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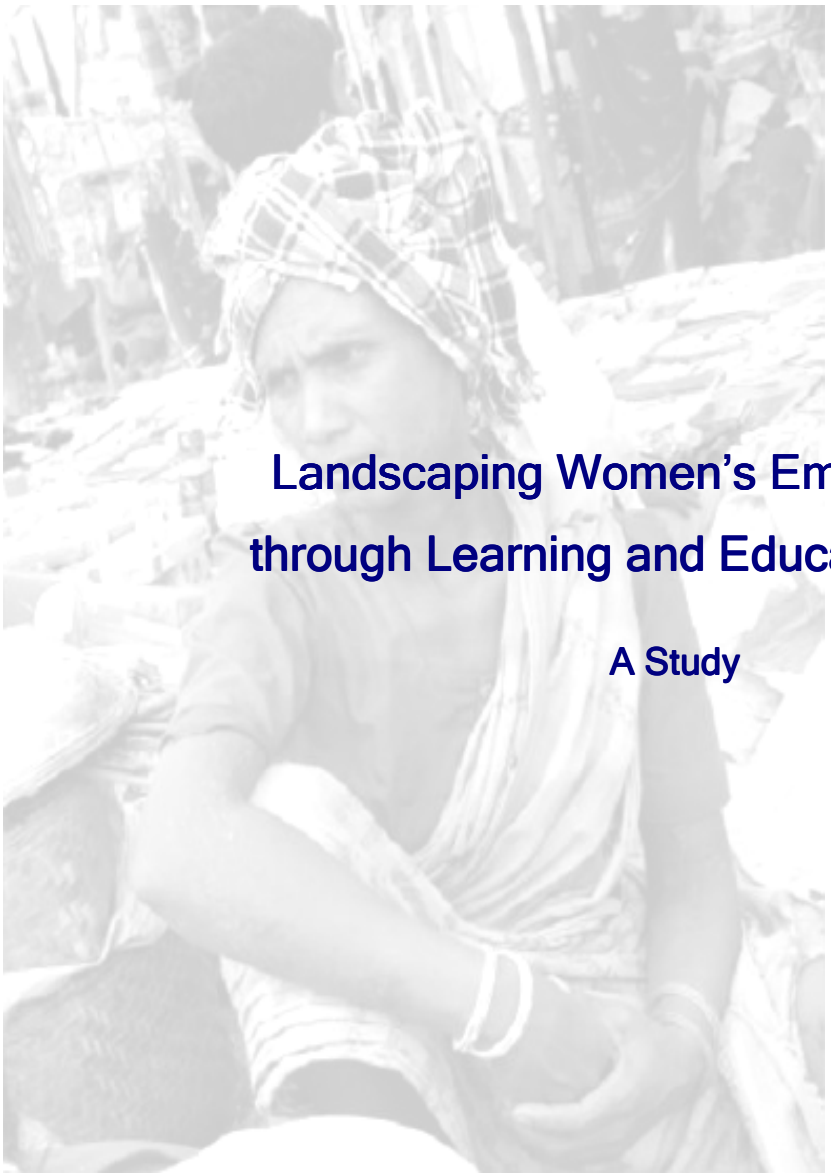

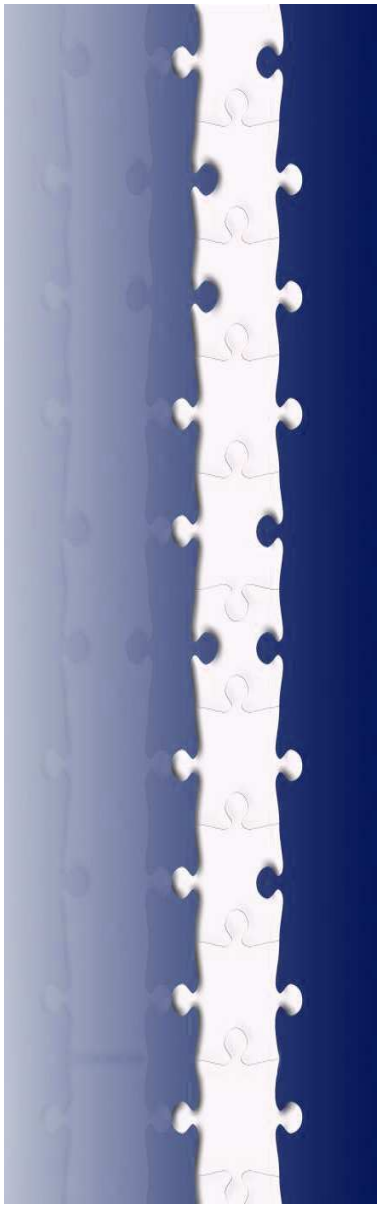

Landscaping Women's Empowerment through Learning and Education in India

A Study

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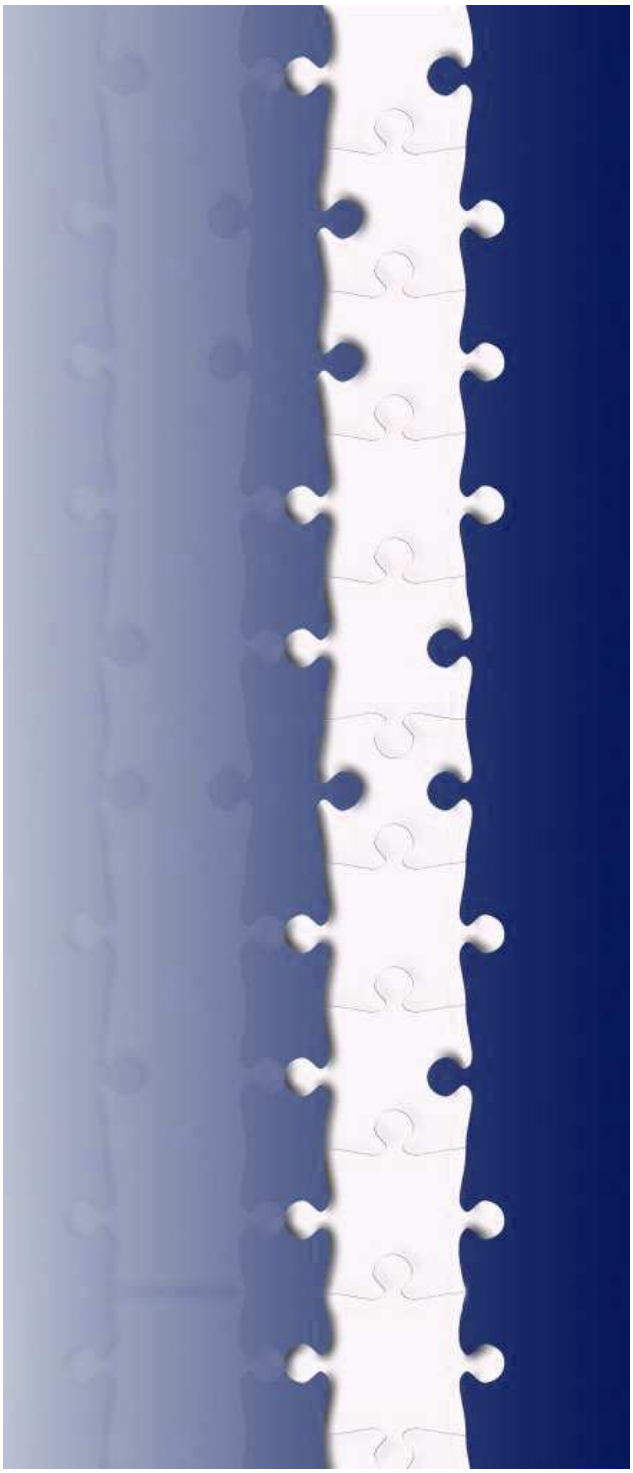


Abbreviations

ANC	Ante-natal Care
BPL	Below Poverty Line
DISE	District Information System for Education
DLHS	District Level Health Survey
EAG	Empowered Action Group
GDI	Gender Development Index
HDI	Human Development Index
IMR	Infant Mortality Rate
IUD	Intra-Uterine Device
MDG	Millennium Development Goals
MoHFW	Ministry of Health and Family Welfare
MMR	Maternal Mortality Ratio
NFHS	National Family Health Survey
PNDT	Pre-Natal Diagnostic Techniques
SC	Scheduled Caste
SRS	Sample Registration System
ST	Scheduled Tribe
TFR	Total Fertility Rate
WPR	Workforce Participation Rate

1. Executive Summary

India is the world's second largest country in terms of total inhabitants. Further, out of a total population exceeding one billion, approximately 120 million are women living in poverty. India is one of only a few countries globally where males significantly outnumber females, an imbalance which has continued to increase over time with the country's maternal mortality rates in rural areas amongst the highest in the world. The current study, commissioned by the Kiawah Trust, focuses on the economic and social status of women in eight Indian states, i.e. Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Orissa, Rajasthan, Uttar Pradesh and Uttarakhand collectively known as Empowered Action Group (EAG) states. The objective of this study is to identify a state / region requiring the greatest action to improve women's empowerment.

This study examines nine indicators of socio-economic development for women, including incidence of poverty, demographic status, marriage and fertility, maternal and child health, nutritional status, family planning, education and enrolment, workforce participation, and empowerment status in order to determine the need for engagement. Based on data collated in connection with indicators, indices have been developed to rank the aforementioned eight states. These individual metrics help identify the most vulnerable state according to each indicator. For instance, the Poverty and Demographic Indices each show different states to be the most deficient (Orissa and Uttar Pradesh, respectively). The report has developed a composite index for all indicators, called the "Vulnerability Index" to provide a composite ranking for the various states.

As a result, Bihar emerges as the most vulnerable Indian state in terms of empowering women followed by Jharkhand and Uttar Pradesh. The report has also developed a Vulnerability Index for Bihar based on the analysis of key indicators including BPL population, female literacy, sex ratio, age at marriage, and institutional births in order to identify the most vulnerable districts.

2. Introduction

The full measure of the quality and maturity of a nation's social and economic growth and overall well-being is not measured simply by its rate of economic growth but by the overall socio-economic and political status of women. A country is not 'developed' in any meaningful sense if either systemically or culturally through neglect or tacit approval it deprives 50 per cent of its population of its basic needs, livelihood options, access to knowledge and effective political representation, especially based on gender. Of all the various economic and political groups in Indian society, Women have a claim to a right to be involved in **all** aspects of development processes. The urgency of the situation and the need to respond with effective action are underlined by the fact that India is currently ranked 114th among 134 countries in the World Economic Forum Gender Gap Index for 2009, down from 113th in 2008.

The Kiawah Trust, founded by Peter and Lynne Smitham in 2004, to help young, vulnerable individuals with health and educational problems in Southern India and sub-Saharan Africa, is currently looking to support organisations and / or projects in India focusing on women's empowerment through learning and education. The Trust has commissioned Copal Partners to undertake a secondary study to identify an Indian state / region most in need of support to improve women's empowerment.

