Child Well-being

The well-being of children is one of the most important markers of development for any nation and has formed an integral part of all discussions about human development. As India experiences record economic growth rates, it is fair to ask whether the advantages of economic growth reach this vulnerable section of society. Children face different risks at different ages. Young children need a chance to grow up healthy and strong through the risky years of infancy and early childhood. Children who survive these risks past age five need an opportunity to feed their minds in a nurturing educational environment and teenagers need an opportunity to prepare themselves for adult roles, without being thrust into premature responsibilities. This chapter assesses how well India has done by her most vulnerable citizens in providing these opportunities. Although education and health have received considerable attention in Chapters 6 and 7, respectively, this chapter attempts to place some of these discussions in the context of broader societal patterns by focusing on two dimensions of child well-being, child health and survival, and labour force participation.

INFANT AND CHILD SURVIVAL

While sweeping epidemics and widespread famines seem to be a thing of the past, young children still face substantial risks in the first five years of life. Many sources of data, including the Sample Registration System as well as the three waves of the *NFHS*, document substantial declines in infant and child mortality. For example, the *NFHS* recorded a decline in the infant mortality rate (that is, the number of children dying before completing the first year of life) from 79 per 1,000 births in 1992–3 to 57 per 1,000 births in 2005–6. In spite of this impressive decline, the *NFHS* recorded that one out of 14 children die before reaching age five, and the IHDS records an infant mortality rate of 52 per 1,000 births.

Although levels of infant and child mortality are important, as we think about policies to address this, it is the age pattern of mortality that deserves the greatest attention. Death in the first month of life, called neonatal mortality, is frequently associated with gestational and delivery problems, genetic factors, premature birth, or a complicated delivery. Post-neonatal deaths (that is, death in the second through twelfth months of life) may be somewhat influenced by low birth weight or delivery related factors, but the role of environmental factors in post-neonatal deaths becomes far more important. Infant deaths in this age range are often due to respiratory illnesses as well as poor nutrition. Among children who survive to be one-year old, between age one and five, most of the deaths are due to environmental causes, which include diarrhoea and other gastrointestinal diseases, respiratory illness and other contagious diseases, and accidents.

Figure 8.1 indicates the distribution of deaths among children under five in the IHDS.

In calculating these figures, we focused on all live births occurring in the ten-year period preceding the survey.¹ Figure 8.1 indicates that a majority of deaths occur to newborn

¹ In surveys with larger samples, such as the *NFHS*, it is common to focus on births in the preceding three years. Given the sample size limitations in the IHDS, however, we focused on births in the preceding ten years. While the number of births covered by IHDS is quite large, 38,259 births in the preceding ten years, the number of deaths is much smaller at 2,373 reducing the precision of the estimate. Hence, results presented here should be treated with caution.



infants and that the risk of death declines with age. The IHDS documents that averaging over births occurring in the prior ten years, about 52 out of 1,000 infants die before reaching the one-year mark; of these, nearly 36 deaths occur in the first month of life. That most of these deaths are associated with gestational factors and delivery complications highlights the importance of providing adequate care to pregnant women and providing emergency care for women with difficult births. Survival past this dangerous period reduces the chances of death. Another 16 out of 1,000 children die before reaching age one, and an additional 16 die before turning five.

A comparison of infant and child mortality across different parts of the country and different social groups presented in Tables A.8.1a and A.8.1b highlights the inequalities in infant and child survival. Much of the neonatal mortality is concentrated among families living in villages, with poorly developed infrastructure, as well as among those in the lowest income quintile. It has been argued in the literature that delivery related complications often cannot be anticipated. Hence, when a woman experiences pregnancy related complications, emergency assistance is necessary. As documented in Chapter 7, women in higher income households are more likely than those in lower income households to have a hospital delivery, where emergency assistance is constantly available. Moreover, women in metropolitan cities can be easily rushed to a hospital in case of emergency. However, in remote villages it may be difficult to get women to hospital in time to save the mother and/or child.

