UT-wise number of teachers and female teachers (%) in primary, middle, secondary/ higher secondary stages. In the fifth round it gave percentage of female teachers at all levels (separately for secondary and higher secondary levels for the first time). AISES has data on teachers by caste groups from the third round (only SC, ST), and by the sixth round had included OBC category but did not give gender-disaggregated caste group data on teachers. It also gave data on female teachers out of full-time teachers including principal/headmaster, as well as female teachers out of para/contract teachers in the seventh and eighth survey rounds. AISES also has data on zero teacher schools, one, two, three, four, five, five plus (percentage out of total primary schools) from the fourth round, for all states and UTs.

3.2.5 DATA SOURCES ON ENABLING FACTORS: LIMITATIONS AND COMMENTS

Data on basic infrastructure which has gender implication are limited and not reliable. ASER is the only source that collects data at the level of the institution, but it is limited to rural areas. NSS data is based on household surveys where the chances of misreporting on facilities in school are high as in many cases it is the perception of the respondent and not the experience of the student that gets captured.

Regarding female teachers, data sources such as DISE and AISES have limitations which have been discussed earlier, the most important being its partial coverage. Though DISE and AISES have data on single-teacher schools (for primary as well as all schools) for all states, there is no gender-disaggregated information (that is proportion of female single-teacher schools) which should be made available as it is an important data. Sources like AISES should also provide gender-disaggregated data on teachers according to caste groups.

3.3. GENDER GAPS AND BIASES IN HIGHER EDUCATION

GOI (2012) defines higher education as the education obtained after completing 12 years of schooling or equivalent and is of a duration of at least nine months (full time); or after completing ten years of schooling and is of a duration of at least three years.

An important form of inequality among women is educational access, particularly in the context of higher education. Educational attainment levels as well as opportunities in higher

education are influenced by a host of socio-economic and cultural factors and gender difference in higher education is an important indicator of women's status. Unequal access to higher education leads to inequality in skills these groups bring to labour markets.

Higher education may be divided into two broad areas: general and technical/professional. The general stream includes courses in arts, commerce and science. Technical education comprises programmes of education, research and training in engineering technology, architecture, town planning, management, pharmacy and applied arts and crafts. Professional education includes courses in medicine, law and other specialized fields. There are formal and non-formal modes in higher education and all who are engaged in either of these modes are considered as undergoing higher education. The non-formal system of higher education includes distance or correspondence modes, wherein education may be imparted through internet, broadcasting, telecasting, correspondence courses, seminars, contact programmes, or using a combination of two or more of the above mentioned means of communication.

3.3.1. INDICATOR 1: LEVEL OF HIGHER EDUCATION COMPLETED

This is an important indicator as it is only successful completion of higher education that opens up opportunities in employment and other life chances. But data on the completion of levels as such are not published by official sources (MHRD) though enrolment data as well as examination results are readily available. There are various agencies involved in the collection of higher education data under MHRD, including the University Grants Commission (UGC) and the All India Council for Technical Education (AICTE). Recently, surveys like the All India Survey on Higher Education (AISHE) have also been instituted.⁶ Prior to 1982, the Department of Education in MHRD and UGC both collected data on higher education (from colleges and universities), which created duplication. Later UGC alone was incharge of the exercise, but it faced problems of time lag and non-response from reporting institutions (though some basic statistics was published every year in its Annual Report). Since 1994/95, MHRD has again started collecting data on higher education from the states through state education departments. NSSO, Population Census and NFHS provide household level data on completed education levels.

MHRD gives gender-wise data on enrolment but not the level of higher education completed. Enrolment figures in higher education in a year may give an idea about senior secondary completion in the year (but not necessarily completion of the level as many who completed senior secondary may not enrol into higher education courses). Gender-disaggregated level-wise enrolment figures (the levels are integrated, certificate, diploma, postgraduate diploma, undergraduate, postgraduate, MPhil and PhD) are available for all students and also for SC and ST categories.

⁶The first All India Survey on Higher Education report was published in 2010/11 by MHRD. The survey was online for which a dedicated portal (<http://aishe.gov.in>) was developed (the reference date was 30 September 2011). The institutions covered in the survey have been classified into three broad categories: 'University', 'College', and 'Stand Alone Institutions'. Data is collected on several parameters such as teachers, student enrolment, programmes, examination results, education finance, and infrastructure.

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Gender-disaggregated enrolment figures from 1950/51 are available for secondary/senior secondary combined (MHRD did not provide separate enrolment figures of senior secondary until 2004/05) and higher education. Senior secondary is 16–17 years (XI–XII) and higher education is 18–23 years. Gender-disaggregated enrolment figures for SC and ST are available from 1986/87 for higher education and from 2004/05 for the senior secondary level.

According to NSSO (2010), persons who have completed higher education include those who have successfully completed any or all of these levels: higher secondary, diploma/certificate course, graduation, postgraduation, and above. The category diploma or certificate course covers diploma or certificate courses in general, technical or vocational education which are below graduation level. Diploma or certificate courses in general, technical, or vocational education which are equivalent to graduation level, fall under the graduate category. Similarly, diploma or certificate courses in general, technical or vocational education, which are equivalent to postgraduation level and above are considered under the category postgraduate and above.

NSS data available from the 42nd round onwards give distribution (%) of persons of age 15 years and above by completed level of education (here, relevant levels are higher secondary, diploma/certificate course, graduation, postgraduation and above). It gives gender-disaggregated data for rural and urban areas.

The Population Census gives gender-disaggregated data on education level completed and higher education level completed (higher secondary, graduate and above, postgraduate degree other than technical degree, and technical degree or diploma equal to degree or postgraduate degree in engineering and technology, medicine, agriculture and dairying, veterinary, teaching, others) for different age groups (15–19, 20–24, 25–29, 30–34, 35–59, 60+ years). The data are available separately for male and females, region-wise (rural/urban) up to ward and village levels. From 2001 Census, data for SC/ST is also available.

NFHS across rounds gives data on “higher secondary complete and above” (12 or more completed years of education). It gives distribution (%) of household population in rural and urban areas who have completed higher secondary and above according to sex and age groups (10–14, 15–19, 20–29, 30–39, 40–49, 50+) for India and states. NFHS does not publish any specific higher levels of education, but information has been collected with respect to highest degree obtained: degree not completed; non-technical degree: bachelors, masters, PhD; technical degree: bachelors, masters; technical diploma/certificate, not equivalent to degree; and non-technical diploma/certificate, not equivalent to degree.

3.3.2. INDICATOR 2: PARTICIPATION IN GENERAL STREAM OF HIGHER EDUCATION

Though gender gaps in higher education at the enrolment level have reduced over time, new and complex forms of gender gaps prevail. Segregation in limited fields, difference in achievement levels and differential gender disparity across social groups are some of the newer concerns. MHRD and NSSO give data related to enrolment in general stream of higher education.

The Department of Higher Education gives details on enrolment of boys and girls in arts, science, and commerce. The gender gaps can be ascertained in each of these streams as data on number of girls enrolled per 100 boys in university education (graduation and master) is available from 1950/51 onwards in arts and commerce and from 1970/71 onwards in the science stream (Arts and Science was combined for a few years between 1955 and 1966.) Data are available on an annual basis.

MHRD publishes annual enrolment of students (boys, girls, total) for all categories by level/courses for all states and UTs (from 2006/07). The enrolment data (by level/courses) is also available for Ph.D./M.Phil., postgraduate and undergraduate degree (arts, commerce, science), post-school diploma and postgraduate Diploma. It also gives enrolment figures for SC/ST (boys, girls, and total) for PhD/MPhil, postgraduate degree, undergraduate degree, post-school diploma and postgraduate diploma.

In the earlier NSS rounds (42nd, 52nd), general stream in higher education included higher secondary levels followed by a normal university education for a degree including professional education like engineering, medicine, agriculture, etc. Since the 61st round general stream includes normal university education at graduate and postgraduate level. This includes bachelors and masters programmes in arts subjects (philosophy, history, geography, languages, dance, music and so on), science (physics, chemistry, biology), commerce (and accountancy related subjects), mathematics, etc. Engineering, medicine and agriculture were separated from general education and put under professional/technical education for the first time in the 61st round.

Since raw data are available from the 52nd round, gender differences can be calculated in general stream of higher education for different levels of education across a number of socio-economic variables.

3.3.3. INDICATOR 3: PARTICIPATION IN TECHNICAL AND PROFESSIONAL COURSES

Technical education has a vital role in improving the employability of women. It encompasses programmes in engineering, technology, management, architecture and town planning, pharmacy, applied arts and crafts, food processing, hotel management and catering. Both MHRD and NSSO provide data on gender-wise enrolment in such courses.

MHRD publishes data on technical and professional education in Statistics of Higher and Technical Education regularly from 2006/07 (since 2010/11 through AISHE reports. It gives the enrolment of students (boys, girls, total) for all categories by level/courses; the gender gap for each course can be worked out from this data for all states and UTs. It includes enrolment (by level/courses) for Ph.D./M.Phil., postgraduate and undergraduate degree (engineering/technology/architecture/design, medicine, agriculture and allied sciences, management/hotel/travel/tourism/management, education/teacher training, law, and other); post-school diploma and postgraduate diploma; as well as enrolment figures for

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Scheduled Castes and Tribes (boys, girls and total) for PhD/MPhil, postgraduate degree, undergraduate degree, post-school diploma, and postgraduate diploma.

In NSS's 42nd and 52nd rounds, technical and vocational courses were taken as one stream, which included courses offered by polytechnics, ITIs, etc. From the 60th round onwards, the vocational stream was separated from technical and professional education (which was separated from general education) and was clubbed with technical education.⁷

The most detailed level of technical education of members of household was recorded by NSS in its 61st round by including 12 categories, namely, (i) no technical education, (ii) technical degree in agriculture/engineering/technology/medicine, etc., (iii) diploma or certificate below graduate level in: (a) agriculture, (b) engineering/technology, (c) medicine, (d) crafts, (e) other subjects, and (iv) diploma or certificate equivalent to graduate and above level in: (a) agriculture, (b) engineering/technology, (c) medicine, (d) crafts, (e) other subjects: diploma or certificate in management, applied arts, etc.

In the latest rounds (66th and 68th), the classifications are: technical degree in agriculture/engineering/technology/medicine, etc.; diploma or certificate (below graduate level) in: agriculture, engineering/technology, medicine, crafts, other subjects; diploma or certificate (graduate and above level) in: agriculture, engineering/technology, medicine, crafts, other subjects.

3.3.4 INDICATOR 4: PARTICIPATION IN VOCATIONAL EDUCATION

Most of the vocational or training courses are parallel to the other conventional courses and a range of institutions with varied organisational structure impart vocational training. Since vocational training is closely linked to the labour market demand, it is bound to reflect gender-based segregation in the workforce. However, no comprehensive data at the institutional level is available on the number of such institutions and their areas of training, or on students who undertake these courses. NSS and Census collect some data on vocational courses which are available across sex.

The major sources of data on vocational education are the Population Census and NSSO, apart from the Directorate General of Employment and Training (DGET). The DGET, as the apex organisation that regulates Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs) at the national level and implements policies for vocational training, does collate some data but these databases are highly irregular and unreliable and do not give gender-wise data. There are some vocational institutions under the public sector which are women-only institutions but data on these are not available.

NSS is the only source that gives data on the fields or vocations in which girls/women have availed training and distribution across trades. It gives data on vocational training

⁷Since the 60th round, three streams of education data are available – general, vocational and technical.

with respect to training received by persons in the 15–29 years category for the first time, through the Employment Unemployment Survey (EUS) of the 60th round (January–June 2004), and followed in the 61st, 64th, 66th, and 68th rounds.⁸ NSSO collected data by “field of training”, which included the following trades and work related to them: mechanical engineering, electrical and electronic engineering, computers, civil engineering and building construction, chemical engineering, leather, textile, catering, nutrition, hotels and restaurants, artisan/craftsman/handicraft and cottage-based production work, creative arts/artists, agriculture and crop production, food preservation, non-crop based agriculture, health and paramedical services, office and business related work, driving and motor mechanic, beautician, hairdressing, tour operators/travel managers, photography, childcare, nutrition, pre-schools and crèche, journalism, mass communication and media, printing technology, and others. Similarly, data with regard to duration of training as well as usefulness of training for taking up self-employment or salaried (or wages) work was also collected. In the 60th round survey, information on vocational training was collected only on formal vocational training, while from the 61st round onwards, information in respect of both non-formal and formal vocational training was collected for persons of age 15–29 years.

From the 66th round (July 2009–June 2010), information on “whether receiving/received any vocational training” was collected for persons of age 15–59 years. It gives gender-disaggregated information for rural and urban areas, with regard to vocational education and training such as field of training, duration of training (less than 3 months, 3–5 months, 6 months–1 year, and more than 1 year) according to their broad usual principal activity status. It also provides data on source of training and helpfulness of vocational training.

The Census since 2001 has included “vocational” to the type of educational institution attended, and makes available data on attendance in such institutes, for both males and females across age groups.

The Census puts those attending vocational training or vocational/professional courses under the “vocational” category. It includes the study of courses which prepare students for various vocations/professions such as agriculture, teacher training, physical education, engineering and technology, architecture, fine arts (music, dancing, sculpture, etc.), journalism, library science, law, medicine, business management, etc.

This definition of vocation followed in the Census is an issue since it clubs professional and vocational courses under one head⁹.

⁸The previous NSS rounds do not allow for a clear distinction between vocational education and general secondary education, and between vocational training and tertiary education. Hence, it is very difficult to do any detailed analysis of vocational education or vocational training on the basis of NSS data.

⁹All persons attending vocational or professional courses such as electrician, plumber, carpenter, motor mechanic, fitter, stenography, typing, architecture, engineering, computers, nursing, midwifery, pathology, courses of ayurvedic, unani and other systems of medicine; agriculture, dairying, forestry, blacksmith, dyeing, tanning, textile, teaching (JBT, B.Ed., M.Ed., etc.); physical education, journalism, library science, art, fine art, dress making, visual communication, etc., are considered as attending Vocational Institutes.

3.3.5. INDICATORS ON 'GENDER GAPS AND BIASES IN HIGHER EDUCATION': LIMITATIONS AND COMMENTS

The higher education data from MHRD is based on information provided by the state governments (as reported by the educational institutions), UGC and Statutory Councils such as Medical Council of India and AICTE. The data are available on an annual basis over a long period of time and contains information on the number of educational institutions as well as enrolment in them.

From the beginning of the 11th Five Year Plan period (2006/07), the data pertaining to higher education is being published separately as Statistics of Higher and Technical Education by the Department of Higher and Technical Education. The coverage has improved over time. The enrolment data is provided by gender, caste (SC, ST, and Others) and region (by state and UTs). As discussed in the previous section, important issues with regard to this data are its delay, reliability and representativeness. In the case of higher education, unlike that of school education, underreporting of enrolment is an issue as many institutions are constrained by sanctioned strength. Further, there has been a massive expansion in private institutions and recognised institutions which are outside the outreach of this source. Added to this, the usual time lag for collection and dissemination of data is more than three years. Though the data gives enrolment by gender and caste (SC, ST), enrolment in the OBC category is not available. Further, no information is available on other social variables such as religion and particulars of the family (parental income, education, occupation, etc.). Hence, this data is of limited use in studying gender-informed social group inequality in higher education.

The NSS surveys on social consumption and employment and unemployment collect rich information pertaining to education. Until the last survey, this covered the age group of 5–24 years. With increasing educational aspirations and availability of education through the distance mode, people enrol in higher education even at later ages. To capture this, the 64th round survey extended its coverage to include persons aged 25–29 years. These surveys provide valuable information for computing net enrolment/attendance rates by education levels (or age groups) and social groups; by type of management (government, private aided and private unaided) and unit private cost of education among others. Further, information was also collected from persons enrolled in vocational stream, expenditure incurred on second course, particulars of course repetition, etc.

Despite the large volume of information collected by these surveys, the sample design and sample size impose constraints for bringing out reliable estimates of gender-wise NAR and unit costs for different educational levels among social groups. For instance, the overall sample size of the 64th round data is very large (1,00,681 households and 4,46,960 persons). But the number of sample persons who are currently attending schools and colleges is only 73,597 in the age group of 5–29 years. The sample size becomes even smaller when one classifies age groups by various educational levels, especially at higher levels of education. Therefore, both the survey design and sampling procedure may need some modification. These could be with regard to household stratification, which must give due weight by age group of the persons in the household and persons enrolled in educational institutions. The

sample size corresponding to the social groups is quite small, making it difficult to derive reliable estimates even at the national level.

Considering the rapid changes taking place in higher education and this being the only survey that provides information to compute net enrolment rates and private cost of education, it is desirable to improve the periodicity of the survey. It can be conducted on an annual or quinquennial basis like the EUS. The NSSO may consider the possibility of collecting detailed information on persons who are enrolled in post higher secondary education or the age group of 18–29 years. Information also needs to be gathered on enrolment in self-financing institutions/courses, quality of the institutions, performance in terms of grades/class or marks obtained in the examinations.

The NSS quinquennial surveys on employment and unemployment (1983, 1987/88, 1993/94, 1999/2000, 2004/05, 2009/10 and 2011/12) provide data on educational attainment and educational attendance of the population. These surveys collect information from a large sample and hence the coverage is excellent. Reliable state and national level estimates of educational indicators can be computed from these surveys. However, since the focus of the survey is on employment and unemployment and not on education, it limits the scope of the data. Data on enrolment by type of institution, cost of education and the courses enrolled in at higher educational levels are not available. Even in these surveys, sample size is a constraint if one wants to make estimates at the state level by gender and social groups. NSSO could consider the possibility of increasing the sample size or stratification based on social groups to address this issue.

The decennial Population Census is wider in coverage and is collected from households. One has to, however, depend on published tables and information as individual/unit-level data are not available for generating tables by various sub-groups. Another limitation is that while it provides detailed classification of education for urban areas, for rural areas the classification is too broad – for example, “graduates and above”. Further, the Population Census data does not distinguish between enrolment in professional degree and in diploma programmes. It is collected once every ten years and hence it is not possible to construct reliable time series data. At the higher education level, there is a need for finer classification based on levels of education in both general and technical education and disciplines gender segregation across disciplines are often marked.

There is a real dearth of data on women’s education in vocational training, largely because most of this is conducted in the informal sector. No systematic data is available even on those under the public sector. DGET needs to collate data from ITIs and ITCs systematically and regularly. The data should be disaggregated by sex and other possible divisions/categories at the national level. With economic and social changes there are many new vocational trades that are gaining prominence and which have clear gender divisions. Thus, more women are found in courses relating to beauty, health and paramedical services and hospitality and customer oriented jobs while few girls take up engineering and craft-related courses. Unless systematic gender-based data is made available, such dimensions cannot be captured. NSS

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has made some welcome efforts in this direction in its recent rounds. However, as NSS and Census focus on household-based data collection, the institutional input is absent. Thus, to supplement household data, there is a need to undertake a survey of institutions which would also give insights into the gendering of teaching and learning in such institutions, apart from other gender dimensions.

Chapter 4

ECONOMIC STATUS OF WOMEN

The economic status of women influences their position both within the family and in society. The sociocultural shifts and changes in recent decades make it imperative to delink women from the household and look at their economic status independently. Access and participation in work, employment situation, asset ownership, social security benefits, financial inclusion and many other aspects have a direct bearing on women's overall status. In the case of men, economic factors principally determine why and where they engage in productive activities. But, in the case of women, more than economic reasons, cultural, social, reproductive and demographic factors determine whether they would engage in productive work and, if so, what would be the nature and sector of work.

Under the theme of Economic Status, there are four sub-themes:

- Economic Opportunities
- Quality of Work
- Support Services at Workplaces and Access to Social Security Schemes
- Financial and Other Forms of Economic Independence.

The indicators of each sub-theme are given in Chapter 1, Table 1.1.

DATA SOURCES

The major data sources on the indicators for the economic status of women are the National Sample Surveys of the NSSO, Population Census, and National Family Health Survey (NFHS). Other sources are the Labour Bureau for employment and labour aspects and Basic Statistical Returns (BSR) and Small Borrowal Account (SBA) Surveys of the Reserve Bank of India (RBI) for understanding gender-wise variations in loan, credit, and deposit details.

4.1. ECONOMIC OPPORTUNITIES

Availability, access and participation in economic opportunities determine the overall economic status of women in society. Some key indicators that capture women's status and position in terms of economic opportunities are explained here.

4.1.1 INDICATOR 1: LABOUR FORCE PARTICIPATION RATE (LFPR)

LFPR is the ratio of labour force (employed + unemployed persons) to total population. LFPR among women in India is relatively low in comparison to that of the developed and similar developing countries. The NSSO is considered to be the most reliable source and has brought out regular data on LFPR through its quinquennial Employment Unemployment Surveys. The only other source is the Labour Bureau which has been bringing out annual figures of LFPR since 2010.

The NSS defines labour force as the population which supplies or offers to supply labour for pursuing economic activities for the production of goods and services and, therefore, includes both employed and unemployed persons/person days.

The employed are persons who are engaged in any economic activity or who, despite their attachment to economic activity, are abstaining from work for reasons of illness, injury, or other physical disability, bad weather, festivals, social or religious functions, or other contingencies necessitating temporary absence from work. Economic activity, according to NSSO, includes all market activities (those performed for pay or profit) which result in production of goods and services for exchange. The non-market activities that are considered economic activities are: (a) all activities relating to the agricultural sector resulting in production (including gathering of uncultivated crops, forestry, collection of firewood, hunting, fishing, etc.) of agricultural produce for own consumption and (b) activities relating to the “own account production of fixed assets”, includes construction of own house, roads, wells, etc., and of machinery, tools, etc., for household enterprises and also construction of any private or community facilities, free of charge. A person may be engaged in own-account construction either in the capacity of a labourer or a supervisor.

Those seeking work or being available for work or unemployed are persons who, owing to lack of work, have not worked but sought work through employment exchanges, intermediaries, friends or relatives; or by making applications to prospective employers; or expressed their willingness or availability for work under the prevailing conditions of work and remuneration.¹

Total population figures in NSS are based on Census projections. As the Population Census is conducted decennially, the total population in any year between two Census years is based either on projections made in the earlier Census or on estimates using the average decadal growth rates between two consecutive Censuses. Using these projections, it is possible to estimate absolute figures of the number of employed people or the number of people in the labour force and so on.

The NSSO gives estimates of LFPR using three different approaches as it collects information regarding the activity status of a person using three different reference periods: one year

¹Persons who were neither ‘working’ and at the same time nor ‘seeking or available for work’ for various reasons during the reference period are considered as being out of labour force. The persons falling under this category are students, those engaged in domestic chores, renters, pensioners, those living on alms, recipients of remittances, etc., in firm or disabled persons, too young or too old persons, casual labourers not working due to sickness, prostitutes, smugglers, etc.