2.1. Scope of the Study

Women's empowerment is typically measured in the following terms:

1. Economic participation – women's quantitative participation in the workforce is important not only in addressing the disproportionate levels of poverty among women, but also as a key step towards raising household income and encouraging economic development.
2. Political empowerment – effective political involvement includes the equitable representation of women in decision-making structures, both formal and informal, and their engagement in formulation of policies affecting the socio-economic groups in which they live.
3. Educational attainment – optimising provision of education is the most fundamental prerequisite for empowering women in all areas of society.
4. Health and well-being – properly providing for the general and gender specific health requirements of women must include access to sufficient nutrition, healthcare and reproductive facilities.
5. Social and cultural rights – enabling women to exercise fully their socio-economic and political rights includes recognising and respecting the rights of women to live with dignity, free from violence and discrimination.

The study has therefore focused on the following indicators for data collation and analysis:

- Poverty Incidence
- Demographic Status
- Marriage and Fertility
- Maternal and Child Health
- Nutritional Status
- Family Planning
- Education and Enrolment
- Workforce Participation
- Empowerment Status

Taking an intensive research approach, the study focuses on the eight EAG (Empowered Action Group) states, which have been identified by the Government of India as vulnerable based on these socio-demographic and economic indicators. These states are Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Orissa, Rajasthan, Uttar Pradesh and Uttarakhand.

2.2. Study Methodology

The methodology adopted for the study is as follows:

- Develop research framework and identify data sources
- Review and collate existing governmental and non-governmental data to support the aforementioned indicators
- Interpret data, analyse and document information
- Report based on qualitative and quantitative analyses results

We have developed indices for each of the indicators to compare statewide performance in each respective area. These indices have then been used to rank each state. Subsequently, a composite **Vulnerability Index** has been developed comprising the following indices, i.e. poverty, demographics, marriage and fertility, family planning, mother and child health, nutrition, education, employment, and empowerment. Overall, and as a result, the Vulnerability Index reflects the status of women in the eight target states included in this report. Finally, a composite rank has been assigned to each state in terms of vulnerability. Individual indices and the composite index have been ranked on a scale of one to eight, where one is the least and eight the most vulnerable.

We have applied two sets of formulae in calculating each respective index.

For positive indicators (i.e. sex ratio, use of contraception, etc.):

$$\frac{x - \min(x)}{\max(x) - \min(x)}$$

For negative indicators (i.e. IMR, MMR, etc.):

$$\frac{\max(x) - x}{\max(x) - \min(x)}$$

where min (x) and max (x) are the lowest and highest values the variable x can attain respectively.

2. Background

India is often characterised as an emerging economic superpower offering enormous demographic advantages for inward investment based on its high quality, well qualified engineering workforce and management personnel, a powerful Indian diaspora and emerging Indian transnational. However, there is also another aspect of Indian society which is less positive, i.e. India has the largest numbers of poor, illiterate and unemployed citizens of any country in the world. High infant mortality, morbidity and widespread anaemia among women and children continue. India suffers from acute economic and social disparities along regional, rural-urban, social, and gender lines. Even worse, there is empirical evidence to suggest that over the past 20 years all these disparities have increased. As a result of various reforms, economic and social development in southern and western states has accelerated compared to northern and eastern states, a development which has resulted in increasing disparities between these two regions in terms of income, poverty and other development indicators. Reforms have also exacerbated the rural-urban divide. While large and medium cities continue to enjoy unprecedented economic prosperity, rural areas are suffering economic stagnation. Consequently, agrarian distress is widespread, reflected in increasing levels of suicide amongst desperate farmers and more widespread rural unrest. Socially backward sections, especially scheduled castes (SC) and tribes (ST) have gained little from India's recent increased prosperity which confers disproportion rewards on those with relevant, transferable assets, skills and higher education. STs have often been victims of development as a result of displacement. However, the country's gender gap, based on women's inferior social and economic status (traditionally greater in India than in almost all other societies) has increased further due to economic reforms and globalisation.

Respective economic and social developments are mutually reinforcing as are disparities connected with them. Generally, the socially excluded are economically marginalised while the economically marginalised remain socially excluded. Gains from economic development accrue disproportionately to socially developed groups. Economic gains support their continued efforts to improve social skills which in turn enable them to acquire an even greater (and even more disproportionate) share of economic opportunities. Conversely, the socially backward may experience only marginal gains from economic development which may well be insufficient to enable them to improve their social skills enough to earn more. This vicious circle continues from generation to generation.

Women fare worse than men on most social indicators. A computation of the Gender related Development Index (GDI) for the Indian states reveals not only low levels of human development and the extent of gender inequalities within India, but also more importantly measures how badly Indian states perform compared to the rest of the world. The "best performing" Indian state based on the GDI is Kerala with a value of 0.597 while the "worst" is Uttar Pradesh at 0.310, similar to Benin. Also significantly, the GDI value for Uttar Pradesh is only half that of Kerala. There are only 13 countries in the world with lower GDI values than Bihar and Uttar Pradesh. Similarly, disparities exist both between and within communities in India. For example, communities classified as belonging to SCs and STs have significantly lower literacy and higher child mortality rates than the rest of the population.

Over the past decade, gender equality and women's empowerment have been explicitly recognised as vital not only to the social, economic and political well-being of civilised societies, but also as key elements in social and economic advancement. India's National Population Policy 2000 lists 'empowering women for health and nutrition' as a crosscutting strategic objective. In addition, promotion of gender equality and empowering of women is one of eight United Nations Millennium Development Goals (MDG) to which India is a signatory.

Gender-based inequalities always result in greater value being placed on the health and survival of males than females. In India, examples of health and population indicators reflecting gender differences involving the perceived worth of males and females include sex ratios at birth, infant and child mortality by sex, and low ages at marriage for women. In addition, at household level, disempowerment of women results in their inferior access to a wide range of social and economic resources including education, employment, and income, and limits women's powers to take decisions and move freely. Men's power over women can be measured, on the one hand, by assessing the level of women's and men's agreement with norms that give men the right to exercise control over women and, on the other hand, by measuring the extent to which women are subject to spousal violence.

4. Study Analysis

4.1. Poverty Incidence

Our study has adopted the percentage of Below Poverty Line (BPL) population as a measure of the incidence of poverty in respective states (Table 1).

Population Below Poverty Line by State: 2004-05

(Based on Uniform Recall Period (URP) Consumption)

Table 1

State	BPL Population (%)
Bihar	41.4
Chhattisgarh	40.9
Jharkhand	40.3
Madhya Pradesh	38.3
Orissa	46.4
Rajasthan	22.1
Uttar Pradesh	32.8
Uttarakhand	39.6

Source: Planning Commission, Govt. of India

Table 2

State	Poverty Index	Rank
Bihar	0.21	7
Chhattisgarh	0.23	6
Jharkhand	0.25	5
Madhya Pradesh	0.33	3
Orissa	0.00	8
Rajasthan	1.00	1
Uttar Pradesh	0.56	2
Uttarakhand	0.28	4

Orissa is the poorest state in our sample followed by Bihar and Chhattisgarh. Rajasthan and Uttar Pradesh suffer from the lowest levels of poverty. In India it is estimated that women and children account for 73 per cent of those below the poverty line. In such situations, increased female labour force participation, particularly among lowest income households, represents the single most important coping strategy for poor families, a development which makes female-headed households and poor women in general a distinct poverty group.

Perceptions (equitable or otherwise) of gender are central to how societies assign roles, responsibilities, resources, and rights between women and men. Allocation, distribution, utilisation, and control of resources are therefore incumbent upon gender relations embedded in both ideology and practice. Gender analyses do not merely focus on women, but

also look at ways in which men and women interact with each other and the gendered nature of their roles, relations, and control over resources. It is therefore sometimes inevitable that gender justice becomes synonymous with the rights of women and any discussion of gender and poverty become essentially a discussion about women and poverty. This reflects the simple fact that, as with all other issues, women and men experience poverty in different ways. If we accept the definition of poverty as the denial of choices and opportunities for a better life, then feminisation of poverty is less a question of whether more men than women are poor than the severity of poverty and the greater hardship women face in lifting themselves and their children out of it. The extensive framework of discrimination in society, including unequal opportunities in education, employment, and asset ownership, mean that women have fewer possibilities for advancement, fewer choices. In fact, poverty accentuates gender gaps. Consequently, in situations of poverty it is women who are often the most vulnerable. Their increased vulnerability is most visible when disasters, conflicts, or involuntary resettlement occur.

4.2. Demographic Status

Gender discrimination is evident even in a country's demographic indicators. While in most major countries the sex ratio favours women, India's continues to discriminate in favour of men. Furthermore, the child sex ratio has become increasingly discriminatory towards girls in recent decades. Of course, this is not a biological phenomenon but instead the result of sex-selective abortions and the blatant violation of Pre-natal Diagnostic Techniques (PNDT) Act, 1994. Table 3 shows male / female population totals and sex ratios i.e. "the number of females per 1000 males" in respective states. Chhattisgarh has the highest sex ratio (989) and Uttar Pradesh the lowest (898). Several states such as Chhattisgarh, Jharkhand, Orissa and Uttarakhand have a higher sex ratio than the national average of 933. However, the fact is that females are under-represented among live births and over-represented among still births. Furthermore, sex ratios at birth decline with wealth, suggesting that sex selection of births is more common among wealthier than poorer households.

Population Totals

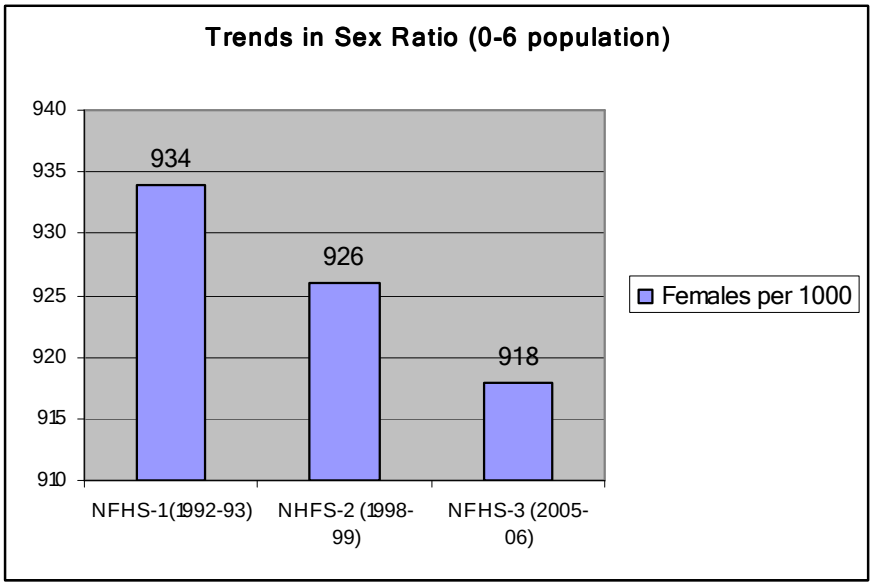
Table 3

State	Total Population	Male	Female	Sex Ratio	Sex Ratio (0-6)
Bihar	82998509	43243795	39754714	919	942
Chhattisgarh	20833803	10474218	10359585	989	975
Jharkhand	26945829	13885037	13060792	941	965
Madhya Pradesh	60348023	31443652	28904371	919	932
Orissa	36804660	18660570	18144090	972	953
Rajasthan	56507188	29420011	27087177	921	909
Uttar Pradesh	166197921	87565369	78632552	898	916
Uttarakhand	8489349	4325924	4163452	962	908

Source: Population Census 2001(Office of the Registrar General of India)

By comparison, the national sex ratio for the population aged 0-6 is only 927 (2001 Census), representing a sharp decline from 945 in 1991. Developments in the sex ratio of the population aged 0-6 based on NFHS data for 1992-93 and 2005-06 also provide evidence of a continued decline, showing that in 2005-06 the sex ratio for those aged 0-6 had fallen further to 918 females per 1,000 males (Fig. 1). The progressive decline over the longer term in the sex ratio of those ages 0-6 may be due to one or more of mainly three possible causes: a decrease in the sex ratio at birth through use of technologies that enable sex selection; an increase in the mortality of girl children compared with that of boys suggesting intensified discrimination against girls; or systematic undercounting of female children, compared with male counterparts under the age of seven.