Social group differences in neonatal mortality are also quite large. Dalit children have a considerably higher likelihood of death in the first month than children from other households, as also Adivasis, who generally suffer from similar, if not greater disadvantages. High neonatal mortality among Dalits has been documented in the IHDS as well as the *NFHS-III* and deserves particular attention because it represents a cascading of inequality that we have documented in other chapters, with Dalits having lower educational attainment and incomes. However, these inequalities are shared by Dalits and Adivasis. What makes Dalit children particularly vulnerable in the first month of life? This vulnerability may reflect a greater inability of Dalit and Adivasi families to obtain emergency obstetric care since, for the post-neonatal period, they exhibit a similar pattern of mortality. Although it is not possible for us to draw any conclusions regarding the role of social exclusion in this context, we believe that this is an area of concern that requires particular attention and future research.

Regional and state differences in neonatal mortality are also striking. All the hill states-Jammu and Kashmir, Himachal Pradesh, and Uttarakhand-document relatively high neonatal mortality although, with the exception of Uttarakhand, their post-neonatal mortality and child mortality are not particularly high. It seems highly likely that the high neonatal mortality in these states is associated with the difficulties in obtaining emergency obstetric care due to vast distances and difficulties in transportation across mountainous roads. However, it is important to exercise caution in interpreting these results. These results are based on a substantial number of births-with minimum sample of about 550 births in a state. However, given the rarity of deaths, number of deaths being quite small, and omission of a few dead children from maternal reports can substantially change the results.

When we look at overall child mortality, that is, mortality rates for children under five, we see stark differences between

privileged and vulnerable sections of the society. Dalit and Adivasi children have higher mortality rates than other social groups with Dalit children being particularly vulnerable. Educational and income differences are important, as well as those between less developed villages and metropolitan cities. Gender differences are also important and discussed in greater detail in the following section. Figure 8.2 provides an interesting snapshot of infant and child mortality by birth order.

While children of mothers at higher parities are generally disadvantaged, when it comes to neonatal mortality, the first-born children face higher risks than those born to women who already have one child. First births are usually more risky than second births, but most of these risks are related to delivery complications and mostly affect neonatal mortality rates. However, children at parity 4 and at parity 5 and beyond face substantially higher mortality risks. These higher risks are undoubtedly partly attributable to the lower education and income of parents who have large families, but a higher birth order also poses some risks.

IMMUNIZATION

In spite of the emphasis on immunization for vaccinepreventable diseases—polio, diphtheria, whooping cough, tetanus, measles, and tuberculosis—universal immunization remains far from reality. The World Health Organization recommends three doses of polio vaccine, three doses of DPT (diphtheria-pertussis-tetanus), one dose of BCG (Bacillus Calmette-Guérin) against tuberculosis, and one dose of measles vaccine before 12 months. Only about 48 per cent of children under five in the IHDS sample received full vaccination (see Table A.8.2a). About 7 per cent received no vaccine, and the remaining 45 per cent received an incomplete series of vaccinations. These figures are comparable to those from the *NFHS-III*, which found that only 44 per cent of those aged 12–23 three months received all basic vaccinations.

Given the tremendous fanfare with which Pulse Polio campaigns are being conducted, this low level of vaccine coverage might seem surprising. However, an examination of trends in vaccination in the three waves of NFHS surveys documents that although polio coverage increased sharply from 54 per cent in 1992-3 to 63 per cent in 1998-9 and to 78 per cent in 2005-6, improvement in the full series of DPT vaccinations was far more limited, 52 per cent in 1992-3, 55.1 per cent in 1998-9, and 55.3 per cent in 2005-6. The stagnation in DPT coverage between 1998-9 and 2005-6 is in striking contrast to the growth in the rate of polio vaccinations. In many ways it points to the limits of campaigns for providing basic health services. The Pulse Polio campaigns have focused on vaccinating as many children as possible on specified days, with vaccination booths being set up at train stations, on street corners, and in schools. This has clearly borne fruit with rapid increase in polio immunization. However, it may well have diverted attention from regular immunization services, causing the proportion of children receiving full vaccinations to lag behind the proportion of children receiving polio vaccinations. The results from the IHDS indicate that while 71per cent of children received three or more doses of polio, only 55 per cent received three doses of DPT (see Table A.8.2a).

Vaccination is an area in which family education plays a particularly important role. While inequalities in income and residence are reflected in vaccination status, the difference, between families in which no one has attended school and those in which even one adult has completed



primary school, is quite striking. Households in which an adult has a college degree is associated with a fairly high rate of vaccination coverage, although even in these households, only 67 per cent children get all recommended vaccines.