(preceding the survey date), one week and each day of the reference week. Based on these three reference periods, there are three measures of activity status: usual status, current weekly status (CWS) and current daily status (CDS).

Based on the duration of engagement, activity status of workers is further classified into principal and subsidiary activity status. The status of activity on which a person has spent relatively longer time of the preceding 365 days prior to the date of survey is considered to be the usual principal activity status of the person. All individuals who are either unemployed or outside the labour force, but have worked for a minor period of not less than 30 days during the reference year are classified as subsidiary status workers. Workers who perform some work activity either in the principal status (PS) or in the subsidiary status (SS) are categorised under “usual status” (UPSS). “Current weekly activity status” of a person is the activity status obtained for a person during a reference period of seven days preceding the date of survey. A person was working (or employed) if he/she while pursuing any economic activity had worked at least one hour on at least one day during the seven days preceding the date of survey.

“Current daily activity status” is decided on the basis of his/her activity status on each day of the reference week using a priority cum major time criterion.

“Each day” comprised either two half days or a full day. Some of the factors considered for assigning the time intensity and determining the current daily status of a person include the following: a person was considered as working (employed) for the full day if he/she had worked for four hours or more during the day; if a person had worked for one hour or more but less than four hours, he/she was considered working (employed) for half day and “seeking or available for work” (unemployed) or “neither seeking or available for work” (not in labour force) for the other half of the day. The “current weekly status” of a person is derived from the intensities assigned for the daily activities performed during the seven days of the reference week.

The annual surveys of NSSO began in 1953, but the “labour force” became a factor only in the 11th round. The current concepts were introduced in the quinquennial survey rounds that were initiated in 1972/73 (27th round). The changes that have taken place with respect to concepts, reference period, and other factors are illustrated in Appendix Table A2. There have been nine quinquennial rounds until now, the last being the 68th (July 2011–June 2012). NSS data provides LFPR (per 1,000) according to PS, PS+SS, CWS and CDS. Since unit-level data is available from the 50th round (1993/94), it is also possible to calculate gender-disaggregated LFPR by age groups, education level (not literate to secondary and above), and socio-economic categories (religious groups, SC, ST, OBC and others; MPCE decile classes) across rural/urban populations.

The Labour Bureau, through its annual Employment and Unemployment Surveys, also gives estimates of LFPR. Its definitions of LFPR, as well as other work-related indicators and concepts, are similar to that given in NSS. The Employment Unemployment Survey (EUS) gives the LFPR (per 1,000) for persons aged 15 years and above according to PS, PS+SS, CWS

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and CDS for each state/UT; and also across social groups (SC/ST/OBC/General and others) for all states and UTs.

The first Labour Bureau EUS was conducted in 2010 for a fixed reference period (financial year 2009/10) in 28 states/UTs and covered 300 districts. The second survey, in 2012, encompassed all the districts in the country for a fixed reference period (agriculture year July 2011– June 2012). The third annual EUS was conducted from October 2012 to May 2013 in all the 35 states/UTs by covering all the districts in the country. A moving reference period of the last 12 completed months from the date of the survey was used to derive various estimates of labour force. So, if the household was surveyed in January 2013, the reference period was January 2012–December 2012.

All the three rounds provide LFPR for rural/urban women according to age categories (15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, and 15–49 years), education (no education, less than 5 years, 5–7, 8–9, 10–11, and 12 or more years completed); marital status (never married, currently married, widowed/divorced/separated/deserted), number of living children (0, 1–2, 3–4, 5 or more) and wealth index (lowest, second, middle, fourth and highest).

4.1.2. INDICATOR 2: GENDER GAP IN WORK PARTICIPATION RATE

The work participation rate is defined as the percentage of total workers to total population. It is available from the Population Census, NSS, and NFHS, though concepts related to Work Participation Rate (WPR) may vary across sources.

The definition of work and workers has changed in the Census over time (elaborated in A3 in Appendix). Data on the activity status of individuals was gathered for the first time in the 1881 Census, but comparable data on work is available only from the 1961 Census. The Census defines work as participation in any economically productive activity with or without compensation, wages, or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective supervision and direction of work. It even includes part-time help or unpaid work on a farm, family enterprise or in any other economic activity.

In the Census, the reference period for determining a person as worker and non-worker is one year preceding the date of enumeration. Those who pursued economic activities of one nature or another for more than 183 days in a year were identified as main workers. Those who worked for less than 183 days were designated as marginal workers and those who did not engage in any form of activities were considered as non-workers. Therefore, “total workers” is the sum of main and marginal workers. Total population figures as well as the number of workers under main, marginal, and total are arrived at through complete enumeration.

Comparable WPR for both males and females using Census data can be obtained for both rural and urban areas up to ward and village levels from the 1961 Census. Workers since 1971 are classified into main workers, marginal workers, non-workers and marginal workers seeking/available for work and data is available by age (5–9, 10–14, 15–19, 20–24, 25–29,

30–34, 35–39, 40–49, 50–59, 60–69, 70–79, 80+ years and also for 15–59, 60+ and 80+ years), social groups (SC, ST and others) and religious groups (Hindus, Muslims, Christians, Sikhs, Buddhists, Jains and others). The WPR of religious groups and across marital status² is available in the public domain only from 2001 Census for total, rural, and urban areas at the state level (not district level).

In NSS, workforce figures are estimated using Census segment-wise population projections and NSS segment-wise worker population ratios (usual status).

WPR can be calculated using the NSS data for total workers in UPS, UPSS, CWS and CDS. Since unit-level data is available in NSS, it is also possible to calculate gender-disaggregated WPR by age groups, education, social groups etc., across rural/urban areas in all states and UTs.

NFHS has collected work status of women across rounds but in the first two rounds it was restricted to married women.³ The third round (2005/06) collected information of work status from unmarried women as well as male respondents, unlike the previous rounds, and also gave more detailed information with respect to women's work.

NFHS defines work as any kind of job for which the woman is paid in cash or in kind as well as unpaid work on a family farm or business. There are three categories for workers in NFHS-3 and 4. Currently employed are those who have done work in the past seven days but also include persons who did not work in the past seven days but were regularly employed and were currently absent from work due to leave, illness, vacation, or any other such reasons; not currently employed persons who were employed at any time in the 12 months preceding the survey, but had not worked in the past seven days; and not employed are those who were not in employment in the 12 months preceding the survey.

The gender gap in WPR can be estimated from NFHS-3 and 4 data. Data is available on both men's and women's employment status (in the categories above) according to age (15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49 years); residence (rural, urban); education (no education, less than 5 years, 5–7, 8–9, 10–11 and 12 or more years completed); marital status (never married; currently married; widowed/divorced/separated/deserted); number of living children (0, 1–2, 3–4, 5 or more years); and wealth index (lowest, second, middle, fourth and highest).

4.1.3. INDICATOR 3: WOMEN IN UNPAID ECONOMIC WORK OR PAID WORK PARTICIPATION RATE (PWPR)

Large numbers of women in India are invisible as workers as they are mostly engaged in unpaid work as helpers in household enterprises. Economic data related to employment has clearly indicated the low levels of female work participation rates in India, but the extent of

²Never-married persons refer to 'single' persons who have not married, i.e., bachelors and spinsters. The second group of ever-married persons refer to all those who have married at least once (may or may not be currently married) and so will include currently married persons, widowed, and divorced/separated persons.

³NFHS-1 has distribution of ever-married women age 13–49 and NFHS-2 of 15–49 years by work status.

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unpaid work participation is not depicted clearly by any of the national level data sources. Only when the magnitude of unpaid work is known, the Paid Work Participation Rates can be determined and the extent of economic independence and independent economic status of women can be assessed.

The NSSO gives us data on women engaged as helpers. The Census has a class of worker categorised as “family worker”, which in most cases would be family members helping out in economic activities. These would include women and children helping with ploughing, sowing, harvesting and collection of farm produce; and those engaged as unpaid family workers in household industries, etc. The Population Census counts family workers either as main or marginal workers. However, these categories are not recorded separately. NFHS also gives data on unpaid work but is limited to ever-married women except in the first two rounds. Thus, the only source of data for unpaid work for all women is NSS.

However, the unpaid work of women in NSS does not refer to domestic work such as cooking, cleaning and child care, but to economic activities performed as helpers generally in household enterprises. These include all the market activities in production of goods and services for exchange, as well as non-market activities which result in production of primary goods for own consumption or relate to the own-account production (as discussed in an earlier section) or in the capacity of either a labourer or a supervisor.

Though NSS does not publish any data on unpaid workers who are included under the category of self-employed, one can calculate the quantum of unpaid workers by rural and urban areas, and across age, education, marital status and socio-economic divisions from unit-level data available since the 38th round.

NFHS-2, 3 and 4 give information on whether women who are employed (any time during the past 12 months before the survey) were paid in cash or kind, or not paid. This could be disaggregated by socio-economic and other parameters.

4.1.4. INDICATOR 4: PROPORTION OF WOMEN WORKERS WITH HIGHER EDUCATION/SKILL LEVELS

Successful completion of higher levels of education should lead to greater work participation and potentially to better work opportunities. We consider women workers with higher education/skill levels as those who have either completed secondary education or above (under the general stream from secondary, higher secondary, diploma/certificate course, graduate, and postgraduate and above) or those with technical or vocational education.⁴ The major sources of data on workers disaggregated by education levels are the Population Census and NSSO.

⁴A skill can be learned on the job or through formal training. An avenue for acquiring formal skills-related training in India are the Industrial Training Institutes (ITIs) and the Industrial Training Centres (ITCs), both of which are under the Ministry of Labour and Employment. In recent years, greater emphasis on vocational training has also been reiterated in the educational policy.

The NSS gives data on demographic particulars like education level attained for all those who are employed. The categories at present are (not literate...secondary, higher secondary, diploma/certificate course, graduate, postgraduate and above). Though published data is limited to broad disaggregation, unit-level data enables analysis at disaggregate levels though the sample size is a limitation.

The EUS rounds of NSS have collected information on education levels of the population from the first quinquennial round (1972/73). But there have been some changes with regard to certain concepts. For example, until the 60th round type of education had only two categories, general and technical; while in later rounds, there are three categories: general, technical/professional and vocational. The NSS has collected detailed information on whether those surveyed were receiving/received formal vocational training from the 60th round (January–June 2004), followed in the 61st and 64th rounds.⁵

In the 66th and 68th round (July 2009–June 2010), information on “whether receiving/received any vocational training” was collected for persons of age 15–59 years. It gave distribution (per 1,000) of persons (separately for males and females) in the age group 15–59 who received/are receiving formal vocational training by duration of training (less than 3 months, 3–5 months, 6 months–1 year, more than 1 year) for each field of training; by field of training for each broad usual principal activity status; and by source of training for each broad usual principal activity status.

From NSS data, it is possible to work out proportion of women workers with higher education levels (out of all women workers) across rural and urban areas for all states and UTs, and also across socio-economic categories.

The Population Census gives data on main and marginal workers disaggregated by education level attained (higher secondary, graduate and above, postgraduate degree other than technical degree, and technical degree or diploma equal to degree or postgraduate degree in engineering and technology, medicine, agriculture and dairying, veterinary, teaching, others) for different age groups (15–19, 20–24, 25–29, 30–34, 35–59, 60+ years) and is available separately for males and females, region-wise (rural/urban). Data on workers cross-classified by education levels attained is available from the 2001 Census onwards.

The Census since 2001 has also included data on vocation education, including the type of educational institution attended. It provides data on attendance in such institutes for both males and females in various age groups. It also has data on females with “technical diploma or certificate not equal to degree”, with “technical diploma or certificate equal to postgraduate degree” working as main, marginal and non-workers.⁶

⁵NSSO also gave data on field of training (mechanical engineering trades, electrical and electronic engineering trades, beautician, hairdressing and related works, work related to childcare, nutrition, pre-schools and crèche and others) and source from where diploma/degree/certificate was obtained (ITI, ITC, polytechnics, hotel management institutes, nursery teachers training institutes, nursing institutes...and so on) as well as duration of training.

⁶Under non-workers, those who were seeking/available for work are also included.

4.1.5. INDICATOR 5: MIGRANT WOMEN'S PARTICIPATION IN EMPLOYMENT

There has been movement or migration of people from their place of origin to other areas within the country as well as movement out of the country for various reasons, one of them being in search of better job/employment opportunities. Migration could take place from one village to another, from village to towns, and from towns to cities, or directly from villages to cities, or to large urban agglomerations (UA).

The proportion of migrant women in employment can be computed by dividing the total number of migrant women workers by the total number of migrant women in the population. Census and NSS, which are the macro data sources on migration, collect data on reasons for migration with respect to predefined categories following a monocausal approach and thus records only one reason. Due to sociocultural reasons, women tend to under-report employment and over-report marriage as reason for migration. As a result, the data pertaining to reasons for migration cannot be used to understand the employment aspect of migration.

The Population Census classifies migrants by place of birth if a person enumerated is at a place (village or town) different from her/his place of birth and by place of last residence if a person had last resided at a place other than her/his place of enumeration.⁷ Though data on migration was collected from the first Census of 1872, comparable data on migration and economic status is available only since 1981. The sex-wise disaggregated data is available upto the district level, across age groups classified by main and marginal workers and industry.

The NSSO defines a migrant as one whose last usual place of residence (UPR) was different from the present place of enumeration.⁸ The UPR of a person is defined as a place (village/town) where the person had stayed continuously for a period of six months or more.

The NSSO began collecting migration data from the ninth round, as part of its employment and unemployment enquiries. In the ninth (May–August 1955), 11th (August 1956–January 1957), and 12th rounds (March–August 1957), migration particulars were collected for the labour force population only. From the 13th round (September 1957–May 1958) onwards, more detailed information on migration was collected. In the 18th round, the survey on migration was conducted on a much larger scale; in the 28th round (October 1973–June 1974), migration particulars of the usual members of the sample households were collected. From the 38th round, it became part of the quinquennial EUS rounds. This was followed in the 43rd (July 1987–June 1988), 55th (July 1999–June, 2000) and 64th (July 2007–June 2008) rounds. Data on migration were also collected in the 49th round (January–June 1993). The NSS gives

⁷Data on migration is collected from the first Census of 1872. However, information collected was confined to the place of birth of the individual. In 1961, the 'rural or urban status of the place of birth' and 'duration of residence at the place of residence' was included. From the 1971 Census, information on migration by place of last residence (in addition to place of birth) was also collected. Since 1981, information on 'reasons for migration' was also collected and the following two Censuses did not have any change with respect to migration particulars except that in 2001 the rural/urban status of place of birth was not collected. The category of 'natural calamities' as a reason for migration was also dropped and 'moved at birth' added. Under questions on migration, until 2001, only names of present district, state, and country were collected, but from 2011, the name of village/town was also added.

⁸NSS has two categories of migrants, namely 'migrant' and 'short-term migrant'.

activity status-wise data for male and female migrants, and these are available since the 38th, followed by 43rd, 49th, 55th, and 64th rounds.⁹ Since raw data are available, estimates of WPR for migrant women could be disaggregated across socio-economic (religion, social groups and MPCE class) categories.

4.1.6. INDICATOR 6: SHORT-TERM/TEMPORARY MIGRATION AMONG WOMEN

A substantial number of migrants in India are temporary migrant workers. Depending on the period for which a household or individual has moved away from his/her usual place of residence, migration may be long-term wherein there is total relocation, or short-term. It is common among socially and economically weaker categories, such as the Scheduled Castes or Scheduled Tribes, with poor educational attainment, and assets and resources, to move from their usual place of residence for a short period of time in search of work.

NSSO is the only national level data source which gives information on short-term migration.

Short-term migrants are recorded from the 55th round. NSSO has defined persons who stayed away from their villages/towns for 60 days or more for reasons relating to employment as “persons temporarily staying away for employment”. The scope on short-term movement of the household members was extended in the 64th round, with collection of information on those short-term movements which were undertaken during last 365 days for 30 days or more, but less than six months for employment-related purpose, including collection of information on destination during the longest spell, industry of work, etc.

Since unit-level data is available for both the two rounds, making gender-wise estimates is possible across many important parameters, though the sample size is an important limitation. Reliable data are available from both the rounds on the gender-wise distribution of short-term migrants across usual principal activity status (self-employed, regular employees, casual labour, unemployed, and not in labour force), social category (SC, ST, OBC, others), general education level, and economic level (MPCE class). The 64th round covered short-term migrants in detail and has brought out data on its different aspects including migration rates, seasonality, destination, industry of work and usual activity status of those undertaking short-term migration.

4.1.7. INDICATOR 7: GENDER GAP IN DOMESTIC WORK BURDEN

Women share a disproportionate burden of household or reproductive work which comprises unpaid domestic work and care activities of the aged, the infants as well as the sick members in the family. This work is not looked upon as productive work though it is

⁹Like Census, NSS also collects data on reasons for migration which has expanded over rounds, from 13 reasons in the 55th round to 18 reasons in the 64th round. The reasons in the 64th round included in search of employment, in search of better employment, business, to take up employment/better employment, transfer of service/contract, and proximity to place of work (which were all employment related reasons). The other reasons were, studies, natural disasters, social/political problems, displacement by development project, acquisition of own house or flat, housing problems, healthcare, post-retirement, marriage, migration of parent/earning member of the family, and others. However, NSS, as in the case of Census, follows a mono-causal approach and hence under-represents migrant women’s employment.

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well-acknowledged that this domestic work burden imposes severe constraints on women's economic participation as well as their choice of employment. The gender gap in domestic burden is expressed in two ways: the difference in the participation rate of men and women in housework (unpaid housework and care work), and the difference between men and women on the time spent on such work.

NSS collects data from women who do not report themselves as workers on their status through two activity status codes which identify women who a) attended domestic duties only and b) attended domestic duties and was also engaged in free collection of goods, sewing, tailoring, weaving, etc., for household use. However, NSS does not collect data on domestic work for those who are employed or for men. Though one can estimate the number of non-worker women who are engaged in domestic work, no information on their actual time use is available.

The Time Use Survey (TUS) conducted by the Central Statistical Organization (CSO) in 1998/99 is the only survey available on housework/care work and its gendering. This was a stand-alone exercise and covered six states (Haryana, Madhya Pradesh, Gujarat, Odisha, Tamil Nadu and Meghalaya).¹⁰ Data were collected from 18,591 households and 77,593 persons of whom 40,187 were males and 37,406 were females in the age group of ten years and above. All household members in the selected households were asked for details of time use in respect of three days during the reference week—a normal day, an abnormal day and a weekly-variant. The information was collected through three sets of schedules, which focused on household characteristics, individual characteristics and on the time disposition of selected individuals.

Though the time division was open ended in the questionnaire, the respondents were asked to list the activities in one-hour slots from 3.00 am in the morning to 4.00 am the next day. Classification of activities provided for 176 activities grouped into nine major groups and 16 two-digit sub-groups. The two major activity categories for data on unpaid housework are a) household maintenance and b) management and shopping for own households and care for children, elderly, and disabled of own household. Limited disaggregation is possible within these broad categories across sub-categories of work. Both the participation rate in household work and the gender gap in time spent on housework could be estimated from the TUS data. Since unit data is available, analysis across various household and individual characteristics (such as social group, household size, age, employment status) is also possible.

4.1.8. DATA SOURCES ON ECONOMIC OPPORTUNITIES: LIMITATIONS AND COMMENTS

Data sets on many indicators concerning economic opportunities for women are limited to NSS and the Census. The other sources do not capture women's work or employment effectively. For example, the sample design of NFHS imposes certain limitations. The emphasis is

¹⁰The results of a second pilot survey conducted in 2013 are not made available to the public.

primarily on health and fertility aspects of ever-married women and aspects related to work are collected only with the aim of giving background information of respondents and the sample design is more tuned towards capturing data on various health parameters. Hence, the estimates of work arrived at by NFHS may not be comparable to the Census and NSS.

The data provided by both NSSO and the Census on women's economic opportunities are reliable and the quality of data has improved over time. The Census is a much more reliable source of information with regard to the WPR than the NSS employment surveys since it is complete enumeration.

However, the definition of work followed by the Census is an issue with reference to women's work. Its definition of economic activity does not cover: (i) growing of plantation crops, vegetables, flowers, and other crops, if done exclusively for home consumption, and (ii) own account production of fixed assets. This under-enumerates women workers. However, since Census 2001, the definition of economic activity has been expanded to include some of the above mentioned activities. Such changes can make times series comparison difficult and appropriate adjustments may have to be performed on the data. Further, Census data are not able to capture the seasonal and intermittent nature of work characteristics in India (though disaggregation of the marginal category in 2011 is useful).

The conceptual aspects as well as depth of information on various aspects of the work status of individuals and related variables are more comprehensive in NSS. The NSS definition of work is more inclusive than Census and so NSS is often considered to be the best source of data to capture women's economic opportunities and is regarded as superior on work and female work participation rates. However, many scholars feel that even this inclusive definition of work under-estimates women's work.

The division between economic and non-economic activity leads to underreporting of women's work, especially that of self-employed women. The gross underestimation is also due to the inherent and overlapping nature of women's work with domestic duties (and also being mostly home-based and therefore invisible), sociocultural reasons, as well as the perception of what is work.

Further, many economic activities carried out for the household such as processing of agricultural products for own consumption and collection of food, water and fodder are not included. None of these sources provide information on women's housework which helps in unpacking the intersection between paid and unpaid work. While the Census may have its limitations in terms of collecting detailed information on women's work, NSS being a sample survey could be redesigned to provide basic data on women's work including that of housework. At present, NSS collects some broad information from women who report domestic work as their primary activity. The scope of this could be extended at least in alternate surveys to include housework as a separate activity and related data could be collected from all persons irrespective of their status as workers or not.

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This could be supplemented by time-use surveys which at present are given least priority. Without understanding housework and its gender dimensions, one cannot fully analyse women's work. The data need to be generated at fixed intervals and ensure continuity in information. A gap of ten years seems practical.

The extent of unpaid work within economic activities is high for women and it is an important indicator of women's independent status (Neetha and Mazumdar, 2010). The only source of data currently available to compute and understand the magnitude of unpaid women workers is NSS. Though the Census captures this dimension it does not record or report it separately, which needs to be undertaken in the future.

Data on female migration and work is clearly inadequate as a monocausal approach without any probing questions is used to elicit information on migration. Since Census captures many demographic dimensions of migration, NSS migration rounds could focus on other dimensions of migration. Though labour migration has been the focus of NSS rounds, female labour migration is largely neglected. Multiple responses may be allowed with regard to reasons for migration to capture primary and secondary reasons of migration. Further, probing questions on female labour migration such as cost of migration, source of finance, recruitment agencies, etc., could be included in the survey as they would reveal gendered dimensions of migration decisions.