Fig. 1



Scheduled Castes and Scheduled Tribes Population

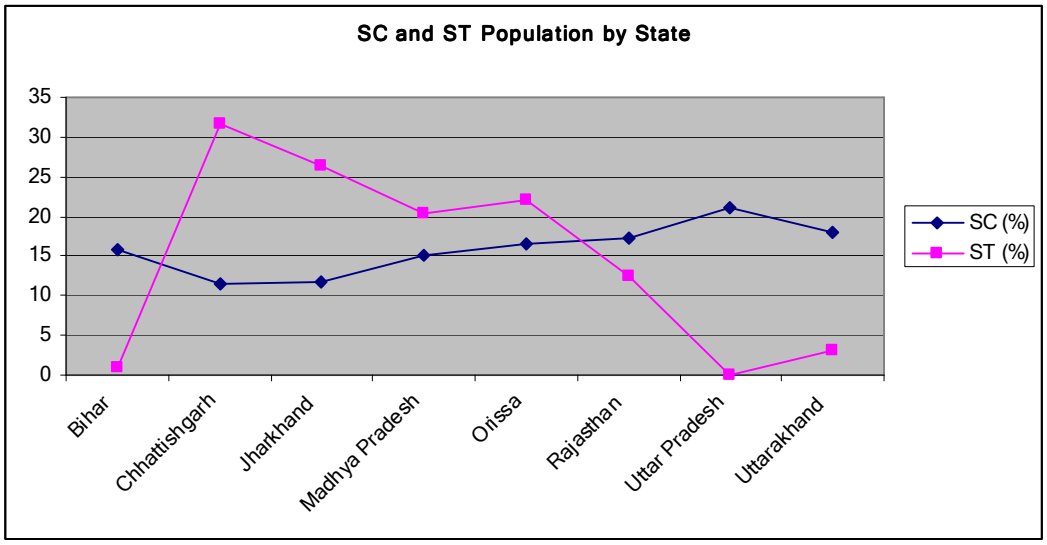
Table 4

State	SC (%)	ST (%)	Total (%)
Bihar	15.72	00.91	16.63
Chhattisgarh	11.61	31.76	43.37
Jharkhand	11.84	26.30	38.14
Madhya Pradesh	15.17	20.27	35.44
Orissa	16.53	22.13	38.66
Rajasthan	17.16	12.56	29.72
Uttar Pradesh	21.15	00.06	21.21
Uttarakhand	17.87	03.02	20.89

Source: Population Census 2001 (Office of the Registrar General of India)

Table 4 shows a percentage breakdown of SC / ST population in EAG states. Uttar Pradesh has the highest percentage of SC population followed by Uttarakhand. Chhattisgarh and Jharkhand have the highest ST populations. Significantly, we note that poverty is greatest among SC and ST populations generally. In 2005 these groups accounted for 80 per cent of the rural poor, although their share of the total rural population was (and is) much smaller.

Fig. 2



India is one of only a few countries worldwide in which both men and women have almost the same life expectancy at birth. However, given the complexity of underlying factors, life expectancy must be understood to represent not just a quantitative measure of health but also an indicator of quality of life: an ability to access food and services, and to a enjoy a reasonable standard of living. At the same time, lifespan clearly does not depend on income levels alone as countries with lower per capita income than India, such as Mongolia, Tajikistan, and Viet Nam, all expect their women to live longer than men. The fact that women do not live longer than men in India suggests systematic problems with women's health including high mortality rates, particularly during childhood and in reproductive years. Among EAG states, a woman is expected to live longest in Rajasthan and shortest in Madhya Pradesh or Chhattisgarh. Further, females have lower life expectancies in all these states compared to the national average of 65.8 (Table 5).

Life Expectancy at Birth

Table 5

State	Male	Female	Total
Bihar*	62.20	60.40	61.60
Chhattisgarh**	58.10	57.90	58.00
Jharkhand*	62.20	60.40	61.60
Madhya Pradesh**	58.10	57.90	58.00
Orissa	59.50	59.60	59.60
Rajasthan	61.50	62.30	62.00
Uttar Pradesh***	60.30	59.50	60.00
Uttarakhand	60.30	59.50	60.00

* Survey conducted in undivided Bihar
** Survey conducted in undivided Madhya Pradesh
*** Survey conducted in undivided Uttar Pradesh
Source: SRS Survey 2002-06 (Office of the Registrar General India)

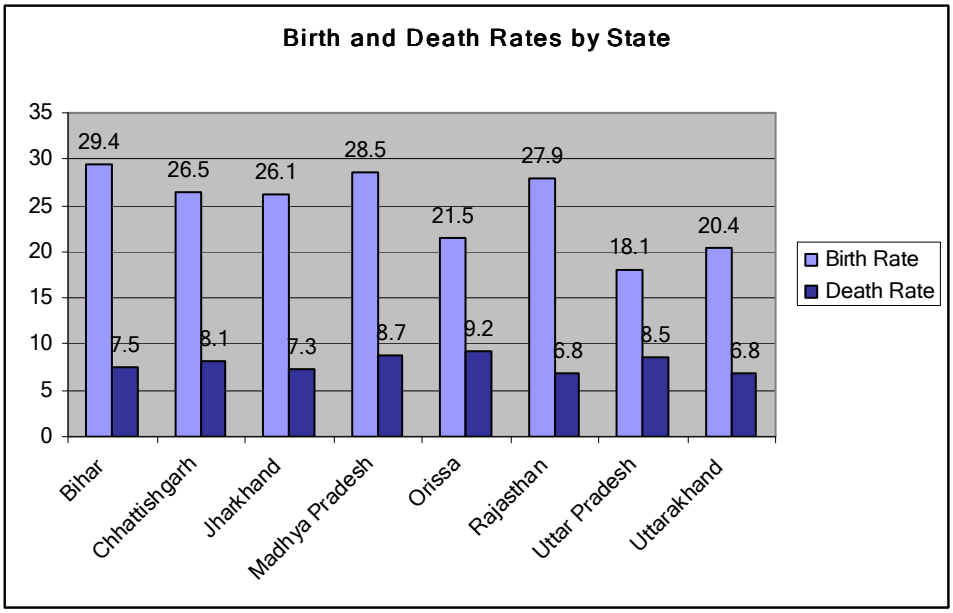
Birth and Death Rates

Table 6

State	Birth Rate	Death Rate
Bihar	29.4	7.5
Chhattisgarh	26.5	8.1
Jharkhand	26.1	7.3
Madhya Pradesh	28.5	8.7
Orissa	21.5	9.2
Rajasthan	27.9	6.8
Uttar Pradesh	18.1	8.5
Uttarakhand	20.4	6.8

Source: SRS Survey 2002-06 (Office of the Registrar General of India)

Fig. 3



On biological grounds, infant mortality is generally higher for males than females particularly in the first month of life. NFHS-3 (2005-06) findings show that neonatal mortality (the number of deaths of children aged less than one month per 1,000 live births) in India was 41 for males, compared to 37 for females per 1,000 births in the five years preceding the survey. However, excess female mortality becomes apparent in India once infants exceed one month. In most countries, where infant and child mortality are driven by biological factors only, female mortality between 1-12 months remains less than for males. In India, however, the post neo-natal mortality rate (the number of deaths to children age 1-11 months per 1,000 live births) for females is 21, compared with only 15 for boys.

A similar pattern in gender differentials is also apparent in the under-five mortality rate (the number of deaths to children age 1-4 years per 1,000 children). For India overall, the child mortality rate for girls, at 23 per 1,000, is 61 per cent higher than for boys at 14 per 1,000 with the highest under-five mortality rate being reported in Uttar Pradesh, followed by Madhya Pradesh (Table 7).

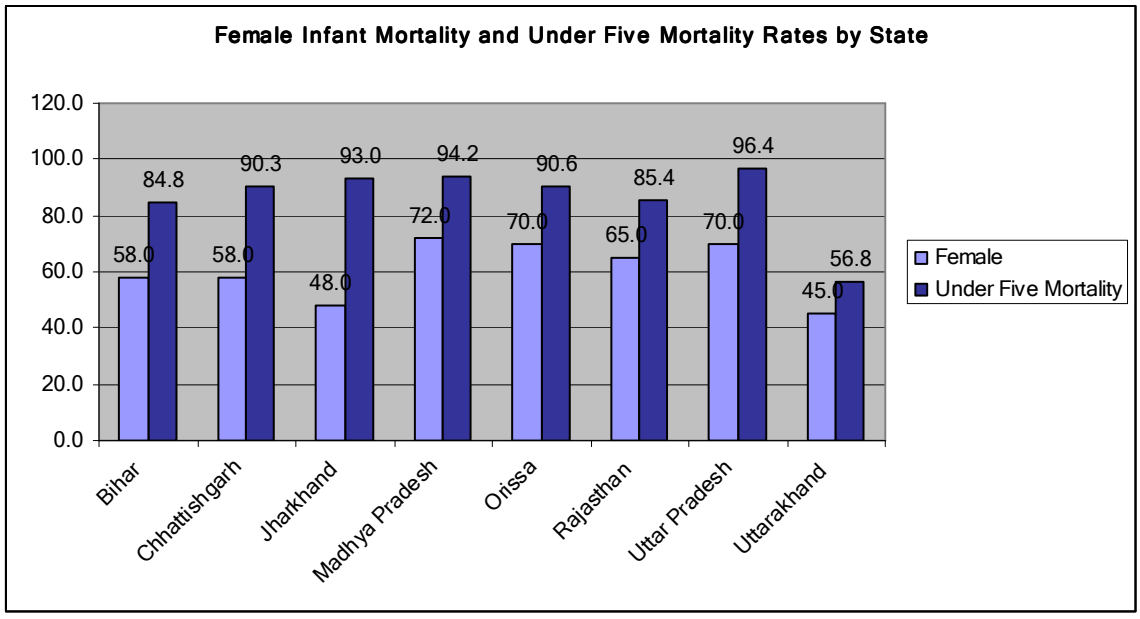
Infant Mortality Rates by Sex (2008) and Under-Five Mortality Rate (2005-06)

Table 7

State	IMR			Under Five Mortality
	Male	Female	Total	
Bihar	53	58	56	84.80
Chhattisgarh	57	58	57	90.30
Jharkhand	45	48	46	93.00
Madhya Pradesh	68	72	70	94.20
Orissa	68	70	69	90.60
Rajasthan	60	65	63	85.40
Uttar Pradesh	64	70	67	96.40
Uttarakhand	44	45	44	56.80

Source: SRS Survey (Office of the Registrar General of India)

Fig. 4



Each year in India, approximately 30 million women become pregnant with 27 million producing a live birth (MoHFW, 2003). Of these, an estimated 136,000 maternal deaths occur each year. In addition, millions more women and newborns suffer pregnancy and birth-related ill health. Indeed, pregnancy-related mortality and morbidity continue to substantially and adversely impact the lives of Indian women and their newborn children. Indeed, pregnancy and childbirth remain potentially dangerous for women, a situation compounded by the fact that many women become pregnant when they are too young. According to NFHS-3, 47.4 per cent women are married by the age of 18, while the median age for first birth is 19.8 years. Needless to say, early childbearing has resulted in a range of adverse health consequences, including damage to the reproductive tract, maternal mortality, complications of pregnancy, perinatal and neonatal mortality and low birth weight. All EAG states report a high Maternal Mortality Ratio (MMR) compared to the national average of 254, due to inadequate prenatal care, delivery in unsafe conditions with inadequate facilities, and insufficient postnatal care. Major causes of maternal mortality are hemorrhages, sepsis and hypertensive disorders (Fig. 6).