Regional differences in vaccination coverage are vast. Only 32 per cent of children in Rajasthan receive a full battery of immunizations, compared with more than 80 per cent for children in Tamil Nadu. Note that our statewise figures are affected by smaller sample sizes. For example, the figures in Bihar are based on only 655 children aged 12–59 months. Full vaccination coverage seems particularly less likely in villages with poorly developed infrastructure. Home visits by a health worker during pregnancy seem to increase the likelihood of completing a full series of vaccinations, and this improvement is particularly noticeable in villages. As Figure 8.3 indicates, relatively few women in urban areas receive home visits, and they are able to find vaccination services for their children regardless of the home visit.

In contrast, it appears that home visits during pregnancy (and presumably following delivery) form a major source of vaccinations for children in rural areas.

GENDER AND CHILD HEALTH AND SURVIVAL

It is difficult to talk about child health without recognizing that child well-being in India is highly gendered. In spite of the euphemism about a daughter being the image of Goddess Laxmi, daughters are welcomed with far less enthusiasm than sons. Declining juvenile sex ratios have drawn our attention sharply to this phenomenon. Around the world, in the absence of deliberate selection the sex ratio at birth is 105 boys to 100 girls, about 51per cent of births are boys and 49 per cent are girls (that is, a sex ratio of 98 female births to 100 male births). But in many parts of India, the sex ratio at birth is far more masculine oriented, with only 85–90 female births per 100 male births, suggesting prevalence of female foeticide (Figure 8.4).

The IHDS documents that, on an average, 52 per cent of the births are boys while only 48 per cent are girls. This overall statistic understates the extent of sex selection in some states. Punjab is most striking, with only about 85 female births per 100 male births. In contrast, the North-East, Chhattisgarh and Jharkhand show little evidence of female disadvantage at birth. Perhaps the greatest evidence of sex selection comes from comparing families with and without a prior male birth at parities 2 and 3. As Figure 8.5 documents, at parities 2, 3, and 4 or greater, when a household does not have any sons, the likelihood of the birth of a boy exceeds the likelihood of the birth of a girl substantially.

After a son has been born, however, the sex ratio at birth becomes more favourable to girls. This suggests that sexselective abortion may have something to do with skewing the sex ratio at birth in families with no sons.

How is this possible given the legislation against sex determination? According to the 2001 legislation titled Pre-Conception and Pre-Natal Diagnostics Test Act, although a physician may perform amniocentesis or a sonogram to determine a child's health risks, he or she is not allowed to tell the parents the sex of the child. However, our results suggest that this law is honoured in the breach. First, results presented in Figure 8.6 for births occurring in the five years



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Source: IHDS 2004–5 data.



preceding the survey show that at each parity the proportion of women who have undergone a sonogram is higher for women who have no sons, than for those who already have a son.

This difference is particularly large for third and later births. Second, the IHDS asked women who had undergone a sonogram or amniocentesis whether they knew the sex of the child. Nearly 34 per cent said they were aware of the sex of the child. This suggests that the role of sex determination in shaping the sex ratio at birth cannot be ignored. While sex-selective abortion results in a lower likelihood of female birth than might be biologically expected, the neglect of girls leads to their higher mortality. Figure 8.1 had shown the likelihood of death during the first month, 2–11 months, and one to four years, for boys and girls. As discussed earlier, neonatal deaths are often due to pregnancy and delivery related factors, but subsequent deaths are more environment-driven. Research also indicates that in the absence of preferential treatment of boys, boys have higher mortality at all ages than girls, until girls reach reproductive



age. Our results confirm this for the neonatal period, when boys suffer from higher mortality than girls. However, after the first month of life, the mortality rate is higher for girls than for boys.

The clearest evidence of the higher mortality of girls comes from comparing mortality rates of brothers and sisters. When we compare siblings, we hold family income, education, place of residence, and neighbourhood infrastructure constant and allow only the sex of the child to vary. As Figure 8.7 indicates, within the same family, boys are 1.4 times as likely as girls to die in the first month of life, but their relative mortality rate falls to barely 66 per cent of that of their sisters at ages one to four years.