An important issue with unpaid housework is the lack of data. Except for 1998/99 TUS survey, there has been no data on this aspect which is a critical variable as far as women's entry into employment and position in the society is concerned. The issue of multiple work and simultaneity in activities are some of the methodological concerns raised in the context of the survey. In case of simultaneous or multiple activities, total time was divided across various activities on the basis of their relative importance as reported by the informant. Given the social understanding of housework and its undervaluation even by women, this approach is prone to underestimation of housework. The priority given to economic work over non-economic activities in its approach adds to this underestimation further. Thus in the case of economic and non-economic activities being performed simultaneously, priority was given to economic activities in deciding their importance.

4.2. QUALITY OF WORK

Workers may be engaged in the organized or unorganized sector, or in formal or informal employment. Many workers in the organized sector avail benefits such as paid leave, provident fund (PF), pension, gratuity, health care, maternity benefits, etc. In addition, they may also receive the opportunity to upgrade their skills through sponsored training and be provided with leave and home travel allowance, education support for children, and other benefits. In the organized sector 'quality of work' is determined by the existence of written contracts, notice period before termination and specific work hours, which are not so well-defined in the unorganized sector.

However, all workers in the organized sector may not be eligible for benefits, particularly those employed on a casual basis. The status of employment, whether self-employed, in regular or in casual work also, to a large extent, determines the quality of work.

4.2.1. INDICATOR 1: INFORMALITY RATIO (WOMEN IN INFORMAL EMPLOYMENT)

In the last few decades, the informal sector has become the main avenue for work for all sections of people, particularly for the poor across countries because of lack of employment opportunities in the formal sector. According to the National Commission for Enterprises in the Unorganized Sector (NCEUS 2006), “Informal workers consist of those working in the informal sector or households, excluding regular workers with social security benefits provided by the employers, and workers in the formal sector without any employment and social security benefits provided by the employers.”

In India, informal sector and unorganized sector employment are used synonymously to include both informal non-farm and farm employment. The informality ratio, which gives an idea of the extent of women in informal employment, can be obtained by dividing women in informal employment by total women workers. NSSO is a major data source on informal sector employment.

National Sample Survey: Till the 55th round of NSS, there was no effort to capture informal sector employment separately. The method of estimating informal sector employment was based on the residual method. In the residual method, estimates of employment in the organized sector obtained from the DGET are subtracted from the total employment figures provided by Census or NSS. In this method, though one is able to estimate proportion of women in the unorganized sector, no further disaggregation is possible.

In the 55th round, data related to informal sector was collected separately. To capture the various dimensions of the informal sector, the survey followed both an enterprise approach and labour force approach.¹¹ It is possible to estimate the size of informal sector employment from this round onwards.

The informality ratio or proportion of women in informal employment can be computed by using NSS data/unit-level data following the NCEUS methodology. The ratio can be disaggregated across social and economic groups, and across individual characteristics.

4.2.2. INDICATOR 2: PROPORTION OF WOMEN IN HOME-BASED WORK (HBW)

According to the International Labour Organization (ILO), home-based work is the production of goods or provision of services for an employer or contractor under an arrangement whereby the work is carried out at a place chosen by the worker, often the

¹¹All unincorporated proprietary and partnership enterprises were defined as informal sector enterprises.

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worker's own home, without any direct supervision. It does not refer to unpaid housework or paid domestic work. There are two basic types of home-based workers: the self-employed who work on their own, and those who work for others (mostly industrial outworkers). The latter, termed home worker, carry out paid work from their homes and are commonly paid at piece-rates. Conceptual and statistical distinction between the two categories is essential for better policy making and for improving conditions and reducing exploitation of women workers who are increasingly subsidizing production costs across countries.

NSSO is the major national level data source on home-based workers in India. NFHS also gives some information with regard to place of work. It asked employed women who they were working for (for a family member; for someone else; or self-employed) and also their place of work (at home or away from home). But NFHS only covered all ever-married women 15–49 years in its first two rounds and never-married and ever-married in the third round. Thus, many in the working group ages may remain excluded.

Though NSSO collects information on those self-employed in all its employment rounds, no estimation on home-based work was possible in the earlier rounds. It was only in the 55th round,¹² when some questions on the location of workers were canvassed, that there was a possibility of calculating home-based work separately. However, these questions were dropped in the 61st round; re-introduced in 66th round,¹³ and then some of them, especially on sub-contracting, were dropped from the 68th round. Thus, the information available on home-based workers is richer in the 66th round in comparison to that in the 68th round.

4.2.3. INDICATOR 3: SHARE OF WOMEN IN FEMININE JOBS

Patriarchal ideologies have created and sustained sexual division of labour into men's and women's work. Some of the dominant occupational choices of women or specific jobs/professions that have been associated with women include nursing, teaching and paid domestic work. Share of women in feminine jobs could be defined as the proportion of women in the total employment for sectors/occupations that are female dominated. NSSO is the only national level data source from where data on distribution of female workers and their share across occupations and industry groups can be obtained.

In all EUS rounds, NSSO has brought out data on specific occupations in which male and female workers are engaged. NSSO has been giving distribution of usually working (usual status) persons by industry of work and occupation since the 27th round, though the number of specific industry/occupation of work has expanded over rounds with revisions in the National Industrial Classification (NIC) and National Classification of Occupations (NCO).

¹²In the 55th NSS round certain questions were included which helped to separate home-based workers, home workers and street vendors. This was done through the introduction of questions on the place where the worker carried out his/her economic activity, the nature of the contract (if working with in a sub-contract relationship) such as receiving the design, raw material, credit, and equipment along with the order for the product/service.

¹³The 66th round of NSS enquired about locations of workers in principal as well as subsidiary status. Many codes were provided for location of workforce of which 'own dwelling unit', 'structure attached to own dwelling unit', 'open area adjacent to own dwelling unit', 'detached structure adjacent to own dwelling unit' are All associated with place of work in home-based work. It enquired as to whether 'worked under given specifications' and also who provided credit/raw material/equipments to capture the subcontracting of work.

However, disaggregated data for certain industries/occupations for which no published data is available, such as nursing, can be computed only in later rounds as unit-level data is available. Sectors/occupations which have gained visibility and attention are incorporated into the data collection with due changes in the NIC/NCO codes across survey rounds. Hence, concordances across surveys for activity/occupation codes are required for comparison across time. Further, for some sectors/occupations, such as domestic work, comparable data is available only from the 55th round.

Like in the case of any other statistics based on NSS data, disaggregation across a number of variables is possible for rural and urban areas separately, but sample sizes do impose restrictions for multiple disaggregation.

4.2.4. INDICATOR 4: GENDER WAGE GAP

Workers engaged in similar kind of work with equal skill levels are paid differently across states and also discriminated by gender and by socio-economic categories. The gender wage gap varies between rural and urban regions, and across states. It may be defined as the average wage difference between male and female workers. While there are many sources of data on rural wages, NSS is the only survey-based national level data source that provides regular data on wages in India (others like the Labour Bureau provides limited data). Wages and earnings of rural workers are available from four sources in the form of five different estimates. The sources are Agricultural Wages in India (AWI), Rural Labour Enquiries (RLE), NSS, Cost of Cultivation Studies and Wage Rates in Rural India.¹⁴ The concepts and definitions, periodicity of availability, and the level of disaggregation possible differ across these sources.

AWI wage data is the oldest data, available from the early 1950s, and provides separate wage rates for males, females and children. But its definition of agricultural labourer and of wages is often criticized for lack of clarity. RLE data, available at a gap of five to six years as they are based on NSS quinquennial rounds are considered superior to the AWI data because of their superior sampling frame and consistency in methodology as well as definitions and concepts. Reliable and comparable data are available from 1977/78 onwards. NSS estimates are again based on the same source and the data are available across activity status for regular/salaried, casual workers in public works and casual workers in other works. Data for Wage Rates in Rural India, is collected by NSSO since 1986/87) and published on the website of the Labour Bureau. However, the data from many states and for many operations have considerable gaps, especially on female workers. The last source of wage data is from the studies on cost of cultivation undertaken by the Ministry of Agriculture in association with various agricultural universities, and is available since 1971. The data have several problems with regard to comparability (number of crops for which data are collected differ) in addition to periodical gaps in data collection and publication. An important aspect of this source is that the data incorporates valuation of various inputs including human labour, which includes attached and casual labour as well as imputed valuation for family labour. Though

¹⁴The source of RLE and NSS are the same.

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no data is published separately for women, a lot of gender-sensitive information collected in these surveys needs further analysis.

Though there are many possible sources for estimating the wage gap in rural/agricultural wages, NSS is the only source of data for both rural and urban areas.

NSS, in various EUS rounds, has brought out gender-disaggregated wage data for selected activity status of workers such as regular/salaried, casual workers in public works and casual workers in other works. From the 38th round (1993/94) onwards, since unit-level data is available it is possible to compute the gender wage gap for all states and UTs for rural and urban areas. The average daily wages (in Rs) and the gender wage gap for regular wage/salaried and casual workers can be disaggregated by broad industry divisions, level of education (illiterate, literate up to middle, secondary, and higher secondary, graduate and above), social and economic groups. From the 66th round onwards, data on casual work is collected separately for Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) workers.

The Labour Bureau has conducted Occupational Wage Surveys in six rounds covering the organized sector. These were held in 1958/59, 1963/65, 1974/79, 1985/92, 1993/2002 and the last in 2002/09 (published in 2010). It has brought out occupational wage differentials by industry in different geographical regions. Average daily earnings by sex and age (of men, women, adolescents, children, and overall) for a number of industries classified under four sectors (manufacturing, mining, plantation, and services) are available.

The Annual Survey of Industries (ASI) was launched in 1960 (with 1959 as the reference year) and is continuing since (except for 1972). The ASI extends to the entire country and covers all factories registered under the Factories Act, 1948, that is, those factories employing ten or more workers using power; and those employing 20 or more workers without using power. ASI gives information on the average daily employment of male and female workers as well as wages/salaries per man-day worked for all employees/all workers/male workers/female workers and contract workers. Though it publishes data on wages of female workers, the data are not disaggregated across contract and regular workers. Unit-level data in the summary format is available from 1974/75 and detailed unit-level data is available from 1983/84. However, since the focus of the survey is on the enterprise, no personal background characteristics of the workers are available.

4.2.5 INDICATOR 5: DISTANCE TRAVELLED TO WORKPLACE

Distances travelled for reaching the workplace is an important determinant of work participation for women.

The Census collected information on the distance travelled by a person to his/her workplace and also the mode of travel for persons engaged in non-agriculture activities for the first time in 2001. In 2011, 'mode of travel to place of work' and one way distance from residence to place of work for all economic activities was collected.

In the 50th round, NSS collected data on distance to place of work in kilometres (less than 5, 5–20, more than 20 km) across the following categories: in the same village/town, in another village, in another town. However, in its later round no such information was captured, limiting data only to place/location of work.

4.2.6. DATA SOURCES ON QUALITY OF WORK: LIMITATIONS AND COMMENTS

Data on quality of employment has improved over time with improvements in NSS concepts and its coverage. The most important aspect is the possibility of directly estimating the size of the informal sector since the earlier residual method had limitations. As it is not mandatory for private enterprises employing 10–24 workers to file information, data on extent of formal employment are clearly incomplete which leads to an underestimation of the organized sector workforce. From the 55th round of NSS, it is possible to combine both the sector concept and the employment concept to distinguish the organized/formal from the unorganized/informal. However, since NSS follows a gender insensitive definition of work, underestimation of women in the informal sector is bound to be high. Further, the methodology followed to estimate informal/unorganized sector is complicated and indirect, which limits the easy estimation of the indicator.

The Annual Survey of Industries provides data on India's factory sector, that is, the organized manufacturing sector. The data on employment are presented under three heads: workers directly employed, workers employed through contractors, and employees other than workers. Among directly employed workers, data are disaggregated by sex. However, the same is not the case for contract workers. Given that contract workers are growing in numbers, and those who are vulnerable including women are likely to form a sizeable proportion of contract workers, it is important that gender-disaggregated data on contract workers be provided. On wages also, there is no disaggregated data by gender in the ASI, which needs to be provided separately for directly employed as well as contract workers.

Though the importance of generating data on home-based workers is well acknowledged, the data pertaining to it are still not adequate. Unless appropriate questions to capture these are canvassed (particularly about existence of contracts, etc., in the case of home workers) one would not get a clear picture of the various dimensions of home-based work. Dropping of question on sub-contracting reduces the scope of home-based work and should be retained in all the further rounds of NSS surveys.

Sex-based sectoral/occupational disaggregation can be captured effectively from the NSS unit-level data at various levels. However, since changes in the labour market are often rapid and the official revision in NIC and NCO takes time, a gap is often felt in documenting these changes. These delays require interventions.

Wage data on non-farm informal sector are limited and at present NSS is the only source of data on this sector. NSS does not collect data on the earning of the self-employed, though some attempt was made in the recent rounds to capture this dimension. Since self-employment

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is an important sector of women's employment, it is important to capture regular data on their earnings across various categories, such as home-based workers, subcontract workers, and employers.

At present, no data source captures the actual duration of employment and average working hours. Working hours, though regulated, are rarely enforced. There could be gender difference in average working days and working hours determined largely by sociocultural and economic factors. For women, enhanced working hours may hinder their entry into employment or lead to breaks in employment. NSS surveys on employment need to pay attention to this aspect. Further, ASI data could also collect data on hours of work a year for men and women workers—directly employed as well as contract workers.

Another field of women's presence in employment, which has been often projected as a major outcome with the expansion of the private sector, is women occupying leadership roles or corporate level positions. Microlevel insights point to the extreme inequality between the sexes in corporate level positions. However, no data are available on the corporate gender gap. Data in respect of board-level positions occupied by women are available for publicly listed companies, but not for private enterprises.

Many women workers are denied minimum wage,¹⁵ though studies have shown that minimum wage provisions can help in substantially reducing poverty, inequality and also the gender wage gap. In India, there is no legally binding national minimum wage at present, but only compulsory state-level minimum wages for a number of occupations.¹⁶ No data on the number of women who get minimum wage are available even from NSS data though indirect methods are used to arrive at some estimates, which are open to debate. With the growing importance of casual and contract work for women, there is a need to closely monitor this indicator which is one of the basic rights at work. NSS survey schedules could be modified accordingly.

Career/job breaks are common in women's working life, given their lifecycle and their reproductive roles. Such breaks can affect their presence and bargaining at workplaces. There should be data capturing this factor. Average career breaks give an indication on women's care work burden and can give insights for advocating public provision of institutional care facilities. However, there is no such data at present. This needs to be addressed. NSS can cover this in the section on employed as well as on unemployed.

Distance travelled to the workplace is again an important variable that has gender implications. Though NSS canvassed a question on this in the 55th round, subsequent rounds did not capture this data. NSS needs to re-introduce it.

¹⁵The Minimum Wages Act of 1948 governs the fixation of minimum wage rates on a per day basis. It is extended to the entire country and is revised within a period of not less than five years, with a provision to increase dearness allowance every two years.

¹⁶Some occupations are still outside the ambit of minimum wage. For example, minimum wage for domestic work is not fixed in many states.

4.3 SUPPORT SERVICES AT WORKPLACES AND ACCESS TO SOCIAL SECURITY SCHEMES

The Indian government has enacted many laws to protect and promote interests of workers but they are relevant only to the organized or formal sector. In the case of the unorganized sector, as per the National Commission for Enterprises in the Unorganized Sector, only about eight per cent of all workers have any statutory protection against sickness, maternity, disability, and old age, through various central and state-level legislations on conventional social security (NCEUS, 2006).

4.3.1. INDICATOR 1: PROPORTION OF WOMEN HAVING ACCESS TO LONG-TERM EMPLOYMENT AND PAID LEAVE

More than wages, access to minimum conditions of work are important indicators of quality of employment. Many women are known to be employed in precarious jobs with no permanent or regular contract, and access to basic conditions at work such as paid leave.¹⁷ The data on these heads are highly limited and NSSO is the only source that could be used to get any relevant statistics.

Since its 55th round NSS collects some data on nature of employment. In this round, a question was asked to ascertain the status of employment as permanent or temporary. From the 61st round onwards, information on type of job contract was collected, the categories being: no written job contract; written job contract: for one year or less, more than one year to three years, more than three years. Information on eligibility for paid leave was also collected for all those who were in regular or casual work from the 61st round onwards, and this has been followed in subsequent survey rounds, and in the 66th and 68th rounds also for persons with in certain industry groups which represented formal sector employment. Eligibility for paid leave can be computed for male and female regular and casual workers across industry groups. Since unit-level data for all these rounds are available, it is possible to disaggregate the data across many socio-economic variables.

4.3.2. INDICATOR 2: PERCENTAGE OF WOMEN WITH CRÈCHE FACILITIES AT WORKPLACE

Child-care facilities are an essential support service for a woman who ventures out for work. Following the ILO conventions, Indian labour laws lay an obligation on employers in factories, mines and plantations to provide maternity benefits and crèche facilities to women workers. According to Section 48 of the Factories Act, 1948, every factory, wherein more than 30 women are ordinarily employed, should provide and maintain a suitable room for the use of children under the age of six years of such women workers. This means that the right to crèche facilities is applicable only to three to four per cent of women workers in the organized sector. There is no national-level data source covering

¹⁷Paid leave means an employee can avail certain number of paid holidays in a year and would still receive for those days the same amount that he/she receives on a regular working day. It includes casual leave, sick leave, maternity leave, etc.

all working women with/without crèche facilities at workplaces. The only information pertains to administrative data collated as part of the Factories Act.

The Labour Bureau's Statistical Profile on Women's Labour publishes data on crèche facilities based on the annual returns filed under the Factories Act. In each of its reports, it has provided annual data on the number of factories providing crèche facilities across states and industry groups.

NFHS across its various rounds has asked questions to married women to ascertain who takes care of the youngest child of a woman who is working away from home. The listed possible choices include husband, older boys, older girls, other relatives, neighbours, friends, servants/hired help, child is in school, and institutional child care. Institutional care comprises a range of institutions which could be outside the workplaces and hence cannot be used to generate any statistics related to workplace provisions.

4.3.3. INDICATOR 3: PERCENTAGE OF WOMEN WITH SOCIAL SECURITY BENEFITS

Workers in the organized/formal sector may be covered under certain social security benefits or a combination of few benefits. However, many workers in the unorganized sector do not have access to many benefits, with a good proportion having no social security at all. Broadly, social security benefits can be classified as provident fund, gratuity, health care benefits, maternity cover and pensions.

NSS is the only national-level data source which gives information on coverage under social security benefits. NSS has captured data on provident fund availability since its 55th round, which asked respondents if they were covered under PF and, if yes, which type of fund GPF; CPF; PPF; combination of GPF, CPF and PPF. These questions were refined from the 61st round and information was collected on what benefits they were eligible for: only PF/pension (i.e., GPF, CPF, PPF, pension, etc.); only gratuity; only health care and maternity benefits; only PF/pension and gratuity; only PF/pension and health care and maternity benefits; only gratuity and health care and maternity benefits; PF/pension, gratuity, health care and maternity benefits; not eligible for any of above social security benefits; and not known. Thus, if a woman worker is not covered by at least one of these benefits then she can be taken as one not receiving any social security benefits which makes it possible to compute the percentage of women workers with social security benefits. These statistics can be computed across industry groups for regular and casual workers and then can be disaggregated across social and economic variables.

4.3.4. DATA SOURCES ON SUPPORT SERVICES AT WORKPLACES AND ACCESS TO SOCIAL SECURITY SCHEMES: LIMITATIONS AND COMMENTS

Though it is well acknowledged that many women are concentrated in the informal sector, the differential employment conditions within the informal sector are still poorly captured. Terms of work differ tremendously across different industry and segments of the informal

sector. Women are over-represented in the lower segments. The data on terms of work is not given adequate importance in the NSS employment rounds, though some data was made available recently. To address this limitation of the existing data, occasional special surveys with emphasis on the employment aspects of the informal sector may be useful. No national-level data covering all working women with/without crèche facilities at workplaces is currently available. The Labour Bureau provides some information, but does not cover all women workers in the organized sector and not even all factory workers, as the data are dependent on individual factories filing returns. It is recommended that a question on childcare facilities should be included in NSS surveys in the section covering social security benefits and availability of paid leave.

Even on social security, though some data is available, various approximations and calculations have to be made for ascertaining percentage of women with social security benefits. The disaggregate analysis is affected by the small size of women workers. Further, the data on social security at present merely give the availability status and no information is available on the quantum of such benefits which has critical gender implications. It is important to capture the details of maternity benefit provision, as it is a major issue for women workers. NSS could collect detailed information on these, at least in alternate rounds.

4.4. FINANCIAL AND OTHER FORMS OF ECONOMIC INDEPENDENCE

Economic status of women is interlinked with her financial independence and autonomy. However, data on these dimensions are absent or are highly limited.

4.4.1. INDICATOR 1: PROPORTION OF WOMEN HAVING ACCESS TO BANK ACCOUNTS

Access to formal sector credit and savings facilities was outside women's radar for close to 50 years after independence resulting in their economic and social deprivation. The financial inclusion push in recent years has led to certain positive and women-friendly policy measures.

Presently, none of the national-level data sources give concrete data on percentage of women having access to bank accounts. NSSO gives data on number of households having accounts as well as number of accounts per household, but does not specify whether the account is in the name of males or females in the house. The Reserve Bank of India is the only source that gives regular information on accounts of women through its Basic Statistical Return and the Small Borrowal Account Surveys. NFHS also has some data on women's access to bank accounts. NFHS-3 and 4 have collected information on whether the woman had a bank or savings account that she herself accessed. But the data is available only for women in the age group 15-49 years.

Basic Statistical Returns, published by RBI, makes it possible to calculate loan accounts for both men and women. The RBI began to publish data on women in the BSR (published annually from early 1980s) from 1996 onwards.

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The Small Borrowal Account Survey was initiated in 1997 and by 2008 seven SBA surveys had taken place. The BSR is based on an annual sample survey on composition and ownership pattern of credit and deposits in scheduled commercial banks. These surveys are conducted to obtain a profile of SBAs (accounts each with credit limit of Rs. 2 lakh or less forming 88 per cent of the number of loans) for which account-wise details are not collected through the BSR system. Information is available on an annual basis on the following heads: (i) Number of deposit/loan accounts (and amount outstanding therein) in the name of women at the all-India, regional and state level and (ii) Number of deposits/loan accounts (and amount outstanding therein) in the name of women at various types of branches (rural, semi-urban, urban and metropolitan branches) and types of banks (public sector, private sector, foreign and regional rural banks).

Apart from this, on a periodic basis information is provided on (i) number of SBAs (and amount outstanding therein) in the name of women at the all-India level; (ii) number of SBAs (and amount outstanding therein) in the name of women belonging to Scheduled Castes, Scheduled Tribes and other Backward Classes; (iii) number of SBAs (and amount outstanding therein) in the name of women under types of loan schemes, such as- Integrated Rural Development Programme, Prime Minister's Rojgar Yojana, and Swarnjayanti Gram Swarozgar Yojana (SGSY); (iv) occupation-wise distribution of credit taken by women in SBAs (agriculture, industry, trade, finance, and other professional services); (v) classification of credit taken by women in SBAs by size class of rate of interest; (v) number of SBAs (and amount outstanding therein) in the name of women under Kisan Credit Cards and other types of loans, from 2008 onwards.

