

ADDRESSING HEALTHCARE DIVIDE IN RAJASTHAN

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ABSTRACT

Health outcomes continue to improve in Rajasthan because of improved social conditions, advancing medical and scientific knowledge, a highly trained professional workforce and massive investment in the health care system. However, these improvements mask a widening gap between the health outcomes of the rural-urban and male-female population. Objectives of the paper are to highlight the relative health status of Rajasthan via India; to address the inter-district inequity in health indicators and to investigate the rural-urban and male-female differences in child health outcomes. Data is undertaken from secondary sources; National Family Health Survey, District Level Household Survey, Statistical Abstract of Rajasthan and from various years of Sample Registration Survey (SRS). Paired- t test is applied on the child health indicators namely Infant Mortality Rate and Under Five Mortality Rate to gauge the difference between rural & urban areas and male & female health parameters. Regression and coefficient of variation is also applied for the same. An attempt has been also made to reflect the considerable regional variations by employing the tool of ratio. The analysis reveals that the pace of decline is not the same for both (Rural & Urban IMR) which shows that differences in two continue to persist in the state. Annual rate of decline in health outcomes has also found to be lower in Rajasthan than the national averages. Overall the study concedes that the rural-urban and male-female mortality differentials have become smaller to some extent. The study suggests adopting different health policy interventions in accordance with varying contribution of socio-economic factors on child health, while designing policies and programmes to reach equitable progress towards health outcomes.

Keywords: Health Outcomes, Mortality, IMR, U5MR

INTRODUCTION

Health inequalities can be defined as differences in health status or in the distribution of health determinants between different population groups (WHO, 2009). The causes of health inequalities are associated primarily with socio-economic status, income, poverty, deprivation levels, unemployment, skills and educational level, housing conditions, accessibility to local

services and social mobility as well as life chances. Various studies have also confirmed similar imbalances existing in the health sector; namely vertical imbalance under which health services improved considerably in urban areas in cities, while the rural areas lagged far behind. Secondly, the horizontal imbalance reflects the inter-state and intra-state deficiencies in the health infrastructure and services (Kumar & Bhardwaj; Bhatia & Dhindsa, 2011). Inequalities are pervasive in the availability of public health services in the rural and urban areas and across states. Three major forms of inequities have been largely responsible for the persistent and ever widening differentials in health outcomes: historical inequities, socio-economic inequities and inequities in provision and access to health services (Baru et al., 2011). Among the various factors that influence health, availability, accessibility and affordability of health services are important determinants for improving population health. The utilization of preventive services such as childhood immunization and ANC are effective indicators for assessing the availability, accessibility and quality at the primary level of health services provisioning. The overall indicators for full immunization are poor in Rajasthan with variation across rural and urban areas and socio-economic groups. The all India average for full immunization coverage for the year 2008-09 was 14.6 (CES, 2009). The rural-urban differential was substantial with a coverage rate of 13.2 among the rural and 19.3 in the urban populations. While the Immunization coverage in Rajasthan is low, there is considerable variation across socio-economic groups. The coverage in the highest income quintile (66.5) is twice compared to that in the lowest quintile (36.1). There is a substantial gap in immunization coverage between the STs (41.8) and others (61.2). Health among Indian citizens has been improving overtime, but the large disparities across sections of the population are worrisome. Rural and urban population records large differentials in accessibility of health care services. Some of the glaring disparities are presented by NFHS rounds (Table-1).

Table 1: Comparison of Rajasthan with India

Indicators	Rajasthan					India				
	NFHS-III			NFHS	NFHS	NFHS-III			NFHS-	NFHS-I
	T	R	U	-II	-I	T	R	U	II	
Mothers who had at least 3 ANC	41.2	32.5	74.7	23.6	18.1	50.7	42.8	73.7	44.2	43.9
Birth assisted by a Doctor/ANM/Other health personnel	43.2	34.6	77	35.8	19.3	48.2	39.1	75.2	42.4	33
Institutional births	32.2	23.3	67.7	21.5	12	40.7	31.1	69.3	33.6	26.1
Children 12-23 months fully immunized	26.5	22.1	44.3	17.3	21.1	43.5	38.6	57.5	42	35.5
Children under 3 years who are stunted	33.7	36.4	22.9	52	41.8	38.4	40.7	31.1	N.A.	N.A.
Children under 3 years who are wasted	19.7	19.9	19.2	11.7	21.2	19.1	19.8	16.9	N.A.	N.A.
Children under 3 years who are underweight	44	45.9	36.3	50.6	44.3	45.9	49	36.4	46.7	51.5
Women age 15-49 whose BMI is below normal	33.6	36.5	25.6	36.1	N.A.	33	38.8	19.8	36.2	N.A.
Children age 6-35 months who are anaemic	79.6	80.1	77.5	82.3	N.A.	79.1	81.2	72.6	74.2	N.A.
Ever-married women age 15-49 who are anaemic	53.1	54.9	48	48.5	N.A.	56.1	58.1	51.4	51.8	N.A.
Pregnant women age 15-49 who are anaemic	61.2	60.1	64.5	51.4	N.A.	57.8	58.8	54.5	49.7	N.A.