CHILD LABOUR AND SCHOOL ENROLMENT

As one travels through India and is served by young boys in corner tea shops or sees young children driving animals on rural roads, it is natural to worry about children's exploitation by employers and the impact of a heavy work burden leading to school dropout. However, most studies of child labour in India have documented that although there are pockets of industries in which children may be employed, in general, relatively few Indian children are employed. The IHDS is no exception. As Figure 8.8 indicates, only about 11 per cent of children aged 10–14 are employed, even when we use a fairly generous definition of labour force, including work on the family farm, care for animals, work for a family business, and wage work.



Of these 11 per cent, 9 per cent mostly participate in family-based work; 8 per cent care for animals; 7 per cent work on the family farm, 1 per cent work in family business, and several do more than one activity. Most of the children who work on the family farm do so during harvesting or other high demand period, with 50 per cent working sixty or fewer days in farm work during the preceding year. Most of this work is limited to a few hours per day; the median number of hours worked per day is two for teenagers (as compared with six for adults). This suggests that most of the work by children takes the form of helping in family-based work rather than labouring in sweatshops.

Tables A.8.3a and A.8.3b examine this issue in greater depth. The results indicate that 77 per cent of children are in school and do not participate in the labour force as defined above. A further 11 per cent are neither working nor enrolled in school. Among the 14 per cent that are employed, 8 per cent seem to combine this work with being in school and only 3 per cent are in the labour force and have dropped out. The proportion of children out of school and in the labour force increases with age and is greater among poorer households.

However, two very striking things emerge from this table. First, an overwhelming majority of Indian children are enrolled in school and do not participate in the labour force. Second, the next biggest group consists of children who are neither employed, nor in school. Thus, if one is concerned about school enrolment, it is this group that deserves greater attention. Some of these children may have dropped out to care for younger siblings, others may have dropped out because school was uninteresting or oppressive, and still others may see little benefit in formal education. As we think about improving school enrolment, focusing on this group may give the greatest payoff. In Chapter 6, we noted that young children often face poor quality instruction and physical punishment in schools, with nearly 25 per cent parents of children aged 8-11 indicating that their children had been beaten or pinched in the preceding month. Improvements in school conditions to keep these children in school may be more important for increasing educational attainment than focusing on controlling or eliminating child labour.

DISCUSSION

The data presented in this chapter points to family and public policy as two distinct but interrelated forces shaping child well-being. Families influence children's well-being by valuing and investing in each child differently. They also serve as the intermediaries through which public services are delivered to children. Hence, when families are unwilling or unable to mobilize these services on behalf of their children, children are often marginalized from public institutions. While the data we presented on parental preference for

boys over girls is most clearly seen in gender differences in child mortality and prenatal sex selection, almost all the data presented in this chapter as well as in Chapters 6 and 7 document girls' disadvantage in education and health care. Immunization data presented in this chapter indicates that 46 per cent of girls are fully vaccinated, compared with 49 per cent of boys. When their children were sick with minor illnesses like a cough, cold, or fever, parents spent about Rs 126 on treatment and doctors for boys in the preceding month, compared to Rs 105 for girls. These are all small differences but may accumulate to create disadvantages for girls. However, we see little of this gender difference in polio immunizations, for which government campaigns do not rely on parental cooperation. This suggests that public policies must be devised in a way that takes into account a parental preference for boys.

The results also suggest that children of poor and less educated parents are most likely to be left out of the medical system and experience higher rates of mortality and lower levels of vaccination. This points towards another reason why government outreach programmes for children must be strengthened to cover all children and programmes must rely less on parents and focus more on the delivery of universal services.

Public policies have also sometimes relied on assumed parental indifference or poverty when explaining the poor educational performance of schools. For example, child labour is frequently blamed for poor school performance and dropout. Although child labour is present in Indian society and may well be responsible for some proportion of school dropout, the fact that a large proportion of children are neither in school nor working suggests that making schools more welcoming and interesting to these students may have a greater payoff in terms of increasing school enrolment than a focus on child labour elimination.

HIGHLIGHTS

- Infant mortality is largely concentrated in the first month of life.
- Infant and child mortality rates vary dramatically by place of residence. Metropolitan cities have an infant mortality rate of 18 per 1,000, compared with 60 per 1,000 for less developed villages.
- Although girls have a biological advantage in survival in the first month of life, they experience higher mortality
 after the first month and into early childhood.
- Even within the same family, once past the first month, girls are less likely than their brothers to survive childhood.
- At an all India level, 77 per cent of children aged 10–14 are in school and do not engage in any remunerative work. Only 2 per cent of children aged 10–14 are involved in wage work; 9 per cent work on farms or family businesses.
- However, 11 per cent are neither employed nor in school.