4.4.2. INDICATOR 2: PROPORTION OF WOMEN HAVING CONTROL OVER OWN INCOME

Financial independence is determined by the extent of control one has over one's cash earnings/income. Despite participating in paid work, many women may have zero control over it as her income is perceived as belonging to the household. All decisions on expenditure may be taken generally by the male members of the family or head of the household. The only source that gives some data on "control over own income" is NFHS.

NFHS-2 for the first time collected data on women's autonomy with regard to the income earned by her. For women earning income in cash, NFHS asked who decided the usage of money they earned: (a) woman herself, (b) husband only, (c) woman with her husband, (d) decided by others in the household and (e) woman with others in the household.

NFHS-2 gave percentage of ever-married women having access to money according to background characteristics for India and all states. The NFHS-3 and 4, apart from women's status, captured relative autonomy for understanding "empowerment within marriage". Hence, data was collected from male respondents also across categories to find out who had financial control over household income: mainly wife, wife and husband, mainly husband, others. This allowed male-female comparison by background characteristics like

age, residence, education, number of living children, household structure (nuclear, non-nuclear), religion, caste/tribe and wealth index.

4.4.3. INDICATOR 3: PERCENTAGE OF WOMEN HAVING CONTROL OVER CONSUMPTION EXPENDITURE

Many women may have no voice in household decisions including major consumption expenditures like those pertaining to purchase of land and other assets, durable goods, education of children and so on.

NFHS is the only data source that gives data on control over consumption expenditure. NFHS-2 gives data on percentage of ever-married women having some control over consumption expenditure from daily spending to other expensive items. NFHS-2 provided information on control over consumption spending based on responses to who made decisions (only woman, only husband, jointly with husband, others in the household, and jointly with others in household) with regard to “what items to cook, obtaining health care for self and purchasing jewellery, or other major household items”. NFHS-3 and 4 also collected the same information, but information was collected only from currently-married women.

4.4.4. INDICATOR 4: PERCENTAGE OF WOMEN HAVING FREEDOM TO SUPPORT NATAL FAMILY

Many women are unable to extend monetary support to their natal family after marriage even if they are employed and earn cash incomes. None of the national level data sources give explicit information with regard to this aspect.

NFHS-2 and NFHS-3 have a question: “Are you allowed to have some money set aside that you can use as you wish?”. In NFHS 4, the question was reframed as “Do you have any money of your own that you alone can decide how to use”? Answer to this can indicate if they have freedom to spend including the freedom to support their natal family.

4.4.5. INDICATOR 5: OWNERSHIP OF LAND/AGRICULTURAL LAND BY WOMEN

Ownership of land may give women a sense of security and independence. Hence, there have been various debates on the necessity of independent land rights to women in recent years. However, there is no data on land ownership by women. The decennial Land and Livestock Holding surveys of NSSO collect data on area of land owned and operated by households. The All India Debt and Investment surveys too provide estimates of the net value of land owned by a household. However, both these surveys consider a household as the primary unit. Hence, there is no information on area or value of land legally owned by female members of a household. The only estimate that can be computed from unit-level data is the land area owned and operated, and value of land owned by female-headed households.

The other important source of data on land is the Agricultural Census. This uses data consolidated from the land revenue surveys of most states and considers operational holdings as the primary unit. Hence, there is no disaggregated data for male and female title holders, as all land held by any member of a household constitutes a single operational unit..¹⁸

4.4.6. INDICATOR 6: OWNERSHIP OF OTHER ASSETS LIKE HOUSE/PROPERTY

The second most important asset after land is housing. Data on housing are collected by the Census of India, NSSO Surveys and NFHS. The Census of India collects data on ownership status of houses (NSSO and NFHS do not collect data on this variable), but the response is given as owned/rented/other. There is no information on the owner: whether it is singly or jointly owned and whether the women in a household have any ownership rights. Asset data of households are also available from the All India Debt and Investment Surveys (AIDIS), conducted decennially by the NSSO, but they do not give asset ownership by gender. NFHS-3 and 4 have also collected information on assets of the households and not the individual women. Certain smaller surveys have attempted to give an idea of asset ownership among women.¹⁹

4.7. DATA SOURCES ON FINANCIAL AND OTHER FORMS OF ECONOMIC INDEPENDENCE: LIMITATIONS AND COMMENTS

Though BSR gives some data on women's financial aspects, there are some heads on which gender-disaggregated information is still not available. The BSR does not provide statistics on credit taken by women, either by occupation or by cohorts of interest rates. There is a need to widen the scope of the BSR and ensure that it provides gender-based information under all major heads. For certain heads on which annual information is not available from the BSR, SBA surveys do give some periodic information, but these are published with considerable lags, which need attention.

Data on land and assets is the most important missing data that can give insights into the economic independence of women. Given the need for women to have independent collateral and for asset security in general, some information on the status of property ownership status among females needs to be collected in future. It is possible to obtain data on land titles held by women from official land records. However, there has been no effort to consolidate or publish such data. It may be an extremely difficult task since land records for the whole nation are not yet digitized. Further, in the land title recording system the responsibility of mutation and registration of land titles lie with the landholder. Land records are often outdated and inaccurate because landholders do not report transfers in land title.

¹⁸Agriculture Census provides gender disaggregated information on operational holdings which include number and area of operational holdings (gender-wise data available for all social groups: Scheduled Castes and Schedules Tribes) by size classes. The state-wise distribution of number of operational holdings and area operated (gender-disaggregated data for all social groups: Scheduled Castes and Schedules Tribes) by size classes is also available.

¹⁹The Karnataka Household Asset Survey conducted by IIM Bengaluru for the first time in India, collected asset ownership information at the individual level for an entire state (in both rural and urban areas of the state, and also the metropolis of Bengaluru). A stratified random sampling method was followed with Census 2001 as the sampling frame. A total of 7,185 individuals from 4,110 households were interviewed.

An attempt needs to be made to document ownership of assets among women. NSSO should undertake a pilot survey on women's ownership of assets, including land and housing, drawing lessons from the Karnataka Household Asset Survey (KHAS).²⁰ Yet another data that is missing and important for understanding women's position is the data on the ownership of livestock. There should be a pilot survey on women in the livestock economy of India.

Data on decision-making and control over income and resources by women is highly inadequate and it is difficult to capture these through large questionnaire-based perception surveys. Though NFHS gives some statistics on these, the reliability of this data is often an issue. To address this data gap, pilot women-centric surveys with well-developed design and methodology may be undertaken to capture these dimensions occasionally.

²⁰The KHAS collected asset ownership information at the individual level for the entire state (in both rural and urban areas of the state and also the metropolis of Bengaluru). The KHAS socioeconomic estimates (demographics, asset incidence and access to amenities) in rural areas were largely similar to those of other state representative surveys such as the NFHS-3. It surveyed two respondents from each household (as far as possible, one of each sex) to capture both men's and women's views on asset ownership. It obtained information on all the physical assets including residence, agricultural land, other forms of real estate, livestock, agricultural tools and equipment, non-farm business activities and consumer durables.

Chapter 5

VIOLENCE AGAINST WOMEN

Violence against women is of undoubted importance in assessing women's status since it is one of the most potent tools of control and domination. The UN defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life."

The power structures within the households are manifested in everyday social life creating gender hierarchies. Violence against women takes many forms and is broadly classified into physical, sexual and emotional violence. Over time this violence has not reduced. In fact, it is now manifesting itself with an increased complexity. Violence against women is rooted in the male dominated socio-economic, legal and political order (Mukherjee et al. 2001).

Studies show that heightened participation and presence of women in the work and public sphere (especially at the grass-roots level) is making them more vulnerable to crime and other forms of violence. Moreover, attempts to control and intimidate women who are associated with decision-making processes are also leading to violence. Most crimes against women go unreported because of attached social stigma, distrust in legal mechanisms, fear of retaliation, and so on. However, in recent years, there has been an attitudinal change which has resulted in more women (or their families) coming forward to report such crimes.

Violence Against Women can be discussed under the following two sub-themes:

- Crimes Against Women
- Domestic Violence.

The indicators are given in Chapter 1, Table 1.1.

DATA SOURCES

Accurate and comparable data on violence are required to strengthen advocacy efforts, help policymakers understand the problem and guide the design of interventions. In India, the only and most important source of data on overall crimes against women is the data published by the National Crimes Record Bureau (NCRB) of the Ministry of Home Affairs. Another major source of data which gives information on various aspects of domestic violence is NFHS.

5.1. CRIMES AGAINST WOMEN

Any direct or indirect act of physical or mental cruelty to a woman is a crime against her. To come under the category of crimes against women, these are crimes directed specifically against women and in which only women are victims. In India, it is said, such crimes are now reported almost every two minutes – and committed with even more alarming frequency given the low reporting rates.

5.1.1. INDICATOR 1: RATE OF CRIMES AGAINST WOMEN

Crime rate against women is defined as the number of crimes against women per million population of women.

NCRB data is the only source of data that is available on crimes against women. Although, women could be victims of murder, robbery, cheating, or any other crimes, the crimes in which only women are the victims and which is directed specifically against women are characterized as crimes against women by NCRB. Though the data on crimes is available since 1953, data on crimes against women is available only since 1971. There have been many changes in terms of its scope and coverage over time, and hence any trend analysis needs to be done with caution.

State-level data as well as data across various types of crimes are available which permits disaggregation. There is also data for selected cities: 23 cities since 1992, 35 since 2001 and 53 since 2011. Age-wise data is available since 1992 across age categories >10, 10–16, 16–30, and 30<. From 1999, the age categories were expanded and amended: upto 10, 10–15, 16–18, 19–30, 31–50, and above 50 years. In 2001, the age groups were refined further. Thus, the current age groups are: upto 10, 10–14, 14–18, 18–30, 30–50, and above 50 years.

Since NCRB does not give any data on the household and individual particulars of the victim, no further disaggregate analysis is possible. Further, the data are based on registered FIRs alone, and other sources of information, particularly unregistered complaints, are overlooked completely. Hence, NCRB data may be huge underestimates. No other source of data is available on crimes. Since its second round, NFHS collects data on violence experienced by women, which include both crimes as well as other violence. However, no differentiation is made between the two in the survey.

5.1.2. INDICATOR 2: NATURE OF CRIMES AGAINST WOMEN

NCRB classifies crimes against women in two categories: under the Indian Penal Code (IPC) and under special laws. The crimes identified under IPC are: rape (Sec. 376 IPC); kidnapping and abduction for different purposes (Sec. 363–373 IPC); homicide for dowry, dowry deaths or their attempts (Sec. 302/304–B IPC); Torture, both mental and physical (Sec. 498–A IPC); molestation (Sec. 354 IPC); sexual harassment (Sec. 509 IPC, referred to in the past as eve-teasing); and importation of girls (up to 21 years of age) (Sec. 366–B IPC).

Various other crimes are identified under special and local laws (SLL), enacted from time to time to deal with specific social and economic problems affecting women. The SLLs covered

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by NCRB data are: Commission of Sati (Prevention) Act, 1987; Dowry Prohibition Act, 1961; Immoral Traffic (Prevention) Act, 1956; Indecent Representation of Women (Prohibition) Act, 1986.

NCRB has been collating data on kidnapping and abduction since the beginning (1986). From 1971, it has been providing data on rape and culpable homicide not amounting to murder. Crime against women was included as a chapter in NCRB from 1992, bringing together crime data under six heads (rape, kidnapping, dowry deaths, torture, molestation, and eve-teasing) from 1990. In 1994, four more crime data heads relating to SLL (importation of girls, Sati Prevention Act, Immoral Trafficking, Indecent Representation of Women) were added. Sexual harassment data is provided since 1995. In 1996, NCRB included the Dowry Prohibition Act in its report and provided data on it from 1994. From 2011, the category torture was replaced by cruelty by husband and relatives. State-wise data is available across all crimes while age-wise and city-wise data is limited to a few.

There has been an addition to the laws on violence against women with the Criminal Law Amendment Act, 2013 which covers gang-rapes, acid attacks, stalking, etc. Data on these would be available only later.

5.1.3. INDICATOR 3: CONVICTION RATES ON CRIMES AGAINST WOMEN

Conviction rates can be defined as the proportion of convicted cases to total number of cases. The conviction rates for crimes against women are poor. NCRB gives data on total FIR registered cases and conviction for various IPC crimes from 2008.¹ Data are available across all the individual crime heads that are reported under crimes against women though disaggregation across age is not available.

5.1.4. INDICATOR 4: INCIDENCE OF HONOUR² CRIMES

One of the worst forms of violence against women is what have come to be known in India as “honour” crimes, where women are subjected to violence in the name of protecting the “honour” of the family and caste/community. Crimes in the name of honour, which are on an increase in recent years, are not specific to any religion, caste/community or region but cut across geographic, social and cultural divides. Such crimes can range from assault, confinement, imprisonment, interference with choice in marriage, declaring her to be a minor or insane, to brutal murder. The exact extent of crimes in the name of honour, which are still not recognised by law, remains unknown, though few brutal cases may get registered under the IPC. No aggregate data is available on such cases under the IPC. A number of cases also go unreported for fear of reprisals or cascading effects.

¹It gives data on cases registered (cr), cases charge sheeted (cs), cases convicted (cv), persons arrested (par), persons charge sheeted (pcs), and persons convicted (pcv) under rape (Section 376 IPC) .

²The UN states that the term ‘honour killings’ risks “reinforcing discriminatory misperceptions that women embody the ‘honour’ of the male and the community”. Alternative suggestions are family femicide, shame killings, and patriarchal killings.

Given the gravity and extent of the issue, immediate attention needs to be paid to collate data on reported cases of “honour” killings annually across states. Demographic and social background of the victim should also be collected.

5.1.5. INDICATOR 5: COMPLAINT RATES OF CRIME AGAINST WOMEN

Complaint rates of crime are an important indicator not only because they provide insights on the actual magnitude of crimes, but also because they are an indication of the agency of women in dealing with violence against them. The NCRB data is based on FIR cases and not on total complaints. There could be many cases which may not have been converted to FIRs. NCRB does not publish the data on complaints as many states do not report the total number of complaints received as well as those converted into FIRs. Analysis of a state for which this data is available shows less than 40 per cent conversion of complaints into FIR. Given the low conversion rate, NCRB needs to strictly collate the data from different states and publish it regularly.

5.1.6. DATA SOURCES FOR ‘CRIME AGAINST WOMEN’: LIMITATIONS AND COMMENTS

The major source of data on crimes is the annual report titled “Crime in India,” published by the National Crime Records Bureau. Over time, it has succeeded in providing timely annual data on crimes against women and there has been a marked improvement in the quality of data. However, many limitations continue.

NCRB data are based on statistics provided by law enforcement agencies. Accordingly, only crimes reported to law enforcement agencies and recorded by them are collated. As a result, there may be many incidents and types of violence that are not in the statistics because they are not reported or recorded. Further, only certain sections of the IPC are included under Crimes against Women, but women are also victims of other crimes under other sections of the IPC. This data is not easily available nor can it be easily compiled from NCRB data. Even the data on crimes registered under the SC–ST Prevention of Atrocities Act is not classified by gender.

The data on crime against women do not give any other socio-economic category-wise data which is a major limitation for undertaking any disaggregate analysis and related interventions. Disaggregate data across social groups, age, marital status, etc., are critical indicators and this could be compiled easily by NCRB. Thus, there is a need to review existing parameters and develop new parameters for reporting crime data.

Further, no data is provided on the disposal of cases of crimes against women, or the number of persons arrested, and so on. The published data provides only state-level information, though it is possible to collate such information from the Bureau. Efforts to make available district-level data public would increase the utilisation of such data for analysis and interventions at the grass-root level.

Approaching Data Sources A Gender Lens

Another factor that needs to be considered by NCRB is that most criminal incidents often involve more than one crime and FIRs often invoke multiple IPC sections. Figures provided by NCRB are segregated into fixed templates of rape, murder, kidnapping, etc., because only the most serious charge mentioned in a FIR is taken into account. Due to this, an incident of rape and murder is recorded as murder, because murder is a more serious offence in law than rape. As a result, heinous rapes would also be classified under murder, thereby not generating real statistics on rapes.

The form and nature of crimes have changed over time and hence the data provided by the NCRB does not give the actual scenario prevalent in the country. Crimes among live-in relations, sexual harassment, “honour” killings, marital rape/violence, cybercrime, cyber bullying and pornography are among those crimes that have risen but there is no data available on them. NCRB has classified cyber crime into 15 categories under the IT Act and IPC. An urgent review of existing statistics on crimes against women is required to see the possibility of capturing these new crime heads. There is also scope for detailed subdivisions within important categories such as rape and sexual harassment³. Additionally, information is also needed on the extent of numerous other crimes that were recognised by the Criminal Law Amendment Act, 2013, like gang-rapes, acid attacks, stalking, etc.

It is imperative to supplement police records with survey data to give a true picture of the issue since all violence/crime is not reported. Further, in the absence of any detailed data from NCRB on the socio-economic and other characteristics of the victims (and perpetrators) of violence, a nationally representative survey is required covering all critical information.

No data exist on workplace-related violence except sexual harassment. There are many other forms of violence that women are subjected to which could be physical or emotional. Women are concentrated in many of the higher-risk occupations, essentially as teachers, social workers, nurses, other health care workers, and domestic workers. Many women in informal sector employment, such as domestic work, are subject to physical and emotional violence and no data exists on this. There are also occupation-related hazards and injuries which are not captured in any of the data sources, except administrative data on workers who have been given compensation under the Workmen’s Compensation Act. Other sources of data that can be used to generate data on work-related violence are police records, compensation records of insurance companies, crime records, court records and hospital records. However, the scope of these administrative sources too is limited as many cases of violence do not get reported or compensated. Further, they do not represent all possible forms of violence and usually only cases of violence that are physical in nature are captured.

Labour force surveys could cover this issue as well as they will enable analysis across individual and household characteristics, as well as work-related data. However, a comprehensive household survey covering different forms of violence may be required since it is not easy

³Sexual harassment at the workplace has risen and data needs to be collected under detailed sub-divisions of the new law.

to elicit full information on violence as part of a survey on employment due to the social dimensions and understanding of the issue.

5.2 DOMESTIC VIOLENCE

Violence against women (in the capacities of daughter, sister, daughter-in-law, wife and mother) within the four walls of the house is widely accepted and legitimized under the patriarchal order. This violence has a tendency to explode in various forms – physical, sexual, or emotional. Domestic violence is recognised as a significant barrier to the empowerment of women, with serious consequences on her health. In 1983, domestic violence was recognised as a specific criminal offence by the introduction of section 498-A into the IPC.

5.2.1. INDICATOR 1: RATE OF DOMESTIC VIOLENCE AGAINST WOMEN

Domestic violence rates against women can be defined as the proportion of women reporting domestic violence to total number of women. No data is available on the incidence of domestic violence separately from NCRB though some gets reported under various IPC categories for violence against women such as homicide for dowry, dowry deaths or their attempts (Sec. 302/ 304-B IPC), and torture, both mental and physical (Sec.498-AIPC). As discussed earlier, the data are based on FIR cases and not complaints and hence are hugely underestimated. Apart from these, there are many cases of violence for which no complaint or FIR may be registered at all. The only source of data on domestic violence is NFHS.

Since its second round, NFHS collects data on domestic violence. In NFHS-2, respondents were asked three questions: whether they had been physically mistreated by anyone since the age of 15, who perpetrated the violence, and how frequently they had experienced violence in the 12 months prior to the survey. The survey covered women in the reproductive age group (15–49 years).

In NFHS-3 and 4, a separate module was used to collect detailed information on domestic violence. It defined domestic violence to include violence by spouses as well as by other household members. Thus, information was obtained from ever-married women on violence by husbands and by others. The questions were asked with reference to the current husband for women currently married, and with reference to the most recent husband for women formerly but not currently married. Various types of violence broadly captured under three heads (physical, sexual and emotional) were listed where women could respond ‘yes’ or ‘no’ to each item. In each instance of a ‘yes’ response, women were asked about the frequency of the act in the 12 months preceding the survey. Widowed women, like other ever-married women, were asked whether they had ever experienced spousal violence; however, unlike other ever-married women, they were excluded from the questions on violence in the past 12 months.

In addition to the questions asked only of ever-married women, all women, regardless of marital status, were asked about physical violence from persons other than the current or most recent husband. Women who responded ‘yes’ to this question were asked who had done this to them and the frequency of such violence during the 12 months preceding the survey.

Approaching Data Sources A Gender Lens

Since many background characteristics of the respondents are also collected, it is possible to disaggregate the data across demographic, social and wealth indices apart from locations.

The approach taken to measuring domestic violence in NFHS-3 and 4 is sufficiently different from that taken in NFHS-2 which precludes any possibility of comparison of domestic violence across a longer period.

5.2.2. INDICATOR 2: NATURE OF DOMESTIC VIOLENCE AGAINST WOMEN

More than the incidence of domestic violence, the nature of violence is an important aspect which provides insights into the severity of the issue. NFHS-3 and 4 are the only sources of data for this.

NFHS captures spousal physical and sexual violence using the following set of questions:

(Does/did) your (last) husband ever do any of the following things to you:

- a) Slap you?
- b) Twist your arm or pull your hair?
- c) Push you, shake you, or throw something at you?
- d) Punch you with his fist or with something that could hurt you?
- e) Kick you, drag you or beat you up?
- f) Try to choke you or burn you on purpose?
- g) Threaten or attack you with a knife, gun, or any other weapon?
- h) Physically force you to have sexual intercourse with him even when you did not want to?
- i) Force you to perform any sexual acts you did not want to?

A 'yes' response to one or more of items (a) to (g) above constitutes evidence of physical violence, while a 'yes' response to items (h) or (i) constitutes evidence of sexual violence. Emotional violence among ever-married women was measured in a similar way, using the following set of questions:

(Does/did) your (last) husband ever:

- a) Say or do something to humiliate you in front of others?
- b) Threaten to hurt or harm you or someone close to you?
- c) Insult you or make you feel bad about yourself?

All women, regardless of marital status, were asked about physical violence from others with the question: From the time you were 15 years old, has anyone [other than your (current/last) husband] hit, slapped, kicked, or done anything else to hurt you physically? All women were also asked: At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts?

Thus, for married women it is possible to arrive at the incidence of three types of crime perpetuated by their husbands. However, for other perpetrators, data is available only for physical and sexual violence. Given other background information on respondents, it is possible to disaggregate the data across demographic, social and wealth indices apart from locations.

5.2.3. INDICATOR 3: PERPETRATORS OF DOMESTIC VIOLENCE

The relationship between the perpetrators of violence and the respondents is an important variable which provides an understanding of the power relationship within families. Again, the only source of data is NFHS. NFHS-2, 3 and 4 give information on perpetrators, though NFHS-2 follows a different approach in capturing violence against women.