Maternal Mortality Ratio (MMR) – 2004-06

Table 8

State	MMR
Bihar*	312
Chhattisgarh**	335
Jharkhand*	312
Madhya Pradesh**	335
Orissa	303
Rajasthan	388
Uttar Pradesh***	440
Uttarakhand***	440

***** Survey conducted in undivided Bihar
****** Survey conducted in undivided Madhya Pradesh
******* Survey conducted in undivided Uttar Pradesh
Source: SRS Survey (Office of the Registrar General of India)

Fig. 5

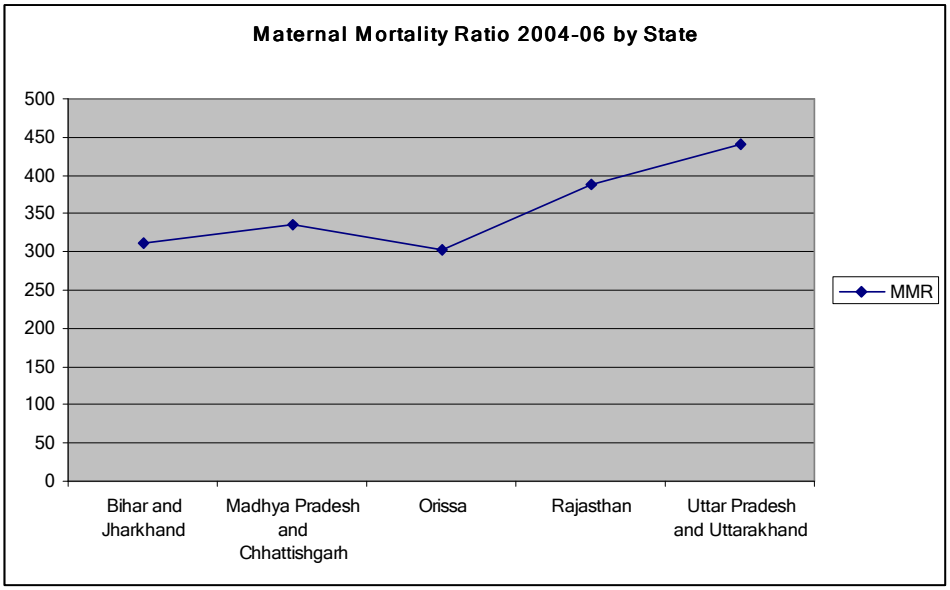
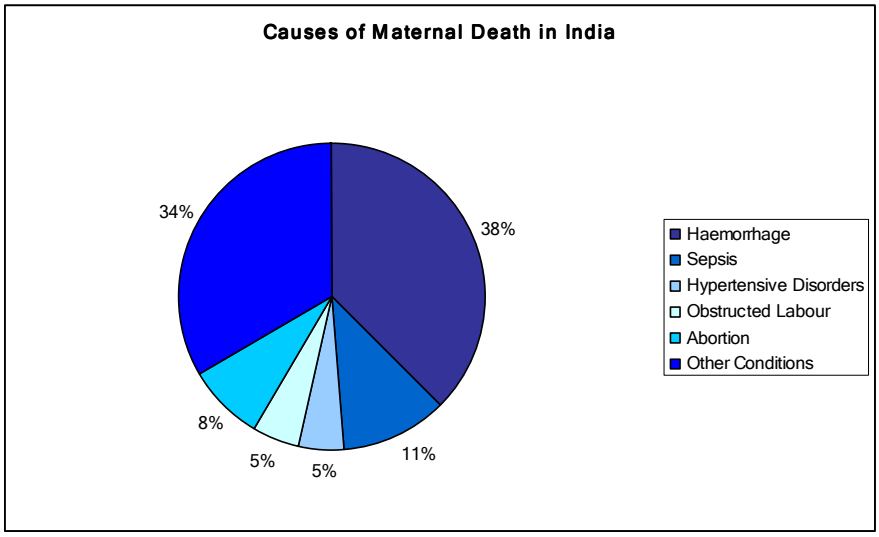


Fig. 6



Source: SRS Survey (Office of Registrar General of India)

Demographic Index

Table 9

State	Sex Ratio at birth	Life Expectancy (F)	IMR (F)	MMR	Demographic Index	Rank
Bihar	0.23	0.57	0.52	0.93	0.75	4
Chhattisgarh	1.00	0.00	0.52	0.77	0.77	2
Jharkhand	0.47	0.57	0.89	0.93	1.00	1
Madhya Pradesh	0.23	0.00	0.00	0.77	0.23	7
Orissa	0.81	0.39	0.07	1.00	0.76	3
Rajasthan	0.25	1.00	0.26	0.38	0.60	6
Uttar Pradesh	0.00	0.36	0.07	0.00	0.00	8
Uttarakhand	0.70	0.36	1.00	0.00	0.67	5

We have considered several key indicators including the sex ratio at birth, life expectancy (female), IMR (female) and MMR in order to calculate our composite Demographic Index. As a result, Uttar Pradesh emerges as the most vulnerable state followed by Madhya Pradesh.

4.3. Marriage and Fertility

The median age at marriage for women in India currently aged 25-49 is only 16.8 years, approximately six years younger than the median age at marriage (22.7 years) for men in the same age group. Age at marriage for women and men increases with education and wealth. However, it increases more with education in the case of women than it does for men and more with wealth for men than for women. The median age at first marriage for women has increased only very slowly over time. For women aged 25-49, the median age at marriage was 16.1 in NFHS-1; 16.4 in NFHS-2; and 16.8 in NFHS-3.

Women's early age at marriage is a clear indicator of the low status of women in society; also at an individual level, a woman's early age at marriage is closely connected with lower empowerment and increased risk of adverse reproductive and other health consequences. An early age at marriage typically curtails women's access to education and radically restricts time available to develop and mature personally unhampered by responsibilities of marriage and children. Young brides are also unlikely to be accorded much power or independence. An early age at marriage also has many negative health consequences for women. For example, an early age at marriage typically results in early childbearing, which in turn increases the risk of maternal and child mortality. In addition, young women married early may be subject to a higher risk of infection due to prior sexual experience of their older partners combined with their inability to negotiate safe sex as a result of their own young age and immaturity and, often, large spousal age difference.

Women Age 20-24 Married by Age 18, Total Fertility Rate (TFR), and Median Age at First Birth by State

Table 10

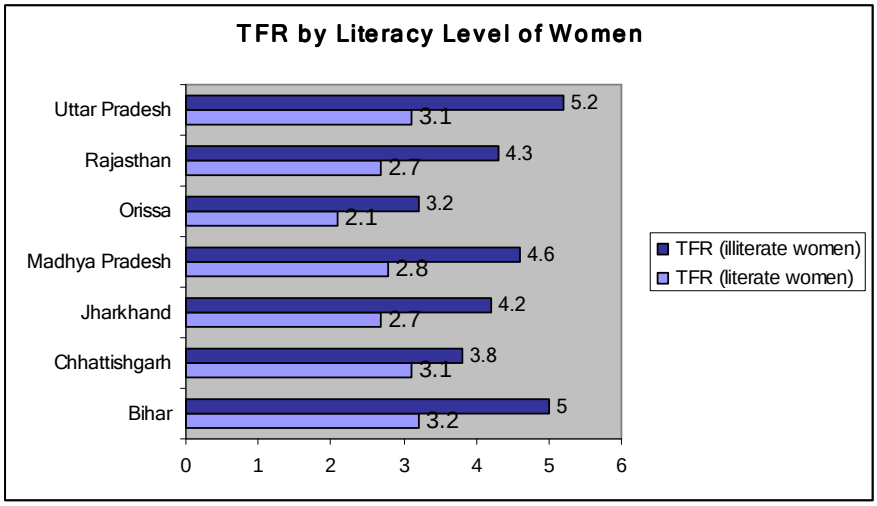
State	Women age 20-24 married by age 18 (%)	Total Fertility Rate (Children per woman)	Median Age at first birth for women age 25-49
Bihar	69..0	4.0	18.7
Chhattisgarh	55.0	2.6	18.8
Jharkhand	63.2	3.3	18.9
Madhya Pradesh	57.3	3.1	19.4
Orissa	37.2	2.4	20.0
Rajasthan	65.2	3.2	19.6
Uttar Pradesh	58.6	3.8	19.4
Uttarakhand	23.0	2.6	20.5

Source: National Family Health Survey – 3 (2005-06)

The percentage of women married under the age of 18 ranges from 12 per cent in Himachal Pradesh and Goa to 69 per cent in Bihar. Overall, there are only five states – Himachal Pradesh, Jammu & Kashmir, Goa, Kerala, and Manipur – where less than 20 per cent of women are married before the age of 18 and eight states where more than half of women are married before age 18, including Jharkhand, Rajasthan and Bihar where over 60 per cent are married before their 18th birthday.

Each year India adds more people to the world's population than any other country. While the Total Fertility Rate (TFR) is declining the ongoing increase in the number of women of reproductive age suggests a continued high number of births. Bihar and Uttar Pradesh have the highest TFR nationwide. Given India's TFR of 2.7, five out of the eight EAG states have a higher TFR than the national average (Table 10). The TFR is closely related to the literacy status of women with illiterate women having a high TFR as shown in Fig. 7.