 Table A.8.1a
 Infant and Child Mortality Rate
 (Per 1,000 Births) for Births in Preceding 10 Years Mortality Rate In Month 1 In Year 1 Under Age 5 All India Sex of Child Male Female Place of Residence Metro area Other urban More developed village Less developed village Income Lowest Quintile 2nd Quintile 3rd Quintile 4th Quintile Top Quintile Social Groups Forward Caste Hindu OBC Dalit Adivasi Muslim Other religion Maximum Household Education None 1-4 Std 5–9 Std 10–11 Std 12 Std/Some college Graduate/Diploma

Source: IHDS 2004–5 data.

Table A.8.1bStatewise Infant and Child MortalityRate (Per 1,000 Births) for Births in Preceding 10 Years

		Mortality Rate			
	In Month 1	In Year 1	Under Age 5		
All India	36	52	69		
Jammu and Kashmir	43	47	58		
Himachal Pradesh	36	41	49		
Uttarakhand	54	60	81		
Punjab	31	44	60		
Haryana	31	41	39		
Delhi	3	5	10		
Uttar Pradesh	53	80	116		
Bihar	25	43	69		
Jharkhand	38	60	63		
Rajasthan	47	63	89		
Chhattisgarh	36	52	85		
Madhya Pradesh	33	54	58		
North-East	21	38	48		
Assam	24	33	28		
West Bengal	31	51	59		
Orissa	59	69	86		
Gujarat	24	38	52		
Maharashtra, Goa	26	37	42		
Andhra Pradesh	27	34	46		
Karnataka	38	46	62		
Kerala	6	9	11		
Tamil Nadu	34	40	57		

Note: Statewise differences in mortality should be interpreted cautiously due to small samples. Source: IHDS 2004–5 data.

Table A.8.2a	Vaccination Rate for Children Aged 12–59 Months					
					percentage)	
	Number of Vaccination	All Basic Vaccines	No Vaccines	3 Polio Doses	3 DPT Doses	
All India	5.83	48	7	71	55	
Sex of Child						
Male	5.91	49	6	72	57	
Female	5.74	46	7	71	53	
Place of Residence						
Metro area	6.91	62	1	84	69	
Other urban	6.37	56	5	75	63	
More developed village	5.94	51	6	73	58	
Less developed village	5.37	40	9	67	48	
Income						
Lowest Quintile	5.44	42	8	66	48	
2nd Quintile	5.43	43	10	69	51	
3rd Quintile	5.79	45	7	71	53	
4th Quintile	6.02	50	5	72	59	
Top Quintile	6.75	63	3	80	69	
Social Groups						
Forward Caste Hindu	6.66	60	2	79	67	
OBC	5.87	48	5	73	57	
Dalit	5.76	47	7	71	53	
Adivasi	5.64	40	11	65	51	
Muslim	4.87	34	14	60	41	
Other religion	7.39	76	0	86	89	
Maximum Household Education						
None	4.71	31	11	62	37	
1–4 Std	5.37	43	10	65	50	
5–9 Std	5.93	48	6	72	56	
10–11 Std	6.24	54	4	74	64	
12 Std/Some college	6.59	60	5	79	65	
Graduate/Diploma	7.03	67	2	83	76	
Source: IHDS 2004–5 data.						