NFHS-2 provides data on perpetrators of violence in general for ever-married women of age 15-49. However, the categories of perpetrators are limited to husband, in-laws, and others. Information on perpetrators across types of violence is available in NFHS-3 and 4; it provides data separately for spousal violence as well as violence from others for women aged 15-49 years. Sexual violence across a number of perpetrators are captured such as current husband; former husband, current/former boyfriend, father, stepfather, other relative, in-law, own friend/acquaintance, family friend, teacher, employer/someone at work, police/soldier, priest/religious leader, stranger, and other. Since background characteristics are available, disaggregate analysis is possible.

5.2.4. INDICATOR 4: PROPORTION OF WOMEN WITH ALCOHOLIC PARTNERS

Given the patriarchal power relations and their acceptance, the chances of under-reporting of violence and domestic violence are very high, even if special attempts may be made to capture these. In this context, an indicator which could give an indirect estimate of domestic violence is the addiction to alcohol among husbands. The link between alcohol use and violence against women is well established. The only source of data again on this dimension is the NFHS.

NFHS-3 and 4 provide data on alcohol use and its intensity, which was collected for the general health part of the health module. The categories to capture alcohol consumption are: does not drink, drinks/never gets drunk, gets drunk sometimes, and gets drunk often. The data can be generated for women across age, education level, marital status, religion, caste and characteristics of their households, such as the type of family and wealth status.

5.2.5. INDICATOR 5: SHARING AND ASSISTANCE RATES

Many women do not share instances of violence and do not take assistance even from family members due to various reasons. The rates of sharing incidence of violence and taking assistance render important insights on women's agency and position within the family as well as society. The sharing and assistance rates are defined as the proportion of women who have shared and taken assistance to total number of women who have encountered violence. NFHS-3 and 4 are the only sources that provide some data on the sharing and help seeking behaviour of women.

In NFHS-3 and 4, all women (married, formerly married, and never-married) who reported physical or sexual violence were asked a series of questions about whether and from whom they sought help to try to end the violence. First, women were asked if they had ever sought help; then, the women who said they had sought help, were asked from whom they had sought help. Women who said they had not sought help were asked whether they had ever told anyone about any of the violence they had experienced. Since NFHS distinguishes between spousal and other sources of violence, it is possible to disaggregate the statistics across these as well as nature of violence. Availability of background variables permits further disaggregation across age, education, family, social and economic categories.

5.2.6. DATA SOURCES FOR DOMESTIC VIOLENCE: LIMITATIONS AND COMMENTS

Notwithstanding the fact that NFHS-3 and 4 (through its separate module) gathered detailed information on domestic violence, there are many doubts still on the quality of data due to the specificity and sensitivity of the issue. Collecting valid, reliable and ethical data on domestic violence poses particular challenges such as subjectivity (what constitutes violence or abuse varies across cultures and individuals) and the culture of silence that surrounds domestic violence. To overcome this, NFHS uses a series of multiple choice questions. Questions are asked about the experience of specific acts of violence, rather than about the experience of violence in general. This, it is argued, has the advantage of removing from the measurement of violence, the effect of variations in the understanding and interpretation of what constitutes violence. However, it limits responses. And ultimately, multiple choice questions cannot by themselves address the problem which is deeply entrenched in patriarchal relations.

Further, the possibility of under-reporting of violence, particularly of sexual violence, is still very high given the structure of our society. This affects the quality of any indicators related to overall prevalence of violence as well as its specificities. The fact that many of the findings of NFHS matched with the stereotypical understanding of violence among groups points to some of these problems. For example, NFHS finds the poor, illiterate, and rural women justifying wife beating, whereas microlevel studies have shown that because of consideration of social status, many middle class and upper class literate women conceal domestic violence though the issue is severe among them.

NFHS data gives information on women of a specific age group. However, the issue of violence spans across the lifecycle of women and hence there is a need to collect data from women of all age groups.

The focus of NFHS was not on domestic violence but on health, and the data on violence was a by-product of the survey which would have affected the quality of data as investigators may not be well equipped to collect such sensitive data. An important area for women on which no data exists is that of mental or emotional violence. Such violence is on the increase with changing lifestyles and changes in family structures. However, there has been so systematic data available on it though NFHS collected some limited data.

Strengthening of NCRB data alongside conduct of special surveys at regular intervals on various forms of violence, with specific and focussed questions, seem to be the only way to collect reliable information, given the intensity and dynamic nature of the issue.

Chapter 6

CRITICAL DEMOGRAPHIC, SOCIAL AND POLITICAL ASPECTS OF WOMEN

Given the multidimensional nature of women's issues there are many interconnections that can be drawn across themes, dimensions and indicators. Some of the indicators that could be classified broadly as social or demographic are thus listed and discussed in the previous chapters. However, there are many other critical indicators which are not covered in the earlier chapters and need detailing. Further, political participation of women is a critical concern. Accordingly, in the present chapter some of the critical demographic, social and political dimensions of women's status are discussed.

Under this theme, we have the following five sub-themes:

- Male bias
- Vulnerable Women
- Women with Special Needs
- The Institution of Marriage
- Participation in Political and Collective Space

The indicators of these sub-themes are detailed in Chapter 1, Table 1.1.

DATA SOURCES

There are several data sources that provide information on the demographic, social and political status of women in India. A considerable amount of data reflecting the male biasness of society are available with the Population Census, national family health survey (NFHS), national sample survey organization (NSSO), sample registration system (SRS), civil registration system (CRS), Annual Health Survey (AHS) and District Level Household and Facility Survey (DLHS). The other important sources are: National Crimes Record Bureau (NCRB) (on the vulnerability of women to violence); the Election Commission of India and Ministry of Panchayati Raj (on women's participation in democracy and electoral politics, both as voters and as representatives); the Labour Bureau (on women in trade union activities (from the annual statutory returns submitted as per Trade Union Act, 1926).

6.1. MALE BIAS

Many societies around the world show a mild but mostly undetectable degree of son preference. But in India this is visibly apparent across all regions and among all socio-religious and economic categories. More alarmingly, son preference in many societies leads to female foeticide and infanticide, and to the neglect of girls as children as well as adults. The demographic indicators of such discriminatory practices are the skewed sex ratios at birth, childhood and in adolescent years.

6.1.1. INDICATOR 1: SEX RATIO AT BIRTH

‘Sex ratio at birth’ is defined as the number of girls born for every 1,000 boys. The comparison of observed sex ratio at birth with normal sex ratio at birth (SRB) gives an idea of girls missing at birth. It is an important and useful indicator to assess relative excess or deficit of men or women in a given population at that point of time.

The major sources of data on sex ratio at birth are the Population Census, SRS, CRS, NFHS and AHS.

The sex ratio at birth is available from Census disaggregated by rural/urban, religious groups (Hindu, Muslim, Christian, Sikh, Buddhist, Jain, and others), social groups (SC/ST/others), age of the mother (below 15 years, 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50+ years), educational level of mother (illiterate to graduate, etc.). Though information on “children born alive during last one year” was collected and tabulated in earlier Censuses, it was tabulated by sex for the first time in 2001 and is available even at the district level. However, Census being a decennial exercise, the data is available only every ten years.

SRS estimates are the most frequently used source for sex ratio at birth in India. Since sampling errors for annual estimates could be large, the SRS gives three-year moving averages of the sex ratio at birth rather than annual estimates. Reliable estimates are available from 1981 onwards (1981/83, 1982/84...) for India and major states.

CRS makes available sex ratio at birth based on registration records at the district level, disaggregated by sex and region (rural/urban), but is dependent on the level of registration which varies from state to state. It is particularly low in Uttar Pradesh and Bihar).

NFHS estimates sex ratio at birth based on a nationally representative sample. As the first NFHS was carried out in 1992/93, it does not have data to support the trends in sex ratio before 1991. NFHS-2 (1998/99) and NFHS-3 (2005/06) and NFHS-4 (2015/16) give sex ratio at birth according to the living, dead and total children across all states and UTs surveyed, and also calendar year ratio for children still alive at the time of the survey, children who died by the time of the survey and total children by calendar year (weighted). In NFHS-4, calendar year ratios are available for 2007, 2008.....2016; in NFHS-3 for 1997, 1998...2006; in NFHS-2, for 1988, 1989, 1990...1999; and in NFHS-1, from 1982, 1983...1993.

Approaching Data Sources A Gender Lens

Data from AHS is available from 2010/11 (and also for 2011/12, 2012/13) and gives district-level data on sex ratio at birth across the eight EAG states and Assam.

6.1.2. INDICATOR 2: CHILD SEX RATIO

The child sex ratio is defined as the number of females per 1,000 males in the age group 0–6 years. There has been a decline in this ratio over the last few decades, with certain states experiencing comparatively larger decline than others. The major data sources for child sex ratio are the Population Census, NSSO, SRS, AHS and NFHS. While Census, National Sample Survey (NSS), and NFHS give data for 0–6 years age group, SRS and AHS data is limited to the age group of 0–4 years.

The Census has been publishing child sex ratio since 1961. It gives sex ratio down to the village and ward level across all states and UTs. By social groups (SC, ST), the data is available from 1981. Sex ratio of age group (0–4 years) is available from 1901 onwards.

NSS provides distribution of persons by age groups from which female to male ratio for the age group 0–6 years can be computed, across socio-religious, and economic categories from the unit-level data for the last few rounds. For the earlier rounds for which unit-level data is not available, NSS gives distribution of population by five-year age groups (0–4, 5–9, 10–14, ... and all ages) from which female to male ratio in the age group 0–4 years can be computed across socio-religious and economic categories for rural and urban areas for India and states/UTs.

SRS estimates of child sex ratio are for the age cohort (0–4 years) and are available from 1996 onwards for India and all major states.

AHS also gives estimates of child sex ratio for the age group (0–4) for all districts across the eight EAG states and Assam annually from 2010/11.

NFHS gives estimates of child sex ratio (0–4 ages) in rural and urban areas for India and states across its four rounds (1992/93, 1998/99, 2005/06 and 2015/16). Since raw data is available, it is possible to calculate sex ratios for age group 0–6 from the survey data. NFHS also makes it possible to look at child sex ratio according to background characteristics of the mother (age group, education, caste group, religious group, wealth index).

6.1.3. INDICATOR 3: MALE CHILD PREFERENCE

Preference for male children is common, particularly in rural areas where the status of the woman is proportional to the number of male children she has given birth to. NFHS is the only data source that has captured this aspect.

Across its four rounds, NFHS has captured the child preference of ever-married (1992/93, 1998/99) and currently-married (2005/06 and 2015/16) women in the age group 15–49: whether she preferred the next child to be a boy/a girl/ or it did not matter. These statistics are available according to background characteristics of the mother (age group, education,

caste group, religious group, wealth index) and across states. NFHS-3 and 4 also give the percentage of parents who preferred sons over daughters.

DHLS, in its second (2002/04) and third (2007/08) rounds gave data with regard to the sex preference (son, daughter, does not matter, up to God) of a desired additional child according to the number of surviving children (0, 1, 2, 3, 4+) based on responses of currently-married women in the age group 15-49 years.

Data on sex preference for all surveyed districts across states and UTs is available according to background characteristics of the mother: age group:15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49 years; residence: rural, urban; education: not literate, less than 5 years, 5-9 years, 10 or more years; religion: Hindu, Muslim, Christian, Sikh, Buddhist/neo-Buddhist, Jain, others; caste group: SC, ST, OBC, others; wealth index: poorest, second, middle, fourth, richest).

6.1.4. INDICATOR 4: ADOLESCENT SEX RATIO

Adolescence is a period of rapid transition from childhood to adulthood, and is accompanied by physical and psychological changes. The adolescent sex ratio is defined as the number of females per 1,000 males in the age group 10-19 years. There has been a decline in this ratio over the last few decades, with many states experiencing comparatively larger decline in this ratio in comparison to child sex ratios.

Adolescents as a category can also be bifurcated into younger and older adolescents according to age group (10-14 years being younger and 15-19 years as older).

The major data sources from where adolescent sex ratios can be computed are the Population Census, NSSO, AHS and NFHS.

The Population Census gives the number of males and females in the age group 10-14 and 15-19 years from which adolescent sex ratio can be computed. Adolescent sex ratios for age group 10-19 years can be worked out from Census data from 1981 (as five-year age groups were made available only since then).¹ With regard to social groups (SC and ST), adolescent sex ratios can also be computed from 1981 and for religious groups from 2001 (Hindu, Muslim, Christian, Sikh, Jain, Buddhist, others). Adolescent sex ratios can be computed down to the village and ward level across all states and UTs.

NSS provides data on members of household including age and sex from which adolescent (10-19 years) sex ratio (also for ages 10-14 and 15-19 years) can be computed, across socio-religious, and economic categories from early rounds (38th round) for rural and urban areas for India and states/UTs.

SRS gives distribution (%) of estimated population by five-year age groups by sex and residence from the beginning (1970). Though per cent distribution of population in adolescent

¹Prior to 1981 Census, the age groups were broadly 0-4, 0-14, 15-34, 35-54, 55+, 15+.

Approaching Data Sources A Gender Lens

ages is available (10–14 and 15–19 years), sex ratios by age cannot be computed from the SRS published results because only distribution (%) for the sample registration areas are available; there is no information on absolute numbers of the population.

AHS has data on household members according to sex, age, religion, social group, marital status, etc., for all districts across the eight EAG states and Assam from 2010/11. It is, therefore, possible to work out the adolescent sex ratio.

NFHS gives per cent distribution of household population by age, according to sex and residence from which it is possible to work out adolescent sex ratio (10–14 and 15–19 years age groups) in rural and urban areas for India and states across its four rounds (1992/93, 1998/99, 2005/06 and 2015/16). Since background characteristics are also collected from every household, socio-economic disaggregation is possible though the sample size is an issue.

6.1.5. DATA SOURCES FOR MALE BIAS: LIMITATIONS AND COMMENTS

The Indian Census is the principal and more reliable source of data on population sex ratios. It provides estimates right up to the district or subdistrict level. However, Census being a decennial exercise, the data are available only every ten years. The Census gives district-level estimates for sex ratio at birth, but there are some specific methodology differences which may limit completeness and accuracy. Since the question is asked only to currently-married women, other births are left out. Besides, since this information is retrospective, there is a possibility of omissions and inaccuracies in date of births and age reporting. Another issue is that the data on births in the preceding year are collected from women who are alive on date of enumeration, thus the total number tabulated may exclude children whose mothers were not alive. For mid-term estimates for sex ratio at birth, one has to rely on SRS data which are limited to national and state-level estimates. SRS data is limited by the fact that it comes from a sample and the sampling frame is changed only once in every ten years; also, there is no data at the district and subdistrict-levels, which is the level at which targeted policy interventions and programme implementation take place. District and subdistrict-level data can be made available by improving the coverage of birth registration under the civil registration system at all administrative levels. Sex ratio at birth estimates, worked out from Census data, are available across districts and social group divisions, while SRS data does not provide social group-wise data.

Though child sex ratios can be estimated from other data sources such as AHS and NFHS, their coverage and reliability are issues. NFHS data has an advantage in terms of possibilities for disaggregate analysis; the extent of such analysis is limited by the size of the sample.

Census, alongside SRS and other periodic demographic surveys with their known limitations, are able to provide a broad picture of the gendered demographic transition. However, no information is available on what were/are the preferences of men and women with regard to the sex of their child, either already born, carrying/planned. Though NFHS gives sex preference of women for their next child across rounds, it does not capture such information

from men until the third round, which has provided insights into the gender differences in the preference for male children.

6.2 VULNERABLE WOMEN

Vulnerability of women depends on a number of factors and varies across socio-economic categories, marital status and age groups. Under the theme of vulnerable women, the sub-themes discussed are: proportion of women in houseless households, number of women in old age and destitute institutions, number of women in prisons, number of women trafficked, and proportion of women who are displaced migrants.

6.2.1. INDICATOR 1: PROPORTION OF WOMEN IN HOUSELESS HOUSEHOLDS

Houseless refers to those who are inadequately housed—without even basic shelter over their head, not even a *kuccha* (unfinished) slum or shanty house. It is an important factor that increases the vulnerability of women. A substantial number among the houseless are women, either single or those with small children and therefore the most vulnerable. The majority of houseless are found living in places such as roadsides, pavements, drainage pipes, under staircases, or in the open, temple premises, railway platforms, etc. The proportion of women in houseless households can be computed by dividing the number of women in houseless households by total persons in houseless households. The only source of data on houseless households is the Population Census.

Households which do not live in buildings or Census houses (defined as a structure with a roof) but in the open or on roadside, pavements, in pipes, under flyovers and staircases, or in the open in places of worship, *mandaps*, railway platforms, etc., are treated as houseless households by the Census. However, the number of houseless is under-enumerated and under-reported. Comparable gender disaggregated data on houseless households is available from 1981. Data on houseless households (number of households, total houseless males, total houseless females, houseless persons, also separately for SC and ST categories, and for children below 0–6 years) are available for India, states, and districts with rural/urban disaggregation.

6.2.2. INDICATOR 2: PROPORTION OF WOMEN IN OLD-AGE AND DESTITUTE INSTITUTIONS

Many elderly women in India, particularly widows, suffer from poverty, isolation and extreme social exclusion. Some are even denied basic necessities such as food and health care, and there have been many cases of old women being thrown out of homes by close family members. Elderly can be defined as those 60 years and above.² The Census, SRS and NSSO give data on the elderly whose absolute numbers have increased substantially. NSSO is the only data source that provides information on the proportion of elderly women in old age homes.

²The WHO defines those belonging to 60–74 years as elderly. The UN in 1980 recommended 60 years as the age of transition for the elderly segment of the population.

Approaching Data Sources A Gender Lens

Based on its 60th round (2004) survey, NSSO has published data on the type of living arrangements of the elderly from where the proportion of women in old age institutions can be worked out. Living arrangements of women were categorised under living alone (as an inmate of old-age home/not as an inmate of old-age home), living with spouse, etc. NSSO makes it possible to compute the proportion of women in old-age institutions out of all elderly women for rural and urban areas for India and all states/UTs.

The reliability of the data is an issue as it may be difficult to capture full information on this issue following traditional survey methodologies. Households may not divulge such information easily because of sociocultural traditions and expectations as well as laws like the Maintenance and Welfare of Parents and Senior Citizens Act, 2007, and other personal laws in the country stipulating that children should care and provide for parents.

6.2.3. INDICATOR 3: PROPORTION OF WOMEN IN PRISONS

Women may get imprisoned for serious crimes like homicide where they may remain incarcerated for years and also for minor crimes in which case the period of imprisonment may be only for few months. The NCRB is the only data source that gives information on women in prisons. The proportion of women prisoners out of total prisoners according to sentence and age group can be computed from the data.

National Crime Records Bureau has published “Prison Statistics India” annually from 1995 onwards. It gives state-wise information with regard to those in prisons, separately for males and females and data on number of women prisoners according to age groups (16–18 years, 18–30 years, 30–50, and above 50 years), categories (convicts, under-trials, detainees, others) serving prison term according to type of punishment (capital punishment, life imprisonment, 10–13+ years, 7–9+ years, 5–6+ years, 2–4+ years, 1 less than 2 years, 6 months <1 year, 3–6 months, and less than 3 months) for all states and UTs.

6.2.4. INDICATOR 4: PROPORTION OF WOMEN AMONG DISPLACED MIGRANTS

There are many reasons that compel women to migrate from their place of usual residence, or the place of their birth, undergoing social and cultural assimilation in a new region. Displaced migration is different from other forms of migration as it is forced migration in the event of natural disasters, displacement by development project or due to social and political problems. The major data sources on migration in India are the Population Census and NSSO.

The Population Census gives data on migration and distribution of migrants (males and females separately) across reasons. Questions on the reason for migration were introduced in 1981, with the possible responses (apart from marriage and employment) including natural calamities like droughts, floods, etc. The pattern adopted in 1991 remained the same, but from 2001 onwards “Natural calamities” were excluded and a new reason “Moved at birth” was added. NSS gives distribution of migrants (males and females) across reasons

for migration.³ The given reasons have been changing over rounds. In 1983, two reasons were specifically captured which could be termed as distress migration: “political change/lack of security or social adjustment” and “due to natural calamity”. In 1993, “housing problem” was added and “natural calamity” was taken out. Instead of “political change/lack of security or social adjustment”, a new categorisation “social/political problem” was added. The 2007/08 survey added and specified many reasons, which include specific heads such as “natural disasters”, “social/political problems”, “displacement by development project”, and “housing problems”. From NSS unit-level data, these reasons by broad age groups, education, caste, religion, wealth class, employment status (‘before’ and ‘after’ migration), etc., can be computed.

6.2.5. INDICATOR 5: NUMBER OF WOMEN TRAFFICKED

Trafficking is a serious crime committed against women, most often for commercial sexual exploitation. Often it is women and girl children from lower income groups who become vulnerable and fall into the trap of organized trafficking gangs. NCRB is the main data source which gives information on trafficking.

It publishes official data on trafficking from 2006 (data from 2002 is available), but from the data it is not possible to work out the proportion of women trafficked in the total population.

Under NCRB, trafficking of women for immoral purposes is identified as offences punishable under the special social enactments to specifically safeguard women and their interests. Under various crime heads of NCRB, data on reported cases related to trafficking (and also importation of girls, kidnapping and abduction) in the year are recorded. Though reported cases have shown an increase over the years, they are only a fraction of the actual number. Thus, NRCB cannot reflect the full picture.

6.2.6. DATA SOURCES FOR VULNERABLE WOMEN: LIMITATIONS AND COMMENTS

Vulnerability of women depends on a number of factors, with houselessness being one of the most critical. But the number of houseless is under-enumerated and under-reported even in the Census. Further, among houseless women there are two categories: those that stay with their family and the others who are without any family, the latter being the most vulnerable. However, the Census does not provide any such disaggregation. Apart from Census data on houseless women, there is a need to design targeted surveys of houseless populations on a regular basis covering various gender dimensions and issues of houseless women. This would help in planning intervention strategies.

³As discussed in the previous section on economic status, NSS integrated collection of migration data with regular quinquennial EUS rounds from the 38th round (January 1983–December 1983), and followed in the 43rd round (July 1987–June 1988), 55th (July 1999–June, 2000,) and in the 64th round (July 2007–June 2008). Data on migration was also collected in the 49th round (January–June 1993). Of the above, three were migration specific rounds in 1993, 1999/2000, and 2007/08.

Approaching Data Sources A Gender Lens

Another group of vulnerable women are the old and destitute, who may comprise a considerable proportion of the homeless. Many such women are found in old age and destitute institutions but no data are available on the number of such women, though NSS captures some limited data. Since the Census covers all institutions and individuals, a question on the individual's residential status can provide data on this dimension, which will be much more reliable than NSS because of its larger coverage. Targeted sample surveys may also be conducted to capture various gender dimensions of the issue.