Fig. 7



Source: SRS, 2006 (Office of Registrar General of India)

Marriage and Fertility Index

Table 11

State	Early marriage	TFR	Marriage and Fertility Index	Rank
Bihar	0.00	0.00	0.00	8
Chhattisgarh	0.30	0.88	0.63	3
Jharkhand	0.13	0.44	0.30	6
Madhya Pradesh	0.25	0.56	0.43	4
Orissa	0.69	1.00	0.90	2
Rajasthan	0.08	0.50	0.31	5
Uttar Pradesh	0.23	0.13	0.19	7
Uttarakhand	1.00	0.88	1.00	1

We have considered two indicators, viz. percentage of women married before age 18 and TFR to compute the Marriage and Fertility Index. Bihar followed by Uttar Pradesh is the most vulnerable state in this regard.

4.4. Maternal and Child Health

Safe motherhood practices and child survival programmes are critically important in a country experiencing high infant, child and maternal mortality. Realising the importance of maternal and child care services, the Government of India has launched several policies and programmes to date. Unfortunately, their results have been sub-optimal. Less than 17 per cent of women in Bihar report having received three ante-natal care (ANC) visits during their last pregnancy according to NFHS-3 findings. Ante-natal care can contribute significantly to the reduction of maternal morbidity and mortality as it also includes advice on correct diet and provision of iron and folic acid tablets to pregnant women in addition to necessary medical care. Improved nutritional status, coupled with better ante-natal care, can help reduce the incidence of low birth weight babies, thereby reducing perinatal, neo-natal, and infant mortality.

Improving the quality of health service facilities and encouraging their greater utilisation are imperative in reducing MMR. Less than 20 per cent of births in Chhattisgarh and Jharkhand are institutional. Less than 50 per cent of births in all EAG states are safe in terms of being assisted by a doctor, nurse, Local Health Volunteer (LHV), Auxiliary Nurse and Midwife (ANM) or other qualified health personnel. Continuing poverty, disempowerment and overall poor health amongst women contribute to continuing poor maternal health. We find that where women have low status and are disempowered, maternal health is likely to be poor. Conversely, where women have household power, and access to resources such as education and economic opportunity, they are better able to access and use services during pregnancy and childbirth, and also maintain good maternal health.

Ante-natal Care (ANC), Institutional and Safe Delivery and Immunisation

Table 12

State	Mothers who had at least 3 ANC visits for their last birth (%)	Institutional Births%	Births assisted by doctor/nurse/LHV/ANM/other health personnel%	Immunisation (Full)* %
Bihar	16.9	22.0	32.6	32.8
Chhattisgarh	54.7	15.7	44.3	48.7
Jharkhand	36.1	19.2	29.1	34.2
Madhya Pradesh	40.2	29.7	37.1	40.3
Orissa	60.9	38.8	46.5	51.8
Rajasthan	41.2	32.2	43.2	26.5
Uttar Pradesh	26.3	22.0	29.2	23.0
Uttarakhand	44.8	36.1	41.6	60.0

Source: National Family Health Survey – 3 (2005-06)
*Full Immunisation - BCG+3 doses of polio+ 3 injections of DPT + Measles

Regarding immunisation, girls are less likely to be immunised than boys. The likelihood of a child being fully immunised increases with a mother's education although in this case girls benefit more than boys from having a highly educated mother.

Maternal and Child Health Index

Table 13

State	ANC	Institutional Birth	Safe Delivery	Immunisation	MCH Index	Rank
Bihar	0.00	0.27	0.20	0.26	0.00	7
Chhattisgarh	0.86	0.00	0.87	0.69	0.59	3
Jharkhand	0.44	0.15	0.00	0.30	0.13	6
Madhya Pradesh	0.53	0.60	0.46	0.47	0.48	5
Orissa	1.00	1.00	1.00	0.78	1.00	1
Rajasthan	0.55	0.71	0.81	0.09	0.51	4
Uttar Pradesh	0.21	0.27	0.00	0.00	0.003	8
Uttarakhand	0.63	0.88	0.72	1.00	0.83	2

Uttar Pradesh is the most vulnerable state according to the Maternal and Child Health Index. It is also the most populous state in India with 166 million residents according to the 2001 census. While the growing population represents a cause for concern in many quarters, it hides several key facts concerning the condition of the state's health care services, particularly regarding maternal and child health which authorities continue to ignore.

The following table compares percentage receipt of various maternal health services in Uttar Pradesh with India overall, based on NFHS-3:

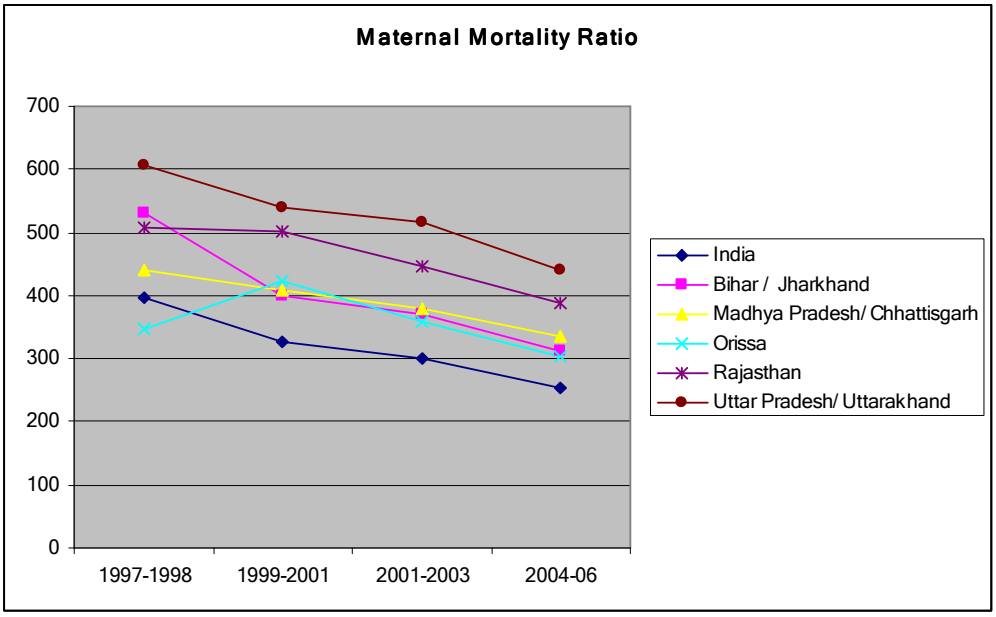
Maternal Health Services in Uttar Pradesh

Table 14

Indicator	India	Uttar Pradesh	Percentage difference
ANC visit in first trimester	43.9	25.7	70.8
Weighed	63.2	20.9	202.4
BP measured	63.8	25.6	149.2
Urine sample taken	58.1	24.7	135.2
Blood sample taken	59.5	22.1	169.2
Abdomen examined	72.0	43.1	67.1
Told where to go for complications	41.1	18.9	117.5

Source: National Family Health Survey – 3 (2005-06)

Fig. 8



Source: SRS Survey (Office of Registrar General of India)

The previous chart shows that MMR in Uttar Pradesh, already 1.52 times the national average in 1997-98 (398:606), increased to 1.73 times in 2004-06 (254:440). Even at this reduced rate (i.e. from 398 to 254) of MMR there are over 28,000 maternal deaths in the state every year.

4.5. Nutritional Status

Gender disparities in nutrition are evident from infancy to adulthood. In fact, gender has been the most statistically significant determinant of malnutrition among young children, with the condition a frequent direct underlying cause of death among girls below five. Girls are breast-fed less frequently and for shorter durations in infancy; in childhood and adulthood, males are fed first and better. Adult women consume approximately 1,000 fewer calories daily than men according to one estimate from Punjab. A comparison of household dietary intake studies in different parts of the country shows that nutritional equity between males and females is lower in northern compared to southern states.

Nutritional deprivation has two major consequences for women: they never reach their full growth potential and they suffer from anaemia. Both are risk factors in pregnancy, with anaemia ranging from 40-50 per cent in urban areas to 50-70 per cent in rural. This condition complicates childbearing and results in maternal and infant deaths, as well as babies with low birth weights.

Beginning in childhood, most rural women fulfill multiple productive functions in addition to bearing children and performing household labour. Ironically, recent agricultural innovations have not benefited rural women, who still perform primarily manual labour. The strenuous physical tasks allocated to Indian women, combined with limited food intake, exacerbate malnutrition. Productive responsibilities are hardest on childbearing women, who typically work until late in their pregnancies without needed rest or additional food. New mothers resume work before fully recovering from childbirth and have their children in relatively close succession, resulting in a cycle of maternal depletion that saps their physical strength and undermines their ability to function effectively.

Body Mass Index (BMI) and anaemic women by State

Table 15

State	Women whose BMI is below normal (%)	Married women age 15 - 49 who are anaemic (%)	Pregnant Women Age 15-49 who are anaemic (%)
Bihar	43.0	68.3	60.2
Chhattisgarh	41.0	57.6	63.1
Jharkhand	42.6	70.6	68.4
Madhya Pradesh	40.1	57.7	57.9
Orissa	40.5	62.7	68.1
Rajasthan	33.6	53.8	61.7
Uttar Pradesh	34.1	50.9	51.6
Uttarakhand	25.7	54.7	50.8

Source: National Family Health Survey – 3 (2005-06)

Bihar has the largest percentage of women with a sub-normal Body Mass Index (BMI), followed by Jharkhand (Table 15) which also reports the highest percentage of women age 15-49 with anaemia, as well as pregnant women with anaemia.

Nutrition Index

Table 16

State	BMI	Anaemic women (15-49)	Anaemic pregnant women	Nutrition Index	Rank
Bihar	0.00	0.11	0.46	0.20	7
Chhattisgarh	0.12	0.61	0.30	0.36	4
Jharkhand	0.02	0.00	0.00	0.00	8
Madhya Pradesh	0.17	0.65	0.60	0.31	5
Orissa	0.14	0.40	0.01	0.19	6
Rajasthan	0.54	0.85	0.38	0.63	3
Uttar Pradesh	0.51	1.00	0.95	0.87	2
Uttarakhand	1.00	0.81	1.00	1.00	1

According to the Nutrition Index Jharkhand is the most vulnerable EAG state. Anaemia severely compromises the health of women. Besides posing risks during pregnancy, it increases women's susceptibility to diseases such as tuberculosis and reduces energy for daily activities including housework, child care and agricultural labour. Those suffering severe anaemia will find most physical activities including walking at an ordinary pace extremely difficult and demanding.

4.6. Family Planning

Contraceptive use affects maternal health and mortality in several ways. It results in fewer births overall, less unwanted pregnancies, and a lower proportion of high risk births. Contraceptive use can also help women ensure a reasonable period between pregnancies to avoid greater risks associated with too frequent (or infrequent) conception.

Knowledge of contraceptive methods is practically universal in India. Modern practices are more widely known than traditional. Contraceptive use is characterised by a predominance of non-reversible methods, particularly female sterilisation; limited use of male / couple-dependent methods; high discontinuation rates; and negligible use of contraceptives among both married and unmarried adolescents. Male and female sterilisation, particularly the latter, is a popular method amongst poorer couples with few assets, poor education and more living children. More literate women are, however, more likely to use various reversible methods of contraception although the effect of a husband's education remains insignificant. Among the three spacing methods offered by the government's family planning programme (pill, IUD and condom), the pill is most widely used by women and the condom by men. However, many women and men are unaware of a wide range of methods of family planning. Fig. 9 shows contraceptive use among married women aged 15-49.