Table A	A.8.2b Statewise Vaccin	Statewise Vaccination Rate for Children Aged 12–59 Months						
		(
	Number o	of All Basic	No	3 Polio	3 DPT			
	vaccinario	n vaccines	vaccines	Doses	Doses			
All India	5.83	48	/	/1	55			
Jammu and Kashmir	6.48	47	4	71	68			
Himachal Pradesh	7.48	80	3	91	88			
Uttarakhand	6.86	68	5	86	74			
Punjab	6.89	62	3	82	73			
Haryana	6.63	57	7	75	67			
Delhi	6.70	52	3	82	58			
Uttar Pradesh	4.88	31	8	72	37			
Bihar	3.11	13	8	46	18			
Jharkhand	5.15	38	20	50	47			
Rajasthan	4.89	32	15	53	44			
Chhattisgarh	6.40	52	6	85	67			
Madhya Pradesh	6.11	46	7	67	49			
North-East	5.50	32	6	52	47			
Assam	2.63	3	22	19	9			
West Bengal	6.54	68	10	74	71			
Orissa	6.80	55	5	77	68			
Gujarat	6.47	55	4	79	64			
Maharashtra, Goa	7.18	66	1	83	71			
Andhra Pradesh	7.01	67	2	85	74			
Karnataka	7.24	67	1	84	83			
Kerala	7.20	70	2	82	85			
Tamil Nadu	7.56	84	1	90	87			
Source: IHDS 2004–5 c	data.							

	Table A.8.3a School Enrolment and Work for Children Aged 10–14 Years							
		In School			Not in School			
	Not Working	Family Work	Wage Labour	Family Work	Wage Labour	Family & Wage	Not Working	
All India	77	7	1	2	1	0	11	100
Sex of Child								
Male	79	8	1	2	1	0	9	100
Female	75	6	0	3	1	1	14	100
Child's Age								
10	87	5	0	1	0	0	8	100
11	85	5	0	1	0	0	8	100
12	78	8	0	2	1	0	11	100
13	73	8	1	3	2	1	13	100
14	64	9	1	5	3	1	17	100
Place of Residence								
Metro city	90	1	0	0	1	0	8	100
Other urban	86	2	0	1	1	0	11	100
More developed village	79	7	0	2	1	0	10	100
Less developed village	70	10	1	3	2	1	13	100
Income								
Lowest Quintile	69	9	0	3	1	1	17	100
2nd Quintile	73	8	1	3	2	1	14	100
3rd Quintile	75	8	1	3	1	1	12	100
4th Quintile	80	5	0	2	1	0	11	100
Top Quintile	90	4	0	1	1	0	5	100
Social Groups								
Forward Caste Hindu	87	7	0	1	1	0	4	100
OBC	79	8	0	3	1	0	10	100
Dalit	74	7	1	2	2	0	13	100
Adivasi	67	8	1	4	2	3	16	100
Muslim	68	6	0	3	2	0	21	100
Other religion	95	1	0	1	0	0	4	100
Maximum Household Education								
None	60	8	1	4	3	1	23	100
1–4 Std	71	9	0	3	1	1	15	100
5–9 Std	81	8	0	2	1	0	8	100
10–11 Std	89	6	0	1	0	0	4	100
12 Std/Some college	90	5	0	1	0	1	3	100
Graduate/Diploma	94	4	0	0	0	0	2	100
Source: IHDS 2004–5 data.								

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Table A.8.3b Statewise School Enrolment and Work for Children Aged 10–14 Years								
	In School			Not in School				Total
	Not Working	Family Work	Wage Labour	Family Work	Wage Labour	Family & Wage	Not Working	
All India	77	7	1	2	1	0	11	100
Jammu and Kashmir	86	5	0	3	0	0	6	100
Himachal Pradesh	73	23	0	2	0	0	2	100
Uttarakhand	84	8	0	1	0	0	7	100
Punjab	87	3	0	1	1	0	9	100
Haryana	80	9	0	1	0	0	10	100
Delhi	91	2	0	0	0	0	7	100
Uttar Pradesh	67	16	1	4	1	0	12	100
Bihar	62	11	1	5	1	0	20	100
Jharkhand	69	6	0	1	0	0	23	100
Rajasthan	73	6	0	4	1	0	17	100
Chhattisgarh	79	6	1	2	2	3	8	100
Madhya Pradesh	78	5	1	2	2	1	11	100
North-East	85	6	0	3	0	0	6	100
Assam	62	15	0	5	1	0	18	100
West Bengal	71	8	0	3	3	1	15	100
Orissa	78	2	0	3	1	1	15	100
Gujarat	82	2	1	1	2	1	10	100
Maharashtra, Goa	89	3	0	1	1	0	7	100
Andhra Pradesh	84	2	1	1	4	0	8	100
Karnataka	85	3	1	2	2	1	7	100
Kerala	100	0	0	0	0	0	0	100
Tamil Nadu	92	3	0	0	1	0	5	100
Source: IHDS 2004–5 data.								