Displaced women migrants also need serious attention in terms of data generation and the present NSS categories should be followed consistently both by NSS and Census. There is also a black hole in the data on trafficked women. NCRB data give statistics on cases that are registered but detailed analysis of some of the cases under trafficking and kidnapping have shown that some of them are cases of eloped marriages. On the other hand, there is little or no data on actual trafficking in several sectors of the informal economy, including prostitution, domestic work, agriculture, the garment industry, and even street begging. Collection of reliable data is however a challenge, as it raises both conceptual as well practical issues.

6.3 WOMEN WITH SPECIAL NEEDS

Under this sub-theme, the indicators are: Proportion of female-headed households, percentage of elderly women living alone, and access to welfare schemes/programmes

6.3.1. INDICATOR 1: PROPORTION OF FEMALE-HEADED HOUSEHOLDS

Surveys generally ask respondents to specify whether the household is male- or female-headed. For women, holding the title of 'head' within the marital union may indicate status and equality with the husband and is a rarity. Data on female-headed households is available from the Population Census, NFHS, DLHS and NSSO.

In the Population Census 'head of the household'⁴ is one who is recognised as the head by the household. The Census gives data on the proportion of female-headed households in the population and also cross-tabulations by age, marital status, religion and size of households. Data are available up to the district level.

NFHS gives the distribution (%) of households by various characteristics of the household head including sex, from which the proportion of female-headed households is made available across its four rounds (1992/93, 1998/99, 2005/06 and 2015/16) for all states and India. This indicator can also be disaggregated by demographic, social and economic characteristics.

DLHS also gives the percentage of female-headed households out of total sample households across all three rounds for all the districts surveyed. Since the focus of DLHS is on health, the background information available is limited for detailed disaggregate analysis.

⁴As per the definition followed in Census, 'household' is usually a group of persons who normally live together and take their meals from a common kitchen and the 'head' is generally the person who is mainly responsible for managing the affairs of the household and taking decisions on behalf of the household. The head need not necessarily be the oldest male member or an earning member, but may be a female or a younger member of either sex.

NSS collects data on demographic particulars of household members like name, relation to head, age, sex and marital status from its early rounds, and has given the proportion of female-headed households out of the total surveyed households from the beginning. The data can be disaggregated across demographic, educational, employment, and other social and economic dimensions at the national level.

6.3.2. INDICATOR 2: PERCENTAGE OF ELDERLY WOMEN LIVING ALONE

The National Policy on Older Persons adopted by Government of India (GOI) in January 1999 defines senior citizen or elderly as someone who is of age 60 years or above. The data sources giving some information on the proportion of elderly women living alone are the Population Census and NSSO.⁵

The Population Census in 2001 gave data on single member elderly (60+) households and also all households with at least one elderly. It also gave gender-disaggregated data on single member elderly households, from which the percentage of elderly women living alone can be worked out. It can also be disaggregated across religious groups for India and states, even up to the district level.

In its 60th round (2004), NSS published data on type of living arrangements of elderly for the first time. These included living alone (as an inmate of old age home/not as an inmate of old-age home); with spouse only; with spouse and other members; without spouse (but with children, with relations, or with non-relations). It is possible to compute percentage of elderly women living alone from the distribution of elderly women by type of living arrangement for rural and urban areas for India and all states/UTs. It is also possible to disaggregate the data by social and economic dimensions taking into account the sample size.

6.3.3. INDICATOR 3: PROPORTION OF WOMEN AVAILING ANY WELFARE SCHEME

Women are targeted beneficiaries in a number of state-sponsored welfare programmes and schemes in India.⁶ But data on the number of women in the population who are availing some scheme or the other are not available from national-level survey sources. What is available at present is programme-level data on the number of beneficiaries who have availed benefits under a particular scheme/targeted intervention of the central and state governments separately. The number of women beneficiaries under various schemes (of ministries at the central government as well as independent schemes by state governments) is available from the official data/site of the implementing agency. However, no attempt has been made to compile such information over time on any regular basis.

⁵The proportion of population above 60 years is available from Population Census, NSSO, NFHS, DLHS, and AHS, but data related to whether the elderly live alone, with spouse or someone else is not available except in the case of the first two. Across all its rounds, NFHS gives estimates of elderly population, including their marital status, from where it is clear that a substantial number of elderly women are widows; but it is silent on their living arrangements, that is, whether they are living alone or with someone.

⁶Some of these are MGNREGA, the Indira Gandhi Matritva Sahyog Yojana, the Conditional Maternity Benefit plan, Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (Sabla scheme), Widow Pension, Rashtriya Mahila Kosh (national credit fund for supporting women in lower income groups), and the Mother and Child Tracking System), etc.

Approaching Data Sources A Gender Lens

AHS is the only data source giving information on beneficiaries under a scheme.

AHS has recorded mothers who availed financial assistance under Janani Suraksha Yojana (JSY) in rural and urban areas across all districts of EAG states and Assam from 2010/11, based on responses of ever-married women aged 15–49 years (for last two outcomes of delivery resulting in live/still births during the reference period, 2008/10). AHS gives percentage of mothers who availed financial assistance for delivery, for institutional delivery, and institutional delivery under JSY.

The NSSO has collected the number of households having a Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) job card (but not specifically whether the job card holder is a male or female member of the family) in its recent employment rounds.

There were attempts in NFHS-1 and in NFHS-2⁷ to capture total beneficiaries in programmes (but not gender-disaggregated) in the village through the village questionnaire. NFHS-3 and 4 tried to look at the extent of penetration of health schemes and captured the same through a relevant question in its household questionnaire, asking whether any household member is covered by any kind of health insurance. Similarly, DLHS-3 (2007/08) records data on villages having beneficiaries under the JSY.

6.3.4. DATA SOURCES FOR WOMEN WITH SPECIAL NEEDS: LIMITATIONS AND COMMENTS

The data on female-headed households, as provided by the Census and NSS, are based on the recognition approach in contrast to a functional approach.⁸ It has often been highlighted through field level surveys that such data on female-headed households do not signify anything other than the absence of a male household member, as a good proportion of women were found to be widowed women or single women. However, the data is often used to signify women's empowerment, for which at present this data is an underestimate. Though many women may not be recognised socially as household heads, they may be the household head for many functional and economic purposes, which at present are not taken into account in defining the head of the household. This suggests the need to redefine the concept of household in the data sources if it is to draw any insights about women's agency.

No data is available on women living alone though such data is extremely important. Correlated with demographic, social, and economic parameters, it could reveal insights into the vulnerability as well as agency aspects of women.

⁷In NFHS-1, the Village Questionnaire had a question on the number of beneficiaries in the village under the Integrated Rural Development Programme (IRDP), National Rural Employment Programme, Training Rural Youth for Self Employment, and Employment Guarantee scheme. In NFHS-2, in addition to the above, Development of Women and Children in Rural Areas (DWACRA) was also included.

⁸The definition of the term 'head of household' given in the *Instruction Manual for Filling up the Household Schedule* reads as follows: the head of household for Census purposes is a person who is recognised as such by the household. She or he is generally the person who bears the chief responsibility for managing the affairs of the household and takes decisions on behalf of the household. The head of household need not necessarily be the oldest male member or an earning member, but may be a female member or a younger member of either sex. It may be remembered that there are female-headed households and in such a case the name of the female head should be recorded.

Women are part of many schemes and programmes, but the data on women beneficiaries under various central and state government schemes are not compiled regularly or systematically. No information is available even on women-specific schemes such as pensions for widows or maternity benefits for women employees. Programme-based data are available for central as well as state schemes, and administrative compilation of such data is possible though there could be many limitations.

At present, data are only provided on two national schemes and no information is provided on other government schemes including women-specific schemes, for instance, the number of pregnant women using Integrated Child Development Services (ICDS). There are a variety of women-specific schemes across states. Data on the coverage of women-specific schemes in different states needs to be compiled by the respective state governments and should be made available annually.

6.4 INSTITUTION OF MARRIAGE AND FAMILY

Marriage is central to societal standing and acceptance for a majority of Indian women, and is subject to strict rules and even prohibitions. Early and arranged marriages have been the social practice, not giving girls any choice. In addition to the burden of early and forced marriage, many have to adjust to occupying a subordinate position in marital homes with restrictions in movement, paid work, etc.

The indicators covered under this theme are: percentage of women married below the legal age of marriage; age at co-habitation, percentage of divorced women; proportion of remarried women to total married women; proportion of women having access to modern family planning; proportion of women having freedom to visit natal family and social networks; and freedom to make routine household decisions.⁹

There are many other indicators that were proposed but not covered in the report due to unavailability of data. These include prevalence of early and forced marriages; prevalence of cross-regional marriages; percentages of inter-caste marriages, polygamous marriages and love marriages; percentage of married women who have given dowry; and percentage of women who have freedom in decisions related to marriage. Most of these issues are widely prevalent in the country and across many states. For instance, polygamous marriages and relationships are common (in spite of personal laws and even national laws banning the practice). Similarly the practice of dowry continues to remain alive among all major communities across the country but macrodata is not available.

6.4.1 INDICATOR 1: PERCENTAGE OF WOMEN MARRIED BELOW THE LEGAL AGE OF MARRIAGE

The prestige and other social aspects of early marriage often lead to child marriages, though various laws have been enacted to prevent child marriages. At present, the Prohibition of Child Marriage Act, 2006 stipulates the legal age at marriage as a minimum age of 18 years for women and 21 years for men.

⁹Household decisions related to economic dimensions were discussed in the section on economic status.

Approaching Data Sources A Gender Lens

The percentage of women married below the legal age of marriage (18 years) has been calculated by dividing the number of women aged 20–24 who indicated that they were married before the age of 18, by the total number of women aged 20 to 24. In recent years, other methodologies for calculating child marriage have been proposed by researchers using census data (Forthcoming: S. Goli, 2016; S. Kumar, 2016). The major data sources giving marital status of women by age groups and from which percentage of women married below the legal age of marriage could be calculated are the Population Census, SRS, NFHS, NSSO, DLHS and AHS.

Data on marriage was collected since the beginning of Census. From 1881 to 1931, the population was classified into married, unmarried, widowed or widower; from 1901/31 there was no distinction between divorced and widowed, and only from 1941 Census they were recorded separately. From 1951 Census, the marital status of the persons was recorded as unmarried, married, widowed and divorced. In 1961 ‘unmarried’ was replaced by ‘never married’ and ‘Separated’ was added with ‘Divorced’. In 1971, the marital status of a person was recorded under the following heads: never married; married; widowed; and separated or divorced and has continued since then. The Census first introduced a direct question on age at marriage in 1971, when all currently married women were asked to state the age at which they got married. This was followed in 1981 and 1991. Since the data on age at marriage pertained only to that of currently married, so the data on age at marriage was under represented as it excluded those who were separated, divorced or widowed. From 2001, both men and women who were ‘ever married’ were asked for the age at which they married. Census gave data on marital status under four heads in 2001 (never married, married, widowed, separated/divorced) for males and females by age groups (0–9, 10–14, 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80+ years, all ages, less than 18, less than 21) for rural and urban areas up to village and ward levels across all states and UTs. In 2011, marital status was recorded under five heads: ‘never married’, ‘currently married’, ‘widowed’, ‘separated’ and ‘divorced. Data is also available for caste groups (SC and ST) and religious groups (Hindu, Muslim, Christian, Sikh, Buddhist, Jain and others).

The SRS makes available distribution of population (per cent) by sex (male, female) marital status (never married, married, widowed/divorced/separated) and age groups (<10 years, 10–14, 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+ years, all ages) from 1991 for rural and urban areas for India and bigger states¹⁰.

SRS first gave data on mean age at marriage for females in 1990. Since then, it has also provided data on the number of females who got effectively married during the reference period of six months of each half-yearly survey and also mean age at effective marriage in

¹⁰Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal.

rural and urban areas. SRS gives the percentage of females by age at effective marriage (<18 years, 18–20, 21+) in rural and urban areas for India and bigger states.

NFHS across all four rounds provided data related to girls marrying below legal age (below 18 years) for both rural and urban areas in all states. Percentage of girls married before specific ages cross-classified by current age can be calculated from all the NFHS rounds data separately for rural and urban areas, disaggregated by background characteristics (residence, education, religion, caste/tribe, wealth index, and states).

DLHS across all four rounds (1998/99, 2002/04, 2007/08, and 2011/12) provided data on girls marrying below legal age (below 18 years). The first two rounds of DLHS covered only currently married women aged 15–44 years where as the last two rounds covered ever married women (aged 15–49 years) and unmarried women (aged 15–24 years). The number of households and women covered in various rounds of the survey varied. Data is published at state level (with rural/urban differentials) and raw data is available for further analysis and research. DLHS-3 and 4 gave percentage of marriages taking place below the legal age in all districts (rural and urban) across states and UTs and also the percentage of currently married women (20–24 years) who were married before the legal age.

NSS data on marital status are available from early rounds, where marital status of each household member was recorded as never married, currently married, widowed/divorced/separated. Unit data in NSSO also makes it possible to get marital status across socio-economic groups. Comparable data are available from the 38th round. NSS gave the distribution of persons in various age groups (10–14, 15–19,... 55–59, 60 years and above) by their marital status (never married, currently married, widowed, separated/divorced) from which percentage married below the legal age cohort can be calculated.

AHS provides data on the mean age at marriage, the proportion of marriages among females below the legal age (based on marriages of usual residents/members of household that had taken place in the past two years) and the percentage of currently married women aged 20–24 years marrying before legal age for rural and urban areas across all districts in the EAG states and Assam from 2010/11.

6.4.2. INDICATOR 2: AGE AT COHABITATION

The prevalence of marrying young, in some cases even before puberty and the setting of menarche, has led to the age at marriage and age at cohabitation being different for many women (and men). This is the reason for the tradition of the gauna ceremony, under which the bride leaves for her husband's home only years after the marriage when she becomes "mature" and is physically "ready" to cohabit with the husband. The difference between age at first cohabitation and the age of formal marriage may be large for child brides. The age at first cohabitation is significant for women, and determines their reproductive behaviour and outcomes, including the number of children, birth intervals, and adoption of family planning methods. The major data source on age at cohabitation is NFHS. DLHS and AHS provide some related data. DLHS-3 does not give age at cohabitation but has data on proportion of women

who were married but whose gauna was not yet performed, that is they had not cohabited with their spouse (under marital status of household members according to age categories. The previous rounds of DLHS and AHS do not give data on age at cohabitation, but the latter has data on marital status of household members which include: never married, married but gauna not performed, married and gauna performed, remarried, widow/widower, divorced, and separated.

The NFHS across its three rounds has data on age at first cohabitation with husband. Data on women who started living with husband before specific exact ages (13, 15, 18, 20, 22, 25) is available in NFHS-1, while NFHS-2, 3 and 4 give cohabitation data by exact ages. From this information it is possible to calculate median age of cohabitation which is available in the respective reports by current age and residence for India and states (NFHS-1 and 2 for all women ages 25-49 years and NFHS-3 and 4 for all women 20-49 years).¹¹

6.4.3. INDICATOR 3: PERCENTAGE OF DIVORCED WOMEN

Dissolution of marital relationship may take place through divorces, desertions and separations. Desertion of the married partner for a period of time is considered and accepted by judicial courts for granting divorce/legal separation. It is also common to find couples who may not have legally separated/divorced, but are separated (do not live together). Though each mode of the above marital dissolutions is different, many data sources club them under one single category. The data on divorced/separated women is made available by the Population Census, SRS, NSSO, NFHS, AHS and DLHS but percentage of divorced women can be worked out only from Population Census, NFHS and AHS. SRS and DLHS gives widowed/divorced/separated as a single marital category. NSSO categories are never married, currently married, widowed, and divorced /separated. Thus, it clubs divorced and separated as one category.

Until 2011, percentage of females who were divorced/separated was clubbed together in the Population Census. The earlier data on marital status pertains to that of never married, married, widowed, divorced/separated. The data for divorced/separated is available across age groups (all ages, 0-9, 10-14, 15-19, 20-24, 25-29... 70-74, 75-79, 80+) across sex. The Census also gives marital status according to social groups (SC, ST, others) from 1981 and also of religious groups (Hindu, Muslim, Christian, Sikh, Buddhist, Jain, others) from 2001. From 2011, it is possible to get the percentage of divorced women separately according to age, social, and religious groups.

In all rounds beginning from 2010/11, AHS recorded marital status¹² of household members (usual residents) irrespective of their age. It is possible to work out the percentage of divorced women in all districts of EAG states and Assam from this data.

Across all three rounds, NFHS gives data on marital status and proportion of divorced women. NFHS-2, 3 and 4 give data for deserted apart from divorced and separated also.

¹¹NFHS-3 also gave median age at first sexual intercourse among women age 20-49, by current age, according to background characteristics (residence, education, religion, caste/tribe, and wealth index).

¹²The detailed categories have been mentioned earlier.

The data can be disaggregated across background characteristics such as age, social groups and economic status.

6.4.4. INDICATOR 4: PROPORTION OF REMARRIED WOMEN TO TOTAL MARRIED WOMEN

Sociocultural traditions of India historically prohibited remarriage, particularly those of upper caste women though similar restrictions were not applicable in the case of men. Today, remarriages of widowed, separated and divorced women have increased, but restrictions and taboos, particularly in rural areas, continue to remain strong. The only national-level survey that has data with regard to women's remarriage is NFHS.

To ascertain the proportion of women who may have remarried, NFHS-1 asked ever-married women whether they were married once or more than once. It also asked the age of the woman at the time of first marriage, at the time of dissolution of marriage, and also the age when she entered into the current marriage. NFHS-2 and NFHS-3 and 4 also collected similar data through the women's questionnaire. The proportion of women who has remarried across socio-economic and religious categories for India and states can be calculated from this data.

6.4.5 INDICATOR 5: PROPORTION OF WOMEN HAVING ACCESS TO MODERN FAMILY PLANNING

Family planning has a significant impact on women's lives. Knowledge and access to family planning methods helps in improving control over one's life, specifically regarding limiting and spacing children. Proportion of women (15-49 years) having access to family planning could be defined as those who had used at least one family planning method at any time in their life to the total number of women in the age group. This gives us an idea about accessibility of family planning method.

The major sources of data that give information on the proportion of women having access to family planning methods are NFHS, DLHS and AHS.¹³

Across its four rounds, NFHS has data on ever use of family planning methods¹⁴ according to age (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49 years) and residence, for India and states. Data are also available according to background characteristics (residence; education; religion; caste/tribe; standard of living index; number and sex of living children).

From its first survey in 2010/11, AHS has data on whether family planning method was used any time in the past in rural and urban areas of all districts in the EAG states and Assam. AHS asked currently married women (15-49 years) who were not using any family planning method whether she or her husband had used any method in the past and had discontinued it.

¹³Different aspects of contraceptive use were covered by both the NFHS and DLHS. These included awareness, status of ever use, and current contraceptive status. Current use of contraceptives or the contraceptive prevalence rate is already covered under the theme of health.

¹⁴The specific contraceptive methods were: any method, any modern method (pill, intra-uterine device (IUD), condom/nirodh, female sterilization, and male sterilization), any traditional method (rhythm, safe period, withdrawal, any other method). In NFHS-2 3, and 4 modern contraceptive methods also included female condom, emergency contraception, and injectables. Further, folk method was added under traditional methods.

Approaching Data Sources A Gender Lens

The methods in AHS were divided into modern (tubectomy, vasectomy, copper T/IUD, daily pills, weekly pills, emergency contraceptive pill, condom/nirodh, other modern methods) and traditional (contraceptive herbs, rhythm/periodic abstinence, withdrawal, lactational amenorrhoea method, other traditional method).

DLHS-3 gives data on ever use of contraceptive method of currently married women (15-49 years) according to background characteristics (age: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49 years; number of living children: 1, 2, 3, 4+; residence: rural, urban; education: non-literate, less than 5 years, 5-9 years, and 10+ years; religion: Hindu, Muslim, Christian, Jain, Sikh, Buddhist/neo-Buddhist, others; caste/tribe: SC, ST, OBC, others; wealth index: lowest, second, middle, fourth, highest) for all districts. DLHS-1 and 2 gave ever use of family planning by women (15-44 years) by background characteristics (age group: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44; surviving children: 0, 1, 2, 3+; surviving sons: 0, 1, 2+; surviving daughters: 0, 1, 2+, etc.).

6.4.6. INDICATOR 6: PROPORTION OF WOMEN HAVING FREEDOM TO VISIT NATAL FAMILY AND PUBLIC PLACES

Women face many restrictions after marriage and a major one relates to visits to natal family. NFHS is the only data source giving information on women's freedom to visit friends or relatives and involvement in decisions regarding staying with parents/siblings. In addition to freedom to visit, data on freedom to stay, as well as days of stay with natal family (after marriage) would give a better picture with regard to real marital freedom.

NFHS attempted to capture a married woman's freedom of movement since its second round. NFHS-2 provided data on ever-married women who had freedom to go to the market, visit friends or relatives and stay with parents/siblings.

NFHS-3 (2005/06) and NFHS-4 (2015/16) provides information on currently married women aged 15-49 years who usually made decisions on visiting natal family either independently or jointly with their husbands. The data for all the rounds can be disaggregated by background characteristics addressing issues of small sample size.

6.4.7. INDICATOR 7: FREEDOM TO MAKE ROUTINE HOUSEHOLD DECISIONS (MAJOR ECONOMIC DECISIONS HAVE BEEN COVERED UNDER ECONOMIC STATUS).

Many households do not allow women to take even routine decisions (like what to cook for a meal) independently without approval of either the husband or an elder in the marital home. NFHS is the only data source having some information on women's autonomy with respect to routine household affairs and purchases.

NFHS-2, NFHS-3 and NFHS-4 tried to measure women's freedom to take routine household decisions based on how decisions with regard to making purchases for daily household needs was done by currently married women (15-49 years). Based on women's responses, it gave the proportion of women who had the freedom to take decisions independently, those

who took decision jointly with husband, whose decision was taken solely by husband and whose decisions were taken by someone else. It also asked women who took decisions with regard to what item to cook, whether it was independently decided by her, the husband, jointly with husband, others in household, or jointly with others in household. The data for all the rounds can be disaggregated by background characteristics addressing issues of small sample size.

6.4.8. DATA SOURCES FOR INSTITUTION OF MARRIAGE AND FAMILY: COMMENTS AND LIMITATIONS

Data on marriage, especially age at marriage, could be unreliable as many marriages are not officially registered. Besides, parents at times falsify their daughter's age at marriage for several reasons; this is easier in rural areas where a lot of people do not get birth certificates. Data on girls who get married below the age of 15 is also error-prone as households hide that fact due to the legal restriction on age at marriage.