Most women and men do not have access to a wide choice of contraceptives, particularly those dependent on the

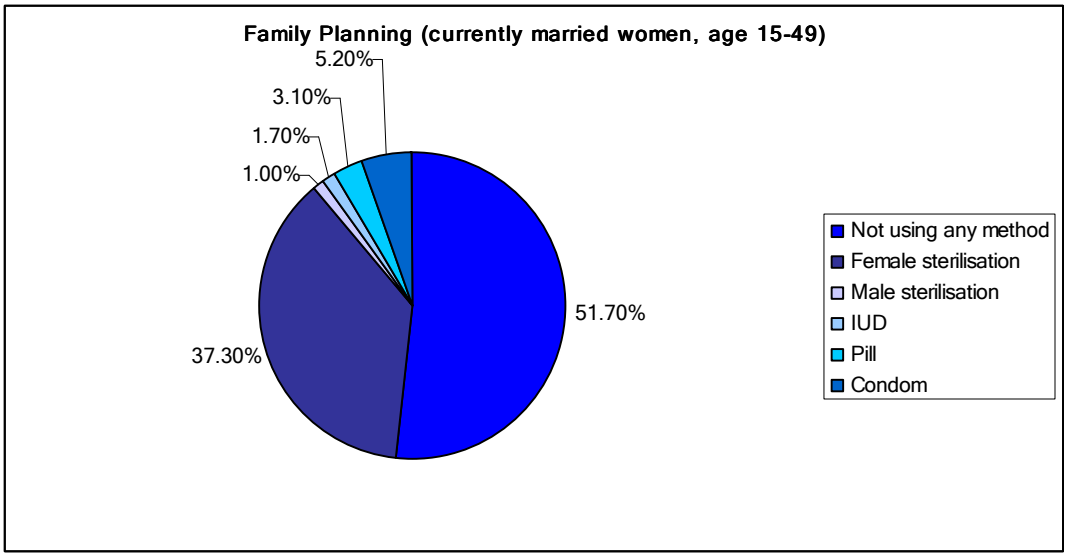
Contraceptive use

Table 17

State	Use of contraception Any Method (%)	Female sterilisation (%)	Total Unmet Need (%)
Bihar	34.10	23.80	22.80
Chhattisgarh	53.20	40.70	10.10
Jharkhand	35.70	23.40	23.10
Madhya Pradesh	55.90	44.30	11.30
Orissa	50.70	33.10	14.90
Rajasthan	47.20	44.40	14.60
Uttar Pradesh	43.60	17.30	21.20
Uttarakhand	59.30	32.10	10.80

Source: National Family Health Survey - 3 (2005-06)

Fig. 9



Source: National family Health Survey -3 (2005-06)

Despite improved availability and access to contraceptive services, a substantial proportion of pregnancies are either mistimed or unplanned. While the family planning requirements of most women wishing to cease childbearing are being satisfied the needs of those wishing to delay or control the period between pregnancies remain largely unsatisfied. For this reason, young women are more likely to report an unmet need for contraception. The desire to limit family size and to space the next birth are the main reasons given by the majority of those seeking an abortion, highlighting the large unmet need for contraception among women in India.

Family Planning Index

Table 18

State	Use of contraception	Unmet Need	Family Planning Index	Rank
Bihar	0.00	0.02	0.00	8
Chhattisgarh	0.76	1.00	0.90	3
Jharkhand	0.06	0.00	0.02	7
Madhya Pradesh	0.87	0.91	0.91	2
Orissa	0.66	0.63	0.66	4
Rajasthan	0.52	0.65	0.60	5
Uttar Pradesh	0.38	0.15	0.26	6
Uttarakhand	1.00	0.95	1.00	1

According to the Family Planning Index, Bihar is the most vulnerable state, followed by Jharkhand, based on its having the lowest contraceptive usage and a high unmet need. Low female literacy rates in both Bihar and Jharkhand are contributory factors in explaining this vulnerability.

4.7. Education and Enrolment

Despite a steady decline in the literacy based gender gap over several decades, considerable differences remain. According to the 2001 census, national female literacy is as low as 54 per cent compared to 76 per cent for males. In EAG states that gap is even wider (Table 19). We believe these differences are especially indicative of the level of gender discrimination in these societies. Low levels of female literacy are often associated with poor access to health and family planning facilities as well as inadequate awareness of proper child care and other hygienic practices adversely affecting the welfare of the whole family.

Male -Female Literacy Gap

Table 19

State	Male	Female	Gap
Bihar	59.68	33.12	26.56
Chhattisgarh	77.38	51.85	25.53
Jharkhand	67.30	38.87	28.43
Madhya Pradesh	76.06	50.29	25.77
Orissa	75.35	50.51	24.83
Rajasthan	75.70	43.85	31.85
Uttar Pradesh	68.82	42.22	26.60
Uttarakhand	83.28	59.63	23.65

Source: Population Census 2001(Office of the Registrar General of India)

According to NFHS-3, only 65 per cent of girls and 75 per cent of boys aged 6-17 attend school. While gender equality exists in terms of school attendance in urban areas, in rural areas females suffer substantial educational disadvantages which increase with age.

Primary and Upper Primary Gender Parity Index

Table 20

State	Gender Parity Index	
	Class I to V (2008-09)	Class VI to VII (2008-09)
Bihar	0.90	0.82
Chhattisgarh	0.96	0.93
Jharkhand	0.97	0.90
Madhya Pradesh	0.97	0.89
Orissa	0.96	0.93
Rajasthan	0.87	0.72
Uttar Pradesh	0.98	0.97
Uttarakhand	0.93	0.95

Source: District Information System for Education (DISE) 2008 - 09

Age-appropriate school attendance is lower than school attendance per se for both boys and girls. Further boys and girls actually attending school are equally likely to be in an age-inappropriate class. The sex ratio of children age 6-17 attending school is 889 girls per 1,000 boys (NFHS-3). The sex ratio ranges from 745 in Rajasthan and Bihar to 1,081 in Meghalaya. Among EAG states, Orissa reports the lowest enrolment of girls both at primary and upper primary levels while Uttar Pradesh has the highest enrolment of girls at both levels.

Enrolment of Girls in Primary and Upper Primary classes

Table 21

State	Enrolment 2008-09	
	% Girls enrolment I to V	% Girls enrolment VI to VIII
Bihar	47.45	45.19
Chhattisgarh	48.87	48.27
Jharkhand	49.32	47.31
Madhya Pradesh	49.28	47.20
Orissa	48.87	48.08
Rajasthan	46.39	41.76
Uttar Pradesh	49.38	49.23
Uttarakhand	48.25	48.63

Source: District Information System for Education (DISE) 2008 - 09

Education empowers, creating opportunities and invests individuals with the ability to make choices. No poverty alleviation measure can be sustainable without addressing this factor. Lack of information and knowledge perpetuates poverty. Disadvantages faced by women in modern India are evident in education. Female literacy rates are connected with population stabilisation, declining infant mortality, increased enrolment of children in schools and better access to health care. Although significant gains have been made in female literacy since independence and the benefits of educating females are widely recognised, population growth has resulted in an increase in illiterate females compared to a decade ago.

Women's lower educational attainment is attributable to various socio-economic factors including direct cost, the need for female labour, a low expected return and social restrictions. For most girls from poor rural families, going to school is an impossible dream. In such a situation, while both girls and boys begin to help with housework from a very early age, the burden progressively shifts to girls as they grow older. Where resources are limited, families prefer to "invest" in educating boys rather than girls who they expect will marry and be sent to live with another family. Removing oneself and others for which one is responsible from poverty is much harder without the education and skills necessary to access better opportunities. As a result, women in India increasingly find themselves driven into unorganised and informal types of work, with lower wages and less secure working conditions. Because women's educational levels and improvements in their health status are closely linked, increasing female access to education is the most important factor in improving their health.

Education Index

Table 22

State	Female Literacy	Girls' enrolment in primary school	Girls' enrolment in upper primary school	Education Index	Rank
Bihar	0.00	0.35	0.46	0.19	6
Chhattisgarh	0.70	0.83	0.87	0.93	2
Jharkhand	0.21	0.98	0.74	0.71	5
Madhya Pradesh	0.64	0.97	0.73	0.91	3
Orissa	0.65	0.83	0.85	0.90	4
Rajasthan	0.40	0.00	0.00	0.00	7
Uttar Pradesh	0.34	1.00	1.00	0.91	3
Uttarakhand	1.00	0.62	0.92	1.00	1

Based on female literacy rates and enrolment of girls in primary and upper primary levels, Rajasthan, the largest state in India, is the most vulnerable followed by Bihar. With its typically feudal society, education, particularly for girls, has been neglected in Rajasthan. Still, over the past decade and more, the state has reported tremendous improvements in literacy levels. In 1991 Rajasthan's literacy rate was 38.55 (males: 54.99; females: 20.44). By 2001 this had increased to 60.41 (males: 75.70; females: 43.85), the highest percentage increase in literacy ever reported in India.

4.8. Workforce Participation

In addition to education, employment can also represent an important source of empowerment for women. Employment, particularly for cash and in the formal sector, can empower women by providing financial independence, alternative sources of social identity, and exposure to power structures independent of kin networks. Although most women in India work and contribute to the economy in one form or another, much of their work is not reflected in official statistics. Women plough fields and harvest crops while working on farms; women weave and make handicrafts while working in household industries; women sell food and gather wood while working in the informal sector. Additionally, women are responsible for the daily housework (e.g. cooking, fetching water, and looking after children).

Early ages at marriage and child bearing and limited access to education limit women's ability to participate in the labour market, particularly in the formal sectors. By contrast, male gender roles are compatible with employment and men are typically expected to be employed and act as breadwinners for their families. Not surprisingly, men dominate most formal labour markets. An analysis of data from EAG states shows that the female Workforce Participation Rate (WPR) is lowest in Uttar Pradesh and Bihar (Table 23).