Many women are forced to marry under patriarchal pressure. Though the number of forced marriages is clearly very high, with growing complexities and violence associated with them, no data is available on forced marriages. Though NFHS has some question on women's decision-making in marriage, it does not provide any data on forced marriages. The percentages of cross-regional, inter-caste and love marriages offer some insights into the struggle that these couples must have faced and how the women have wrested some freedom to take their own decision. These estimates are also important to analyse the changing patriarchal structures and caste-driven power relations within families and communities. A national level survey on marriage, related practices, and customs may be desirable – as also follow-up surveys on the fate of these couples, as some of them become victims of family rage and honour killings.

No data are also available on number of remarried women subsequent to divorce, separation, or death of the husband, though there is now data under separate heads for divorced and separated women from the Census.

Reproductive freedom is another issue on which reliable data on this is difficult to collect. NFHS, over the years, has improved their coverage and scope which could be further modified to enhance the quality of data on these aspects.

Apart from whether women visit their natal family or not, the average number of visits and days of stay at natal family are important indicators of women's freedom after marriage. Though NFHS gives data on women's freedom to visit natal family and providing them financial help, it does not capture the above dimension without which the data are incomplete. Decision-making is often not a simple and straightforward process but depends on a variety of factors. This is especially true in the context of daily decisions and hence it is not easy to capture these through queries based on multiple responses. The social understanding of decision-making may also influence their choice of answers.

6.5 PARTICIPATION IN POLITICAL AND COLLECTIVE SPACE

Access to political and collective spaces is denied to a large number of women across all socio-economic categories. Political participation of women and their engagement in the electoral process is an important marker of equality and freedom. India has seen low levels of unionization of workers and very low levels of women's participation in unions. However, there are a few cases where participation in trade unions and other collectives has helped these women to access public space and contribute to individual and social empowerment of women.

Under the sub-theme of political participation, the specific indicators are participation of women in collective institutions, gender gap in voter turn-out, number of women candidates in elections, number of elected women representatives (Panchayati Raj institutions, Assembly and Parliament), proportion of women members in political parties and proportion of women in leadership positions in major political parties. There is very limited data on the last two indicators.

6.5.1. INDICATOR 1: PARTICIPATION OF WOMEN IN COLLECTIVE INSTITUTIONS

Women collectives, particularly the self-help group (SHG) movement as well as community-based organisations, have helped many women to access public space in the past few decades. There are many forms of collective organisations of which the most important are trade unions and SHGs. Women's participation in trade unions is well below the desired level in contrast to their association with SHGs, more than 90 per cent of which are women-only groups. The National Bank for Agriculture and Rural Development (NABARD) has information on the number of SHGs based on data on the SHG-bank linkage programme (through commercial banks, regional rural banks and cooperative banks) since 1992/93. But NABARD data does not include all SHGs, particularly those nurtured by government programmes and microfinance institutions and those that have not availed bank loans. Because of this lacuna, we do not have clarity on the actual number of loans/SHGs or the average number of loans a woman may have availed as member of different SHGs from banks/micro finance institutions as well as from government schemes. Thus, though women are increasingly participating in SHGs and similar forms of collectives like joint liability groups, national-level data are not available from any secondary sources.

Participation in trade unions or labour unions helps women to negotiate for their rights and bargain for better wages and working conditions. National-level data is available on union participation from the Labour Bureau and NSSO.

The Rules Framed under the Trade Unions Act, 1926, impose obligation on the registered Trade Unions (Workers and Employers) to submit annual statutory return in the prescribed format to the Registrar of their respective states/UTs. These state/UT authorities, in turn, furnish the consolidated data in respect of the entire state/UT to the Labour Bureau. The Labour Bureau compiles and disseminates these statistics at the all-India level. However, the data are not reliable as even among registered unions the response rate of unions

submitting annual returns is generally less than 5 per cent. There are no data available regarding unregistered unions.

In order to overcome some of these difficulties, the Chief Labour Commissioner (Central), under the direction of the Ministry of Labour and Employment, conducts verifications of membership of trade unions affiliated to the Central Trade Union Organisations. But these general verifications of membership of trade unions are carried out irregularly: The latest data available is for 2008. It does, however, give sex-wise data and so offers some insights into women's participation in trade unions.

The NSSO has made available data on union membership of women workers since the 50th round. The 50th and 55th rounds of NSS had only two questions on unions: "Is there any union/association in your activity"¹⁵ and "Whether a member of union/association". In the 61st round, the concept was defined for better collection of data. It defined union/association as any registered/recognised body whose membership was open to a section of those engaged in a specific activity or trade, and whose main objective was to look after the interests of its members. The proportion of usual status workers (male and females) who had no union/association in their activities was also recorded in the recent rounds. The 68th round in addition to the above also specified that besides the usual trade unions, this category also covered the association of owners and self-employed persons, etc. The data can be disaggregated across activity status and industry, apart from social and demographic variables.

6.5.2. INDICATOR 2: GENDER GAP IN VOTER TURN-OUT

Exercising voting rights and contesting for elections are also important elements determining women's access to public space. The Election Commission of India (EC) provides data on women voters across assembly and parliament (general) elections.

EC provides data on percentage of female voters out of total eligible voters across elections. It also gives state-wise data on registered women electors (%), votes (%) polled by women out of total votes and women voters (%) out of registered women electors. Similar data are also available for males from which gender gap in voter turn-out can be worked out from 1957 onwards. State-wise gender gap can also be worked out both for assembly and parliament elections.¹⁶ The EC has data on total number of male and female voters as well as the proportion who cast their votes in all elections, except for the first which took place in 1951. There are no possibilities of any disaggregate analysis.

State assembly data on contestants and voters is available from the year of the first election to a legislative assembly, for instance for Karnataka from 1957, for Arunachal Pradesh from 1978, and so on.

¹⁵In the 50th round it was trade union/association.

¹⁶There have been 16 general elections since independence. The first general election took place in 1951, followed by 1957, 1962, 1967, 1971, 1977, 1980, 1984, 1989, 1991, 1996, 1998, 1999, 2004, 2009, and 2014.

6.5.3. INDICATOR 3: PARTICIPATION AS CANDIDATES AND ELECTED REPRESENTATIVES

The 73rd and 74th Amendment to the Constitution of India through affirmative action mandated that one-third of seats in urban municipalities and the village panchayat are reserved for women. This created both the space and opportunity for women to participate in local politics and governance structures. The quota system has ensured representation of women in local self-government (LSG) institutions (Gram Panchayat at the village level, Janapad Panchayat at the block level, and Zilla Panchayat at the district level), but women's participation in both assembly (across states and UTs) as well as the parliament elections continue to remain low.

EC gives data on women and men candidates as well as those who are elected in political bodies for parliament and state Legislative Assembly elections. For local bodies, the data is provided by the Ministry of Panchayati Raj for local self government institutions.

ET publishes state/UT-wise number of seats, women/men contestants, and number of women/men elected. From this data, one can calculate the gender gap in those elected to parliament. Similarly, it has data on state/assembly elections. Data on number of women candidates contesting (as well as total seats) and seats won by them are available from the second general elections. Data on women members in Rajya Sabha are also available from 1952 onwards. The EC publishes data on number of women candidates who participated in the parliamentary elections and the number that were elected from various national political parties, state parties, registered (unrecognised) parties, and as independents. There are no possibilities of any disaggregate analysis.

The Ministry of Panchayati Raj gives state-wise data for women representatives in the three tiers of local self-government.¹⁷ It also gives the total number of representatives at each level, from which the gender gap among representatives in LSGs can be worked out. However, no data is available on the number of women who contested, which is an important indicator of women's political participation. Information is available from the early 2000s.

6.5.4. DATA SOURCES FOR PARTICIPATION IN POLITICAL AND COLLECTIVE SPACE: COMMENTS AND LIMITATIONS

The exclusion of women from positions of power seriously affects the ability to challenge the subordination of women in all its manifestations. Political participation means not only exercising the right to vote, but also power sharing, playing an active role in decision and policymaking at all levels of governance. Political participation of women can be measured in three different dimensions: as voters, as elected representatives, and in the actual decision-making process. While data is available on two of these aspects little is known

¹⁷The Act is yet to be extended to Jammu and Kashmir and is not applicable to Meghalaya, Mizoram and Nagaland as they have traditional councils.

on their contribution to policymaking, which is the most crucial aspect of understanding women's political empowerment.

An important limitation of the data at the panchayat level is the non-availability of statistics on women contestants. In the context of reservation for women, their number among the elected representatives is bound to go up. But, whether the increased number of women representatives in panchayats has facilitated more women to contest in non-reserved seats as well, is another interesting dimension. However, no data are available on the number of women contestants in the non-reserved seats.

Women's participation in political and collective spheres is limited due to various sociocultural barriers as well as levels of exclusions practiced by patriarchal leaderships. Another dimension, equally or more important than the number of elected women representatives, is the data on membership of women in political parties. Currently, there is no data on this in the public domain. Further, data is missing with regard to the number of women occupying leadership or key positions in political parties as well as the numbers engaged in active campaigning.

Data on women's participation in collective institutions such as trade unions and women's collectives are also not collated or collected regularly. Though data on union membership are collated by the Ministry of Labour and disaggregated across male and females, it is highly irregular and unreliable. Data is not available on women in leadership level/proportion occupying leadership positions in these trade unions.

Chapter 7

CONCLUSION

The proper measurement of gender inequality and women's status is an extremely important issue that must be addressed in order to monitor the situation of women and the degree to which policies in general as well as those specific to women's development are achieving their goals. For those who are concerned with redressing inequalities, gender-disaggregated data and indices are important as they provide indications on the status and specific dimensions of various issues that they should address. The purpose of gender-sensitive indicators is to generate specific sets of information, which could help in the identification of areas for intervention to achieve gender equality. Further, without such data, it is impossible to monitor the effectiveness of any intervention. Thus, gender-disaggregated data and indices are tools that can be used to identify gender inequalities, determine priority issues and steps to redress them, provide feedback on interventions, and re-prioritize allocation of resources.

An important challenge faced by many who want to highlight specific issues of women or advocate for a gender sensitive policy is the lack and inadequacy of gender specific statistics. Though various data sources exist which provide information on a diverse set of variables, little is known on the possibilities and limitations of these statistics. Further, for many critical indicators data sources either do not exist or are of limited use. An overview of different data sources alongside providing an outline of the specificities of these are thus of utmost relevance.

The exercise uses the individual indicator approach as against composite index, which allows for considering a number of indicators. The approach to identifying specific indicators in the study was through an issue-based approach taking into account the various dimensions of a particular theme. The report has examined five broad themes: Health Status; Educational Status; Economic Status; Violence against Women; and Demographic, Social, and Political Status.

There are various dimensions of each theme and indicators for each of these dimensions are discussed in the report. The range of gender equality related indicators are numerous, and the list presented in the report has been arrived at through a brainstorming session involving experts and policymakers, apart from a review of exiting studies. The feasibility of calculating or measuring some of the indicators quantitatively is limited by availability of data.

7.1 DATA GAPS

The review exercise clearly brings out the vast range of current data and the richness of such data on monitoring various spheres of women's lives. Clearly, there are many aspects of that are now reasonably well captured, but that does not rule out possibilities of further improvement. However, there are some critical dimensions and indicators, which were currently out of the statistical data collection process completely. Further, though data on some indicators were available from the existing data sources, they were found highly inadequate due to conceptual issues, limited scope or poor coverage. Another set of data, though reliable, does not provide scope for much disaggregate analysis, which is critical in the context of multiple identities in terms of region, religion, caste or class, or even age groups. The data gaps and way forward are thematically explained below.

7.1.1. HEALTH STATUS

The most important limitation of existing data is that while reliable data on many of the issues are available at the national and state level, data at the district level is not available. Failure to have gender informed infant mortality indicators for diverse regions within states is a major handicap in carrying out analysis and making interventions. Data on immunisation and nutrition gap are limited even at the state level and comparability across data sets are issues. Yet another issue is about averages which often mask the wide disparity between extremes which could be across regions, social groups, economic categories and between males and females. Data on maternal morbidity is highly unreliable and inaccurate as none of the existing sources capture the complex dimensions of maternal morbidity, which ranges from physical to emotional issues.

Of all the data sets available National Family Health Survey (NFHS) data is clearly the most useful research data for many of the indicators of health as it provides for many levels of disaggregation. However, the quality of data is an issue.

In the context of large-scale withdrawal of the state from the health sector and given the possible gender biases that accompany individual and private health insurance coverage, there is a need to collect gendered data on health insurance at the national level.

Though surrogate motherhood is growing in India, there is no official/national-level data available owing to many reasons. Generating data based on household sample surveys on such an issue is complex as the level of secrecy involved in surrogacy is highly coupled with the prevalence of few cases which such surveys cannot capture adequately.

Data on disability is yet another area of concern. The concept and categories of disability covered in the data sources on disability are limited and problematic though there has been a broad change in the approach followed over years. The definitions followed especially on mental disabilities are vague and much is left to the individual and social perceptions which surely have a gendered impact. Besides, there are also specific indicators on disability that are important from a gender sensitive perspective. The most important of these indicators are old-age disabilities.

7.1.2 EDUCATIONAL STATUS

A number of challenges and problems continue to constrain data on women's education. Quality and reliability of data collected is an issue, given the wide discrepancy across sources of data. Indicators on enrolment, attendance, and dropout vary considerably between the official source and National Sample Survey (NSS), clearly reflecting the methodological, definitional and conceptual issues in these surveys.

No cross-checking or validation of data is done which makes the official data highly unreliable. Under-reporting of enrolment alongside the massive expansion of private and unrecognised institutions which are outside the purview of this source, makes the statistics under-estimates. Gender biases and gaps are bound to be pronounced at a greater scale in these private schools which are market driven. No information is available on the social characteristics of the students except SC, ST and others, which limit its usefulness in terms of providing a disaggregate picture.

Though completion rates are available from different sources, the quality of data is definitely an issue. Alongside completion rates, repetition rates and grade transition rates are important variables that need to be captured for a gendered analysis of schooling. None of the sources give data to capture these dimensions.

No reliable data on the division between dropout and never-enrolled is available. These are important gender indicators as many girls may not get enrolled at all even though dropouts may be less. This data gap needs immediate consideration.

Yet another dimension that requires attention is the distribution of students by medium of education, as in many parts of the country girls are sent to vernacular medium schools and boys are put in English medium schools.

The data generated from institutional sources do not shed light on student and household socio-economic characteristics such as caste, religion, occupation, income, etc., while the household surveys do not contain information pertaining to educational institutions.¹

Pre-primary education or early childhood education is yet another area where availability of data is highly inadequate. Gender-wise data on enrolment, fees, male/female teachers, etc., of these pre-primary schools could reveal interesting dimensions of discrimination.

Data on basic infrastructure which has significant implications on girls' education are limited and unreliable.

Most of the data sources provide only a generalized picture and are inadequate in providing a disaggregate picture. There is a real dearth of data on vocational and training programmes and its details, as the bulk of these are in the informal sector. No systematic data is available even on vocational and training courses imparted by state institutions like the

¹ASER is the only data source that collects information from both sources.

industrial training institutes (ITIs). With changing demands in the labour market and given the gender-based occupational segregation, certain trades are bound to be dominated by women while in many others they could even be absent.

7.1.3. ECONOMIC STATUS

Data sets on many indicators on economic opportunities are limited to NSS and Census data. There are a few other sources but they do not capture women's work or employment effectively. The data provided by both National Sample Survey Organization (NSSO) and Census on this theme are reliable and the quality of data has improved over time.

Under-reporting of women's work has been an issue with both these data sources, but that is due to the inherent and overlapping nature of women's work with domestic duties. Further, many economic activities carried out for the household, such as processing of agricultural products for own consumption and collection of food, water and fodder, are not counted as economic activity. None of these sources provide information on women's housework which helps in unpacking the intersection between paid and unpaid work. Though the importance of generating data on home-based workers is well acknowledged, the data pertaining to it are still not adequate. At present none of the data sources capture the actual duration of employment and working hours, which in the current context are bound to show sharp gender differentials. Further, no data is available on gender-gaps on many employment related aspects in the corporate or other private sectors.

Data on female labour migration is clearly inadequate, as a monocausal approach without any probing question is used to elicit information on migration. The above issue has already been raised but changes are yet to take place.

An important gender limitation of the existing statistics is that of absence of data on ownership of land and other assets. This can be addressed to a large extent if all the data that are collected at the household level could be gender disaggregated. On critical variables such as earnings, ownership of land and assets, and debts, the data should be collected separately for men and women. The NSSO could also undertake a pilot survey on women's ownership of assets, including land and housing, drawing lessons from the Karnataka Household Asset Survey.

The data on women's financial aspects is in its nascent state and there is a need to widen the scope of the Basic Statistical Returns (BSR) by providing gender-based information on all major heads. A critical gender gap is in relation to decision-making and control over income/resources.

7.1.4. VIOLENCE AGAINST WOMEN

Over time, timely annual data on crime against women is available from official sources and there has been much improvement in the quality of data. However, many limitations still exist, including restrictive coverage since only those that are reported to law enforcement agencies are covered.

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Further, since National Crimes Record Bureau (NCRB) segregates crimes under fixed categories cases which involve multiple crimes get reported only under one crime based on the seriousness of the various charges. Under crimes against women only certain section of the Indian Penal Code (IPC) are included, but women are also victims of other crimes under other sections as well. This information is not easily available, nor can it easily be compiled from NCRB data.

No socio-economic category-wise data is available from NCRB, which is a major limitation for any disaggregate analysis and related interventions. Further, no data is provided on the disposal of cases of crime against women, or the number of persons arrested, and so on. There is a need to review existing parameters and framework, and develop new systems for reporting crime data.

The form and nature of crimes have changed over time but the data provided by NCRB does not reflect the reality. An urgent review of existing statistics on crimes against women is required to see the possibility of capturing these new categories, such as crime among live-in relations, honour killings, marital rape/violence, cyber crime and cyber bullying.

Existing data on sexual harassment at the workplace touches only the tip of the iceberg. This is an issue of growing concern and data needs to be collected under detailed sub-divisions of the new law. Further, no data exists on workplace-related violence except sexual harassment.

No statistics are available for the entire gamut of non-cognizable offences, which are very important for knowing the overall crime situation and for designing policy interventions. Thus, it is imperative now to supplement official data with survey data to give the true picture of the issue.

Domestic violence is a largely neglected area by statistical agencies. Collecting valid, reliable and ethical data on domestic violence is a challenge and special focused surveys are needed which capture its various dimensions – physical and emotional. .

Strengthening the NCRB data alongside conducting of special surveys at regular intervals on various forms of violence with specific and focussed questions seem to be the only way to collect reliable information and capture the intensity and dynamic nature of the issue. A comprehensive household survey covering different forms of violence is of immediate need.

7.1.5. SOCIAL, DEMOGRAPHIC AND POLITICAL STATUS

The Census, alongside SRS and other periodic demographic surveys with their known limitations, are able to provide a broad picture of the gendered demographic transition.

Due to lacunae in data collection mechanisms, statistics on vulnerable women is scanty whether it is related to houseless, destitute, displaced or trafficked women. The need for reliable data is high but designing methods to measure these would be a challenge.

Limitations of the approach used to collect data and a restrictive definition of “household” make the data on female-headed households and on women who are living alone unreliable.

A dark hole, as far as the data on social indicators are concerned, is that of marriage. There is almost no data on forced marriages, cross-regional marriages, inter-caste marriages, love marriages, remarriages and decision-making in marriages. Even data on age at marriage is unreliable due to reporting errors (intentional or otherwise) by families and the fact that few marriages are registered. These indicators are important to analyse the changing patriarchal structures and power relations within families and communities.

On the issue of political participation, while data is available on women voters and elected representatives, little is known on the critical aspect of their contribution to policy making. There is also no data (or very limited data) on women contestants, membership of women in political parties, women in leadership or key positions in political parties or as campaigners and women's participation in collective institutions such as trade unions and women's collectives.

7.2 WAY FORWARD: POSSIBILITIES OF IMPROVED GENDER DATA

The analysis has clearly brought out many gender gaps in statistics, which can be addressed by gendering existing household and administrative sources, enlarging their scope or by developing new databases. There are many ways in which existing data can be modified or used to provide better information on women's status. Existing databases can also be enriched by adding specific modules on women-specific issues or by redefining sampling frame and samples. The need to relate indicators to women's specificity in terms of age, religion, caste, marital status, income, and other related characteristics is important as outcomes can vary substantially by these variables. In the following subsections, some of the possibilities of improving gender-based data, both by improving existing statistics as well as by undertaking fresh surveys/compilation, are discussed. (The recommendations have also been compiled in a tabular form.)

7.2.1. HEALTH STATUS

Existing Sources: For vital statistics related to births and deaths, the only feasible way to improve existing statistics on women is to strengthen the civil registration system. The Annual Health Survey (AHS), which is relatively a fresh initiative, has a large enough sample size to obtain district level estimates on many indicators. It is a good source for gender-based health indicators including maternal mortality. However, the coverage could be expanded to other states and background data should be collected regularly. The raw data may be made available which will permit further analysis.

The only way to plug some of the limitations on data pertaining to key indicators at the district level is to widen the scope of the district level household and facility survey (DLHS) survey, which at present focuses on indicators pertaining to maternal health and child welfare programmes. Consistency and comparability must be ensured across DLHS rounds and nutrition aspects should be part of all DLHS surveys. However, since the survey does not provide background characteristics in all its rounds, it is important to design periodic household surveys.

NSS health surveys should be redesigned to make them more gender sensitive. Concepts and definitions related to many dimensions such as immunisations, morbidity, disability, etc.,

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needs to be revisited and modified alongside reference periods. Sexual and reproductive health should also be captured adequately. The growing importance of insurance schemes calls for regular data not only across sex, but also other socio-economic and demographic variables, which the NSS health rounds could capture if modified suitably. NFHS could revisit some of its concepts such as nutrition, morbidity and maternal care to bring in consistency. There is also a need to expand coverage of certain issues such as nutrition and morbidity to all women, irrespective of whether they are in the reproductive age group or not.

Poor data exists on the sexual and reproductive health of women. The DLHS-3 provides extensive data on this dimension which should be continued in the future rounds also. Data on sexual and reproductive health needs to be collected from all women irrespective of their marital status.

There is a need for uniformity across data sources and various rounds in the definition of various concepts such as immunisation, prenatal and antenatal care, institutional delivery, hospitalisation, out-of-pocket expenditure, disability and others.

New Surveys/Data Compilation: Regular surveys on nutrition are required and the possibility of National Nutrition Monitoring Bureau (NNMB) revamping earlier surveys on nutrition may be explored.

Since large surveys are bound to under-report prevalence of sexual health issues, there is a need to design smaller surveys targeting different segments of the population, taking into account social, demographic and economic aspects.

Data on women beneficiaries of various health schemes needs to be compiled, which could be undertaken by the Ministry of Health and Family Welfare and Ministry of Women and Child.

Data on surrogacy is not available and sample surveys are not a viable option to collect the data. The state machinery should generate regular data based on records from hospitals/reproduction centres, which could be published periodically.