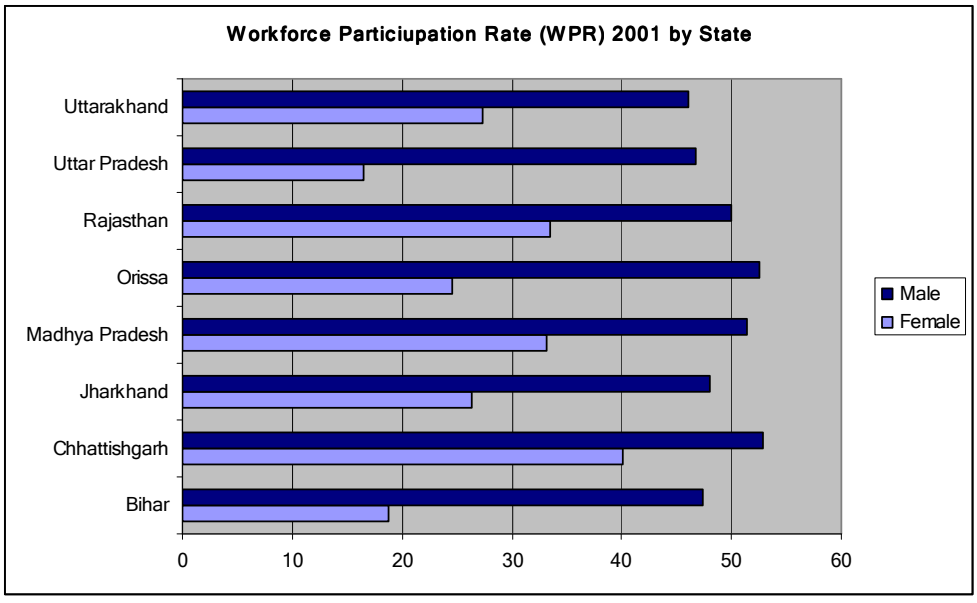
Workforce Participation Rate (WPR) 2001

Table 23

State	Female	Male	Total
Bihar	18.84	47.37	33.70
Chhattisgarh	40.04	52.81	46.46
Jharkhand	26.41	47.96	37.56
Madhya Pradesh	33.21	51.50	42.74
Orissa	24.66	52.53	38.79
Rajasthan	33.49	49.95	42.06
Uttar Pradesh	16.54	46.80	32.48
Uttarakhand	27.33	46.14	36.92

Source: Population Census 2001 (Office of the Registrar General of India)

Fig. 10



Although women represent one third of India's workforce, they account for less than one fifth of employees in the organised sector. Further, they are often engaged in repetitive activities characterised as drudgery. Globalisation has resulted in increasing feminisation of a number of activities especially in the textile and garment industries, as well as the electronics and agro-processing sectors. Such tasks are often both repetitive and low-paying. Furthermore, the informal sector is particularly important for women due to barriers imposed by cultural restraints on access to jobs in stores, factories, and the public sector. More women are involved in undocumented or "disguised" wage work than in the formal labour force. Examples of jobs in the informal sector include domestic servant, small trader, artisan, or field labourer on a family farm. Bihar and Jharkhand have the lowest percentage of women employed in the organised sector.

Employment in Organised Sector (2006)

Table 24

State	Total Employed (Lakhs)	Percentage of women employment to total employment
Bihar	4.3	4.7
Chhattisgarh	3.4	11.8
Jharkhand	14.8	7.4
Madhya Pradesh	10.6	13.2
Orissa	7.4	16.2
Rajasthan	12.1	15.7
Uttar Pradesh	20.9	11.0
Uttarakhand	2.6	15.4

Source: Directorate General of Employment and Training, Ministry of Labour

Unemployment is difficult to estimate in India with most data likely to underestimate actual levels, particularly for women. This is due, in part, to the fact that many potential workers do not bother searching for work believing jobs are scarce. Such people are rarely included in unemployment statistics. According to the NSSO Survey (2004-05), Orissa has the highest unemployment rate for both rural and urban females (Table 25).

Unemployment Rates

Table 25

State	Rural		Urban	
	Male	Female	Male	Female
Bihar	0.2	1.8	4.1	6.7
Chhattisgarh	0.3	0.8	2.4	3.8
Jharkhand	0.1	2.0	2.3	7.5
Madhya Pradesh	0.1	0.7	1.6	3.1
Orissa	8.3	3.1	26.6	9.0
Rajasthan	0.1	1.2	2.9	2.8
Uttar Pradesh	0.3	0.7	2.5	3.5
Uttarakhand	0.4	2.0	10.2	4.2

Source: National Sample Survey Organisation, 61st round (July 2004 - June 2005)

Employment Index

Table 26

State	WPR (F)	Women employed in organised sector	Employment Index	Rank
Bihar	0.10	0.00	0.00	8
Chhattisgarh	1.00	0.62	0.96	2
Jharkhand	0.42	0.23	0.35	6
Madhya Pradesh	0.71	0.74	0.85	3
Orissa	0.35	1.00	0.79	5
Rajasthan	0.72	0.96	1.00	1
Uttar Pradesh	0.00	0.55	0.28	7
Uttarakhand	0.46	0.93	0.82	4

The Employment Index computed on the basis of female WPR and employment of women in the organised sector shows that Bihar is the most vulnerable state followed by Uttar Pradesh.

4.9. Empowerment Status

An important element of empowerment is the outright rejection of unequal rights and privileges that derive from and are assigned solely on the basis of a person's sex. Examples of common normatively ascribed rights of husbands include the right to act as key decision-maker on major household matters, the right to control their wives' behaviour and bodies, even by violence, and the right to have sex with their wives on demand. According to NFHS-3 findings, although most men age 15-49 believe that husbands and wives should make decisions jointly, the proportion who believes that the husband should play the greatest role and that his opinion should carry greatest weight in such matters remains significant. Amongst EAG states, Jharkhand and Orissa report the highest percentage of women participating in household decisions (Table 27).

Women Participating in Household Decisions and Spousal Violence against Women

Table 27

State	Currently married women who usually participate in household decisions (%)	Ever married women who have ever experienced spousal violence (%)
Bihar	32.70	59.00
Chhattisgarh	26.80	29.90
Jharkhand	41.80	36.90
Madhya Pradesh	29.40	45.70
Orissa	41.80	38.40
Rajasthan	22.80	46.30
Uttar Pradesh	33.70	42.40
Uttarakhand	36.00	27.80

Source: National Family Health Survey - 3 (2005-06)

Violence by husbands against their wives, commonly called domestic or spousal violence, is one of the most common forms of gender-based violence experienced by women. Domestic violence is not just a violation of the human rights of women, but has significant economic costs. These include the loss of women's labour hours, as well as the increased need for healthcare investments at both household and societal levels. In India, significant proportions of women aged 15-49 experience emotional, physical and sexual violence by their husbands. Bihar and Rajasthan report the highest percentage of women who have experienced spousal violence.

Empowerment Index

Table 28

State	Decision-making	Violence	Empowerment Index	Rank
Bihar	0.52	0.00	0.08	7
Chhattisgarh	0.21	0.93	0.56	4
Jharkhand	1.00	0.71	1.00	1
Madhya Pradesh	0.35	0.43	0.28	6
Orissa	1.00	0.66	0.96	3
Rajasthan	0.00	0.41	0.00	8
Uttar Pradesh	0.57	0.53	0.53	5
Uttarakhand	0.69	1.00	0.98	2

According to the Empowerment Index, the most vulnerable state is Rajasthan, a feudal society with deeply entrenched patriarchal values and polarised along caste lines. Due to low literacy levels women are simply disempowered. The state also reports one of the highest numbers of child marriages in India.

5. Recommendations

5.1. Vulnerability Index

In the course of preparing this report, we have developed a Vulnerability Index based on analysis of data generated by the various indicators selected for our study. It represents a composite index to be used in measuring the need to focus on women's empowerment in a particular state / region. Individual indices have been calculated for each indicator in order to generate the composite index. Based on our Vulnerability Index, we have ordered the various states included in the report with the first ranked least and eighth most vulnerable.

Table 29

State	Poverty Index	Demographic Index	Marriage and Fertility Index	Family Planning Index	MCH Index	Nutrition Index	Education Index	Employment Index	Empowerment Index	Vulnerability Index	Rank
Bihar	0.14	0.75	0.00	0.00	0.00	0.20	0.19	0.00	0.08	0.00	8
Chhattisgarh	0.11	0.77	0.63	0.90	0.59	0.36	0.93	0.96	0.56	0.72	3
Jharkhand	0.15	1.00	0.30	0.02	0.13	0.00	0.71	0.35	1.00	0.33	7
Madhya Pradesh	0.74	0.23	0.43	0.91	0.48	0.31	0.91	0.85	0.28	0.60	4
Orissa	0.13	0.76	0.90	0.66	1.00	0.19	0.90	0.79	0.96	0.80	2
Rajasthan	0.31	0.60	0.31	0.60	0.51	0.63	0.00	1.00	0.00	0.42	5
Uttar Pradesh	1.00	0.00	0.19	0.26	0.003	0.87	0.91	0.28	0.53	0.41	6
Uttarakhand	0.23	0.67	1.00	1.00	0.83	1.00	1.00	0.82	0.98	1.00	1

Based on our Vulnerability Index, Bihar is the most vulnerable state followed by Jharkhand. Bihar scores a zero in four out of the nine indicators selected in developing the index, i.e. the Marriage and Fertility, Maternal and Child Health, Family Planning and Employment indices. The state is the second most vulnerable in terms of empowerment and the third most vulnerable based on nutrition.

Jharkhand is the second most vulnerable state with particularly low scores in nutrition, marriage and fertility, family planning, maternal and child health. Uttar Pradesh is the third most vulnerable state with very poor demographic (mortality rates), and maternal and child health indicators.

Bihar, Jharkhand and Uttar Pradesh form part of the less shining India, which is impoverished and underdeveloped. These states are characterised by slow economic growth and much poorer performance in health and education. Generally, these states had stopped developing while others had moved ahead. While Uttar Pradesh is the most populous state of India with the highest number of districts Jharkhand was carved out of Bihar in 2000. Societies in these states are typically feudal and highly casteist, although Jharkhand has a large tribal population. All these states, particularly Jharkhand, have proved to be fertile grounds for the growth of left wing extremism (Naxalism) in India. Due to the feudal basis of society in these states, the status of women in terms of all indicators used has been particularly low. Caste and class politics have further retarded development.

5.2. Focus on Bihar

Bihar, the third most populous state in India reported the highest decadal growth between 1991-2001 while around 40 per cent of its population lives below the poverty line. The state's major health and demographic indicators including for example IMR, MMR and TFR, are much higher than for India overall and reflect a poor health status. The economy of Bihar is predominantly agrarian with over 85 per cent of the population directly engaged in agriculture.

Bihar at a Glance	
Area	94,163,00 sq. kms.
Districts	38
Total Population	8,28,78,796
BPL Population	41.4
Sex Ratio	919
Literacy Rate (M)	59.68
Literacy Rate (F)	33.12

Like the rest of India, Bihar reports an improved Human Development Index (HDI), a composite of literacy, life expectancy and per capita income. However, among major states, its HDI has been the lowest for the last 30 years. Based on indicators mainly concerning primary health care infrastructure and reproductive and child health care, the state ranks 35th in all India (DLHS-3 2002-04). The following tables summarises key data on a district basis:

Table 30

Sl. No.	District	Population	BPL	SC	ST	Sex Ratio
1	Araria	2158608	80.30	13.60	1.40	913
2	Aurangabad	2013055	61.70	23.50	0.10	934
3	Arwal	711728	23.36	8.90	0.05	929
4	Banka	1608773	63.40	12.40	4.70	908
5	Begusarai	2349366	65.40	14.50	0.10	912
6	Bhagalpur	2423172	70.20	10.50	2.30	876
7	Bhojpur	2243144	55.30	15.30	0.40	902
8	Buxar	1402396	46.60	14.10	0.60	899
9	Champaran (East)	3939773	54.10	13.00	0.10	897
10	Champaran (West)	3043466	47.40	14.30	1.50	901
11	Darbhanga	3295789	60.00	15.50	0.00	914
12	Gaya	3473428	69.80	29.60	0.10	938
13	Gopalganj	2152638	37.60	12.40	0.30	1001
14	Jehanabad	802587	26.34	10.00	0.05	929
15	Jamui	1398796	63.40	17.40	4.80	918
16	Kaimur	1289074	15.40	22.20	2.80	902
17	Katihar	2392638	49.10	8.70	5.90	919
18	Khagaria	1280354	48.80	14.50	0.00	885
19	Kishanganj	1296348	58.00	6.60	3.60	936
20	Lakhisarai	802225	62.30	15.80	0.70	921
21	Madhepura	1526646	55.40	17.10	0.60	915
22	Madhubani	3575281	72.40	13.50	0.00	942
23	Munger	1137797	53.00	13.30	1.60	872
24	Muzaffarpur	3746714	55.90	15.90	0.10	920
25	Nalanda	2370528	53.80	20.00	0.00	914
26	Nawada	1809696	62.00	24.10	0.10	946
27	Patna	4718592	48.10	15.50	0.20	873
28	Purnia	2543942	70.00	12.30	4.40	915
29	Rohtas	2450748	56.80	18.10	1.00	909
30	Saharsa	1508182	14.20	16.10	0.30	910

Sl. No.	District	Population	BPL	SC	ST	Sex Ratio
31	Samastipur	3394793	19.50	18.50	0.10	928
32	Saran	3248701	54.10	12.00	0.20	966
33	Sheikhpura	525502	59.50	19.70	0.00	918
34	Sheohar	515961	69.80	14.40	0.00	885
35	Sitamarhi	2682720	67.10	11.80	0.10	892
36	Siwan	2714349	51.00	11.40	0.50	1031
37	Supaul	1732578	74.60	14.80	0.30	920
38	Vaishali	2718421	41.10	20.70	0.10	920

Source: 2001Population Census (Office of Registrar General of India)

District-wise Literacy Rate

Table 31

Sl. No.	District	Literacy Rate	Male Literacy	Female Literacy
1	Araria	35.00	46.50	22.14
2	Aurangabad	57.00	71.99	42.04
3	Arwal	22.25	29.50	15.00
4	Banka	42.70	56.28	29.10
5	Begusarai	48.00	59.71	36.21
6	Bhagalpur	49.50	60.11	38.83
7	Bhojpur	59.00	74.78	42.81
8	Buxar	56.80	72.82	40.36
9	Champaran (East)	37.50	50.14	24.65
10	Champaran (West)	38.90	51.91	25.85
11	Darbhanga	44.30	57.18	30.35
12	Gaya	50.40	63.81	37.40
13	Gopalganj	47.50	63.81	32.81
14	Jehanabad	29.30	70.90	40.08
15	Jamui	42.40	57.10	26.92
16	Kaimur	55.10	70.57	38.90
17	Katihar	35.10	45.51	24.03
18	Khagaria	41.30	52.02	29.62
19	Kishanganj	31.10	42.80	18.49
20	Lakhisarai	48.00	60.97	34.26
21	Madhepura	36.10	48.87	22.31
22	Madhubani	42.00	57.26	26.56
23	Munger	59.50	70.68	47.97
24	Muzaffarpur	48.00	60.19	35.20
25	Nalanda	53.20	66.94	39.03
26	Nawada	46.80	61.22	32.64
27	Patna	62.90	73.81	52.17
28	Purnia	35.10	46.16	23.72
29	Rohtas	61.30	76.54	46.62
30	Saharsa	39.10	52.04	25.31
31	Samastipur	45.10	57.83	32.69
32	Saran	51.80	67.81	35.74
33	Sheikhpura	48.60	62.56	34.13
34	Sheohar	35.30	45.54	27.43
35	Sitamarhi	38.50	51.02	26.35
36	Siwan	51.60	67.67	37.26
37	Supaul	37.30	53.23	21.02
38	Vaishali	50.50	64.00	38.14

Source: 2001Population Census (Office of Registrar General of India)

Maternal Health and Family Planning

Table 32

Sl. No.	District	Percentage of girls marrying at below 18 years of age	Any method of contraception Used	Female sterilisation	Unmet need for family planning	Institutional Births	Delivery at home assisted by a doctor/nurse/LHV/ ANM
1	Araria	41.40	31.50	27.80	36.10	13.70	6.00
2	Aurangabad	38.70	34.50	29.40	37.90	30.60	5.00
3	Arwal	46.20	32.40	NA	NA	27.70	5.90
4	Banka	59.90	25.00	20.40	39.20	24.70	12.60
5	Begusarai	46.20	28.00	23.40	39.00	26.80	4.60
6	Bhagalpur	27.80	40.30	29.30	36.40	30.40	14.70
7	Bhojpur	48.10	35.30	25.50	39.90	40.40	12.50
8	Buxar	49.80	31.20	23.70	36.80	48.00	4.80
9	Champaran (East)	54.90	27.70	20.80	34.70	27.10	1.70
10	Champaran (West)	57.80	32.30	26.30	36.90	24.90	2.40
11	Darbhanga	39.10	31.80	27.90	36.30	15.10	2.90
12	Gaya	50.40	30.50	23.30	34.00	20.70	6.60
13	Gopalganj	35.90	12.80	20.40	NA	36.50	6.60
14	Jehanabad	56.70	28.20	20.10	39.80	42.50	10.60
15	Jamui	72.90	27.40	18.30	44.20	17.60	8.00
16	Kaimur	56.10	29.90	21.30	34.90	42.60	6.80
17	Katihar	43.70	26.00	16.60	43.70	12.40	3.90
18	Khagaria	49.30	31.10	25.20	37.30	25.30	6.70
19	Kishanganj	32.10	27.20	16.00	38.10	17.80	3.80
20	Lakhisarai	54.70	31.20	25.10	41.60	32.50	6.30
21	Madhepura	55.30	35.00	29.20	35.90	17.70	4.00
22	Madhubani	39.50	96.30	28.20	40.30	16.00	4.00
23	Munger	30.50	41.40	30.30	31.60	48.60	10.50
24	Muzaffarpur	35.70	33.10	28.90	36.90	23.00	3.30
25	Nalanda	46.60	30.90	21.20	40.70	39.30	7.00
26	Nawada	65.30	24.30	18.70	39.90	31.10	3.70
27	Patna	34.00	43.70	33.60	31.00	58.80	3.70
28	Purnia	40.40	10.40	25.70	41.20	21.60	2.90
29	Rohtas	52.90	40.00	29.00	29.80	48.50	20.80
30	Saharsa	54.40	32.60	27.80	37.50	20.00	8.80
31	Samastipur	51.40	34.80	26.60	36.30	27.60	3.10
32	Saran	31.00	29.10	20.90	43.70	22.40	6.10
33	Sheikhpura	53.50	26.70	20.20	39.00	41.60	5.00
34	Sheohar	54.80	27.40	20.40	42.60	11.90	3.40
35	Sitamarhi	44.40	18.10	23.70	41.20	16.40	4.70
36	Siwan	27.60	24.00	17.20	39.70	33.50	8.20
37	Supaul	44.20	43.10	40.10	29.80	23.20	2.40
38	Vaishali	41.20	43.60	35.00	32.70	28.20	9.60

Source: District Level Health Survey - 3 (2002-04)

Bihar Vulnerability Index

A Vulnerability Index for Bihar has been developed to identify the less developed districts of Bihar based on some key indicators, viz. female literacy rate, BPL population, sex ratio, percentage of girls marrying at below 18 years of age, and institutional births. This too is a composite index developed from the individual indices of the five selected indicators. As per this Index, Sheohar is the most vulnerable district of Bihar followed by Jamui and Araria.

Table 33

District	Female Literacy	BPL	Sex Ratio	Percentage of girls marrying below 18	Institutional Births	Composite Index	Rank
Araria	0.19	0.00	0.26	0.70	0.04	0.09	30
Aurangabad	0.73	0.28	0.39	0.75	0.40	0.62	12
Arwal	0.00	0.86	0.36	0.59	0.34	0.47	16
Banka	0.38	0.26	0.23	0.29	0.27	0.18	28
Begusarai	0.57	0.23	0.25	0.59	0.32	0.39	18
Bhagalpur	0.64	0.15	0.03	0.99	0.39	0.49	15
Bhojpur	0.75	0.38	0.19	0.55	0.61	0.60	13
Buxar	0.68	0.51	0.17	0.51	0.77	0.66	10
Champaran (East)	0.26	0.40	0.16	0.40	0.32	0.23	27
Champaran (West)	0.29	0.50	0.18	0.33	0.28	0.24	26
Darbhanga	0.41	0.31	0.26	0.75	0.06	0.32	23
Gaya	0.60	0.16	0.42	0.50	0.19	0.36	20
Gopalganj	0.48	0.65	0.81	0.82	0.52	0.91	3
Jehanabad	0.67	0.82	0.36	0.36	0.65	0.75	5
Jamui	0.32	0.26	0.29	0.00	0.12	0.007	31
Kaimur	0.64	0.98	0.19	0.37	0.65	0.74	6
Katihar	0.24	0.47	0.30	0.64	0.01	0.69	7
Khagaria	0.39	0.48	0.08	0.52	0.29	0.31	24
Kishanganj	0.09	0.34	0.40	0.90	0.13	0.35	21
Lakhisarai	0.52	0.27	0.31	0.40	0.44	0.38	19
Madhepura	0.20	0.38	0.27	0.39	0.12	0.15	29
Madhubani	0.31	0.12	0.44	0.74	0.09	0.29	25
Munger	0.89	0.41	0.00	0.94	0.78	0.81	4
Muzaffarpur	0.54	0.37	0.30	0.82	0.24	0.51	14
Nalanda	0.65	0.40	0.26	0.58	0.58	0.59	13
Nawada	0.47	0.28	0.47	0.17	0.41	0.33	22
Patna	1.00	0.49	0.006	0.86	1.00	0.94	2
Purnia	0.23	0.16	0.27	0.71	0.21	0.24	26
Rohtas	0.85	0.36	0.23	0.44	0.78	0.67	9
Saharsa	0.28	1.00	0.24	0.41	0.17	0.45	17
Samastipur	0.48	0.30	0.35	0.48	0.33	0.38	19
Saran	0.56	0.40	0.59	0.92	0.22	0.68	8
Sheikhpura	0.51	0.31	0.29	0.43	0.63	0.47	16
Sheohar	0.33	0.16	0.08	0.40	0.00	0.00	32
Sitamarhi	0.30	0.20	0.13	0.63	0.10	0.15	29
Siwan	0.60	0.44	1.00	1.00	0.46	1.00	1
Supaul	0.16	0.09	0.30	0.63	0.24	0.18	28
Vaishali	0.62	0.59	0.30	0.70	0.35	0.63	11

Kiawah Trust may consider supporting projects / programmes on women's empowerment in any or all of the most vulnerable districts identified here. Alternatively, the Trust may consider supporting non-profit organisations in Bihar working on women's empowerment, not necessarily in the identified districts. Projects / programmes concerning women's empowerment may be designed specifically for these districts for implementation through various non-profit organisations.

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