To counter the lack of data on health parameters in the context of institutionalized persons, the homeless, refugees or nomadic populations, the institutions and places where they are known to take refugee need to be specially targeted for data collection.

7.2.2. EDUCATION STATUS

Existing Sources: Cross-checking and validation of all official data sources such as Ministry of Human Resource Department (MHRD), District Information System for Education (DISE) and All India School Education Survey (AISES) is required on a priority basis. Official data formats could be revisited and necessary changes made to collect basic data on household characteristics of students. There is a need to enlarge the data collected from the institutions by collecting additional information on students' socio-economic

characteristics. A system of 20 per cent sample data collection along with collection of education data may be introduced. The diversity of the educational systems should be captured by making it mandatory for all education institutions to report basic information irrespective of their status.

Data on non-formal education should be collated regularly as it is for formal education. The ministry can develop a separate format for collating this information. There is a real dearth of data on women's education in vocational and training courses, and no systematic data is available even from public sector institutions. Directorate General of Employment and Training (DGET) needs to collate data from ITIs and industrial training centres (ITCs) systematically and regularly.

Data should be collected on dropout rates, out of school children, repetition rates, grade transition rates, completion rates and quality of education on a systematic basis after addressing definitional and conceptual issues around these dimensions. On single-teacher schools across states, gender-disaggregated information may be given in both DISE and AISES. There is a need to collect data not only on the availability of facilities, but also on their use both by DISE and AISES.

The scope of the National Achievement Survey conducted by NCERT among Class V students could be expanded to cover all schools. This, alongside Annual Status of Education Report (ASER) surveys, can give some insights on the quality of education aspect.

Considering the rapid changes that are taking place in higher education and as the only survey that provides information at the household level for both rural and urban areas, net enrolment rates and private cost of education, the periodicity of NSS survey has to be improved. It can be conducted on a quinquennial basis like the Employment Unemployment Surveys. Despite the large volume of information collected by NSS, the sample design and sample size impose constraints for bringing out reliable estimates of gender-wise patterns and changes. This needs to be addressed by reviewing existing sample design and methodology. NSS should continue its recent efforts on collecting data on gendered vocational education.

Though DGET at present provides statistics on technical education, the data is partial and highly irregular. There is a need to collate data from ITIs and ITCs systematically and have it regularly disaggregated by sex and other possible divisions/categories.

Finally, consistency in concepts and definitions should be maintained across data sources

New Surveys/Data Compilation: A one-time survey of pre-primary education institutions is required for providing a base for understanding core issues. This would require detailed planning and designing.

There is a need to expand the coverage of ASER to urban areas where changes have been drastic, as it is the only survey which captures various dimensions of schooling and its gendering through data at both household and institutional levels.

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A national level survey on higher education institutions mapping the structure and layers, courses offered, student profile (information on sex, age, religion, caste and economic status), teacher profile, etc., is critical to map the canvas as well as for designing periodic surveys in future.

7.2.3. ECONOMIC STATUS

Existing Sources: There are many suggestions put forth by experts working on the theme for a comprehensive accounting of women's work by revising concepts and adding new dimensions. The concept of work is to be revisited in both the Census and NSS to make them more gender sensitive. The scope of data collection of NSS on domestic duties could be extended to include housework at least in alternate surveys as a separate activity and related data could be collected from all persons irrespective of their status.

NSS survey schedules need revision for questions on home-based work. Appropriate questions should be developed to capture the specificities of home-based work (particularly about the existence of contracts, etc., in the case of home workers). Data on earnings of the self-employed and the various categories (such as home-based workers, subcontract workers, and employers) needs to be captured in the NSS surveys by appropriately redesigning the schedule. NSS employment and unemployment surveys should be modified to collect data on basic rights and social security coverage at the workplace, including maternity benefit, crèche at workplace, career/job break, distance travelled to workplace, availability and mode of transport, and so on.

With regard to female migration, the available data sources, the Population Census and NSSO, are inadequate. The survey schedules of these sources need review and revision so that multiple responses are captured alongside the diverse issues and dimensions of migration. Migration related information could also be included in all the quinquennial rounds on employment for generating regular and reliable data.

On financial aspects, there is a need to widen the scope of the BSR and ensure that it provides gender-based information for all major heads.

New Surveys/Data Compilation: Conduct of time-use surveys should be a priority not only for measuring women's economic contribution, but also for understanding gender inequalities in house work. The data needs to be generated at fixed intervals and a gap of ten years, given the extensive field work requirement, seems practical which assures continuity in information. Time Use Survey (TUS) can give better estimates of women's work, both paid and unpaid work, and its various dimensions including formal and informal work.

A special survey to capture gender gap in the corporate sector is recommended. Occasional surveys on specific sectors/industries, which employ women in reasonable numbers, could be focused on to begin with.

It is difficult to capture dimensions of decision-making and control over income/resources through questionnaire-based large surveys and hence pilot women-centric surveys may be undertaken to capture these dimensions occasionally.

An attempt is needed to document ownership of assets among women. The NSSO should undertake a pilot survey on women's ownership of assets, including land and housing, drawing lessons from the Karnataka Household Asset Survey (KHAS).

KARNATAKA HOUSEHOLD ASSET SURVEY

The survey was undertaken across eight districts of Karnataka. Some critical features of the survey and instrument design are given below:

- Contrary to conventional survey practices of interviewing the household head, a primary respondent identified as the household member best aware of the household's economic circumstances, specifically household assets, was interviewed.
- If the primary respondent identified was married, then her or his spouse was interviewed as the secondary respondent. If unmarried, then another adult household member was selected as the secondary respondent based on a set of protocols.
- As far as possible, the respondents within a household were of the opposite sex to capture both men's and women's views on asset ownership.
- The survey obtained information on all the physical assets including residence, agricultural land, other forms of real estate, livestock, agricultural tools and equipment, non-farm business activities and consumer durables.
- Information on asset values was collected as well. For immovable property (house, land, other real estate), different types of values including the sale, lease, and replacement (for built-up property) values were obtained. For all other assets, only sale values were recorded.
- Data on modes of asset acquisition which can be used to uncover institutional and other barriers to individuals' asset acquisition was also obtained.

7.2.4. VIOLENCE AGAINST WOMEN

Existing Sources: There is a need to review existing parameters and framework of NCRB and develop new systems for reporting crime data. There should be a provision to report a case under multiple IPC heads to capture the complexity of the issue. Also, data across all IPCs should be segregated by gender. Crimes registered under the SC-ST Prevention of Atrocities Act should also be provided by gender. There is a need to report basic demographic and social backgrounds in the case of all crimes against women for obtaining a holistic picture.

NCRB data formats should be reviewed to cover the changing form and nature of crimes, such as crime among live-in relations, sexual harassment, honour killings, marital rape/violence, cyber crime, and cyber bullying all of which are increasing. An urgent review of

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existing statistics on crimes against women is required to see the possibility of capturing these crime heads. Detailed sub-divisions within important categories such as rape and sexual harassment should be thought of. Additionally, data on numerous and increasingly common crimes that were recognised by the Criminal Law Amendment Act, 2013, like gang-rapes, acid attacks, stalking, among others should be provided soon.

New Surveys/Data Compilation: In the absence of any comprehensive statistics on violence against women, a national level survey on violence is an immediate requirement. It is imperative to supplement NCRB data with this survey data to give the true picture of crimes/violence against women. Such surveys should also cover all workplace-related violence apart from sexual harassment which may be physical, emotional or both. These surveys may also incorporate special components to capture domestic violence which could be developed using the international definition of violence. NFHS-3 modules on violence may also be reviewed and adequately modified.

Apart from a national level survey, there a need to conduct special surveys at regular intervals on various forms of violence with specific and focussed questions which may be the only way to collect reliable information on specificity and changing dimensions of various forms of violence.

7.2.5. CRITICAL DEMOGRAPHIC, SOCIAL AND POLITICAL ASPECTS

Existing Data: Definition of household head needs to be changed, taking into account the functional criteria both in Census and NSS. The definition of household followed in KHAS may be reviewed for this purpose.

Census modules should be adequately modified to record the specificity of houseless women with regard to their family status. Further, since Census covers all institutions and individuals, a question on individual's residential status could be included in the Census schedule to capture data on women in old-age and destitute institutions.

Compilation of programme-based data on women beneficiaries under various schemes/programmes of state and central governments are required, which may be taken up with different implementing ministries. Administrative compilation of such data is possible though there could be many limitations. The final integration, compilation, and publication of data could be undertaken by the Ministry of Women and Child Development.

There is a need to cross-check data on age at marriage for all existing sources to reduce error at source. Additional questions such as age of the first child could be included in the survey schedule. Reproductive freedom is an issue that many women face but reliable data on this is difficult to collect. NFHSs over the years have improved their coverage and scope which could be further modified to provide reliable data on these aspects.

Since NFHS covers many issues related to decision-making and marriage, it could also collect data on forced marriages through questions on women's decision-making and marriages.

The scope of data provided by the Election Commission and Ministry of Panchayati Raj could be relooked at and adequately modified to allow for further gender-based analysis. The Ministry of Panchayati Raj should provide data on women contestants in non-reserved seats also.

New Surveys/Data Compilation: To meet the urgent need to generate basic data on vulnerable women, targeted sample surveys at specific intervals may be taken up on houseless and trafficked women. It is also important to develop and formulate innovative methodologies and targeted surveys for generating better data on single women.

In the absence of any data on the institution of marriage, which is the critical institution that influence women's lives, a national level survey on marriage, related practices, and customs is an immediate requirement. This should cover cross-regional, inter-caste, inter-religious and other love marriages.

Holistic data on women in Self-Help Groups (SHGs) and other collective organisations are required which can be compiled administratively state-wise. Special surveys on elections with a gender focus could be developed on the lines of Lokniti programme² of the Centre for the Study of Developing Societies, New Delhi.

7.2.6. INTEGRATED DATA INITIATIVES

There are definitely merits for focused surveys covering an issue or specific aspects of the selected theme. However, focused surveys limit the possibility of understanding complex interactions and entwining of issues which are important in analysing gender-based discriminations and women's status. Since NSS undertakes surveys on diverse issues such as employment, education and health, apart from other social and demographic aspects, there is a possibility to supplement data on a theme by other surveys if they cover the same households. This will help in analysing the complexity of issues and unveiling some of the broader questions that may be difficult to capture by looking at one source alone.

There have been few attempts to capture various dimensions/aspects through a single survey (which are non-official data sources) by organisations at the national level. The Indian Human Development Survey of The National Council of Applied Economic Research (NCEAR) is an important initiative in this regard.³ The survey had covered a wide range of issues, and data is available on different dimensions of human development which include child care, child rearing, demographic characteristics, disposable income, education, employment, extended families, family background, fertility, gender roles, gender stereotypes, health, housework, housing, income, marital status, parents, social status and socio-economic status. The large

²Lokniti is a research programme of CSDS established in 1997. The programme has carried out various national- and state-level cross-sectional surveys as part of its research on electoral patterns. This includes landmark studies such as a series of National Election Studies (NES) (1967/2009), a series of State Assembly Election Studies (1995/2011), State of the Nation Surveys (2006/11), the State of Democracy in South Asia Study (2005/07) and a series of Studies of Indian Youth (2007/11).

³Till now two surveys have been undertaken and the first round (IHDS-1) was undertaken in 2004/05 covering 41,554 urban and rural households in all states and union territories of India (except Andaman/Nicobar and Lakshadweep). During 2011/12, the second round (IHDS-II) re-interviewed the same households. Comparative time series analysis is possible with the two sets of data. The data of the first round is available, and the second round data is scheduled to be made public by 2015.

coverage of issues facilitated analysis of associations across a range of social and economic conditions.

National Survey of Household Income and Expenditure, also titled Living in India Survey (2012),⁴ is another initiative from NCAER which is a stand-alone survey that captures the socio-economic and demographic characteristics of households, with a particular focus on income and expenditure, savings and debt, and other aspects of household life such as amenities and dwelling details, water usage and health.

Looking Ahead: Possibilities of Improved Gender Data	
Health Status	<p>Existing Data Sources</p> <p><i>Civil Registration System (CRS) should be strengthened.</i></p> <p><i>AHS data: Possibility of expanding it to other states to be examined; should collect background data which should be analysed; raw data to be made available.</i></p> <p><i>DLHS to be strengthened; nutrition aspects to be covered across all rounds of DLHS; sexual health data to be continued as in DLHS-3; consistency and comparability should be ensured across rounds; terminology and definition to be relooked at to bring uniformity; periodic surveys at regular intervals required; background information to be captured.</i></p> <p><i>NSS health surveys need redesigning; concepts such as immunisation, morbidity, disability, etc., should be revisited; sexual health problems of women to be given attention.</i></p> <p><i>Modification of NSS health schedule to include insurance related information.</i></p> <p><i>NFHS concepts need reworking to ensure consistency and comparability; data from all women required for specific issues such as nutrition, morbidity, sexual health; possibility of increasing sample size to be explored.</i></p>
	<p>New Surveys/Data Compilation</p> <p><i>Regular Surveys on Nutrition Required: Possibility of NNMB revamping earlier surveys on nutrition to be explored.</i></p> <p><i>On sexual health issues, design smaller surveys targeting different segments of the population taking into account social, demographic, and economic aspects.</i></p> <p><i>Compilation of data on women beneficiaries of various health schemes: Could be undertaken by the Ministry of Health and Family Welfare and Ministry of Women and Child.</i></p> <p><i>Data on Surrogacy: State machinery should generate regular periodic data based on records from hospitals/reproduction centres/fertility clinics.</i></p> <p><i>Data on institutionalized persons, the houseless, refugees, or nomadic populations to be generated through special targeted surveys.</i></p>

⁴The survey covered 514,000 households and was conducted in two rounds.

Looking Ahead: Possibilities of Improved Gender Data

Education Status

Existing Data Sources

Cross-checking and validation of all official administrative data: MHRD, DISE and AISES; consistency across data sources should be maintained; data formats of all to be revisited to include basic data on household characteristics of students; a system of 20 per cent sample data collection along with collection of education data required; reporting of basic information to be made mandatory for all educational institutions, irrespective of their status.

DISE to collect data on dropout rates, out-of-school children, repetition rates, grade transition rates, completion rates, and quality of education on a systematic basis after addressing definitional and conceptual issues around these dimensions.

On single-teacher schools, gender disaggregated information should be given in both DISE and AISES.

On facilities, there is a need to collect not only data on availability but also on its use both by DISE and AISES.

Data on non formal education should be collated by the MHRD; should develop separate formats.

Periodic data to be collated on women's education in vocational and training courses for both public and private sector; DGET should take the initiative.

Periodicity of NSS surveys on education to be improved; quinquennial surveys required; the sample design and sample size to be reviewed and reworked to facilitate gender disaggregate analysis by background characteristics; consistency across rounds and other data sources should be maintained; on gendered vocational education, efforts by NSS in its recent rounds may be continued.

New Surveys/Data Compilation

A one time survey of pre-primary educational institutions to provide base for understanding core issues, planning and designing periodic surveys in the future.

ASER to expand its coverage to urban areas.

A national level survey on higher educational institutions mapping their structure and various layers of institutions, courses offered, students profile (information on sex, age, religion, caste, and economic status), teachers profile, etc., is critical.

Looking Ahead: Possibilities of Improved Gender Data

Economic Status

Existing Sources

The concept of work is to be revisited in both Census and NSS; the scope of data collection of NSS on domestic duties could be extended at least in alternate surveys to include housework; NSS survey schedule needs revision on questions on home-based work and its specificities.

Data on earnings for the self-employed and its various categories to be captured in the NSS surveys by appropriately redesigning the schedule; additional modules/questions to be included to collect data on basic rights and social security coverage at the workplace including maternity benefit, crèche at workplace, career/job-break, distance travelled to workplace, availability and mode of transport, etc.

The survey schedules on migration of Census and NSS need review and revision to capture multiple responses and various dimensions of gendered migration; data on migration to be part of all quinquennial rounds on employment.

Scope of the BSR to be widened to provide gender-based information under all major heads.

New Surveys/Data Compilation

Conduct of time use surveys should be a priority; data to be generated at fixed intervals.

Special surveys to capture gender gap in corporate sector required; occasional surveys on women specific sectors/industries could be attempted in the beginning.

Pilot women-centric surveys need to be undertaken to capture decision-making in economic and financial matters.

NSSO should undertake a pilot survey on women's ownership of assets, including land and housing.

Looking Ahead: Possibilities of Improved Gender Data

Violence against Women

Existing Sources

Review existing parameters and framework of NCRB and develop new systems for reporting crime data; provision to report a case under multiple IPC heads required; data across all IPCs should be segregated by gender; crimes registered under the SC-ST Prevention of Atrocities Act to be provided by gender; basic demographic and social background for all crimes against women required.

NCRB data formats to include crime among live-in relations, sexual harassment, honour killings, marital rape/violence, cyber crime, cyber bullying; detailed subdivisions within rape and sexual harassment to be included; data on crimes that are recognised by the Criminal Law Amendment Act, 2013, like gang-rapes, acid attacks, stalking, etc., should be provided soon.

New Surveys/Data Compilation

A national level survey on violence is an immediate requirement; survey to cover all crime and its various dimensions; a special component on domestic violence to be developed.

Special targeted surveys at regular intervals on various forms of violence with specific and focussed questions.

Looking Ahead: Possibilities of Improved Gender Data	
Critical Demographic, Social and Political Aspects	<p>Existing Data</p> <p><i>Definition of household head to be reviewed taking into account the functional criteria.</i></p> <p><i>Census modules should be adequately modified to record the specificity of houseless women; a question on individuals' residence could be included in the Census schedule to capture data on women in old-age and destitute institutions.</i></p> <p><i>Compilation of programme-based data on women beneficiaries under various schemes/ programmes to be taken up by different implementing ministries.</i></p> <p><i>Cross-check data on age at marriage for all existing sources to reduce error at source.</i></p> <p><i>NFHS module/questions on reproductive freedom could be further modified to provide reliable data; since NFHS covers many issues related to decision-making and marriage, it could also collect data on forced marriages through questions on women's decision-making and marriages.</i></p> <p><i>The scope of the data provided by the Election Commission and Ministry of Panchayati Raj could be relooked and modified to provide gender perspective. Panchayati Raj ministry should provide data on women contestants in non-reserved seats also.</i></p>
	<p>New Surveys/Data Compilation</p> <p><i>Targeted sample surveys at specific intervals may be taken up to capture data on vulnerable women.</i></p> <p><i>A national level survey on marriage, related practices, and customs is an immediate requirement which should cover cross-regional marriages, inter-caste marriages, and various types of love marriages.</i></p> <p><i>Holistic data on women in SHGs and other collective organisations are required which can be compiled administratively across states.</i></p> <p><i>Special surveys on elections with a gender focus are required.</i></p>

7.3. LIMITATIONS

This exercise does not claim to be comprehensive in terms of themes, its dimensions and indicators covered, and sources of data. Discussion has been purely restricted to macrolevel data sources, but data collected by different ministries and departments are not covered unless these are regularly published. Many of these dimensions have been extensively examined in recent years by many scholars and the analysis draws on these writings heavily. Another issue which has often been raised is that of gender-sensitive methods of data definition and collection which are still concerns. Issues of gender sensitivity in the collection of data and related issues such as including women investigators in data collection, asking questions to female respondents in the absence of male members or elderly women, etc., are not delved upon as these are extensively highlighted in many discussions on the issue.

Though the report gives a range of indicators under each theme, the intention is not to suggest measurement of all indicators. One could do a selection of indicators across various dimensions of a theme depending on the objective of the exercise as well as availability of data. The selection needs to be based on the objectives and goals of measurement as well as to identify the aspects/changes that are required to measure or capture these goals. Choice of indicators need to be based on these exercises and should be those which enable capture of status and its changes well. It is true that the number of indicators to measure each dimension should be small though this does not rule out using many measures to examine a particular theme.

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APPENDIX 1

TABLE A2: QUINQUENNIAL SURVEY ROUNDS FOR EMPLOYMENT AND UNEMPLOYMENT

Rounds	Year: from	Year: To	Reference-Urban	Reference-Rural	Concept Used		
					Usual Principal Status	Current Weekly	Current Daily
27	1972	1973	Long Period in the past (say 1-Year and likely to continue)+1-week+1-Day	Long Period in the past (say 1-Year and likely to continue)+1-week+1-Day	Unemployed primarily, lately working and expected to work in future = Employed	1 hr or 1 day of the week	>4 hrs
28 th –31 st							
32	1977	1978	1-Year+1-week+1-Day	1-Year+1-week+1-Day	Unemployed primarily, lately working and expected to work in future= Unemployed	1 hr or 1 day of the week	>4 hrs
33 rd –37 th							
38	1983		1-Year+1-week+1-Day	1-Year+1-week+1-Day	"	"	"
39 th –42 nd							
43	1987	1988	1-Year+1-week+1-Day	1-Year+1-week+1-Day	"	"	"
44 th –49 th							
50	1993	1994	1-Year+1-week+1-Day	1-Year+1-week+1-Day	"	"	"
51 st –54 th							
55	1999	2000	1-Year+1-week+1-Day	1-Year+1-week+1-Day	"	"	"
56 th – 60 th							
61	2004	2005	1-Year+1-week+1-Day	1-Year+1-week+1-Day	"	"	"
62 nd –65 th							
66	2009	2010	1-Year+1-week+1-Day	1-Year+1-week+1-Day			
68	2011	2012	1-Year+1-week+1-Day	1-Year+1-week+1-Day	"	"	"

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TABLE A3: CHANGES IN CONCEPT OF WORK AND WORKER IN THE POPULATION CENSUS

Years	Employed	Unemployed	Out of labour force	Concept	Reference period
1951	Self-supporting person: One who earns income and it is enough to support to him or her	Earning dependent: One who earned income but not sufficient to support one self.	Non-earning dependent: Ones who didn't earn and depended on other entirely		
Workers	Non-Workers			Income Work	1 hr a day for the length of the working season
1961	Seasonal work: >1 hour a day, through the greater part of the working season regular employed: if employed on any one days fifteen days prior to survey day	>A previously unemployed person but seeking employment for the first time >A person employed before but now out of employment and seeking employment	Not engaged in any economic activities		15 days
1971	Seasonal work: If working throughout the greater part of the working season Regular employed: if employed on any 'one day' fifteen days prior to survey day		Work: Primary and secondary		1 year 7 days
1981	Main Worker: Worked in economic activity for more than 183 days Marginal Worker: Worked in economic activity for less than 183 days Non worker: Did not work at all at any time				1 year 1 year 1 year
1991	Same as 1981, Definition of work specified to include unpaid economic activity				
2001	Same as 1991				



United Nations Population Fund – India

55, Lodhi Estate, New Delhi - 110003
Phone: 011-46532333 Fax: 011-24628078
Email: india.office@unfpa.org
Website: india.unfpa.org