Percentage girls marrying below age 18	39.9*	-	-	49.4*	57.1*	22.1*	-	-	27.5*	36.9*
Institutional delivery	45.5*	-	-	31.4*	22.5*	47*	-	-	40.5*	34*
Safe delivery	52.7*	-	-	44.4*	33.4*	52.7*	-	-	47.6*	40.2*

Note- * refers to DLHS-III, II and I

Source - Various rounds of NFHS and DLHS.

Objectives of the study are following:-

1. To highlight the relative health status of Rajasthan versus India.
2. To address the inter-district divide in health indicators.
3. To investigate the rural-urban and male-female differences in child health outcomes.

Hypotheses of the study are as follows:-

1. H₀: There is no significant difference between rural-urban and male-female health performance in the districts of Rajasthan.
2. H₀: There is no difference in rate of decline in rural and urban IMR in Rajasthan over a period of 40 years.

DATA SOURCES AND METHODOLOGY

Data has been collected from secondary sources; National Family Health Survey, District Level Household Survey, Statistical Abstract of Rajasthan and from various years of Sample Registration Survey (SRS). Infant Mortality Rate (IMR) is defined as the probability of dying between birth and exactly one year of age, expressed per 1000 live births. To test the hypothesis Paired- t test is applied on the child health indicators namely IMR and U5MR to gauge the difference between rural & urban areas and male & female health parameters. In a paired experiment, there is a one-to-one correspondence between the values in the two samples. The mean of the difference indicates the average difference. If the p value is below the significant threshold, then the difference in means is not equal to zero. Again, in order to understand the rate of decline in IMR of Rajasthan in rural and urban areas over time, following regression equation has been formed; $\log(R/U_{IMR})$ is to be considered as a function of time such that $\log(R/U_{IMR})=f(\text{Time})$

Reflection of Overall Scenario and Mortality Rates in Rajasthan via India

In Rajasthan, all the health indicators have actually improved substantially during NFHS-3 in comparison to NFHS-1 and 2 but Rajasthan is still lagging far behind than the national averages. Undoubtedly, inequality in health outcomes is arising due to the interplay of several factors including education and health awareness and it would be an important and challenging task to probe into inequalities obtained due to reasons other than the elementary issue of income deprivation. Half of the households in Rajasthan live in a pucca house. 66 per cent of households (96 per cent of urban households and 54 per cent of rural households) have electricity up from 64 per cent at the time of NFHS-2 and 52 per cent in NFHS-1. 31 per cent of households have toilet facilities, up from 28 per cent at the time of NFHS-2 and 20 per cent in NFHS-1. In rural areas, 92 per cent of households do not have any toilet facilities. 82 per cent of households use an improved source of drinking water (99 per cent of urban households and 75 per cent of rural households), but only 33 per cent have water piped into their dwelling, yard or plot. 20 per cent of Rajasthan's households (with 19 per cent of the population) are in the highest wealth quintile and 25 per cent of households (with 24 per cent of the population) are in the lowest wealth quintile. 35 per cent of rural households are in the lowest wealth quintile and only 4 per cent are in the highest wealth quintile. By contrast, in urban areas, only 1 per cent of households are in the lowest wealth quintile, whereas 57 per cent are in the highest wealth quintile. At current fertility levels, women in Rajasthan will have an average of 3.2 children in her lifetime, about one child more than the replacement level of fertility. Fertility has decreased by 0.57 children between NFHS-2 and NFHS-3. Fertility in rural areas is 3.6 children per woman, 1.4 children higher than in urban areas where the fertility rate of 2.2 children per woman is close to the replacement level. Fertility rates are higher for women in disadvantaged groups (3.6 children per woman among SCs, 3.7 among STs and 3.1 among other backward classes), compared with women who are not in any of these groups (2.8). The largest differentials in fertility are by wealth and education. At current fertility rates, women with no education will have twice as many children as women with 10 or more years of schooling (a TFR of 3.7, compared with 1.8). Contraceptive use increased rapidly by wealth quintile, from only 30 per cent for women in the lowest wealth quintile to 67 per cent for women in the highest wealth quintile. Women with 10 or more years of education are likely to use family planning methods than women with less education or no education. Muslim women and ST women are less likely to use family planning methods than women in other religious or caste or tribe groups. Thus, large discrepancies in health outcomes across rural and urban populations are seen. The National Family Health Survey (NFHS, 2005-06) reveals sharp regional and socio-economic divides in health outcomes, with the lower castes, the poor and the less developed states bearing the burden of mortality disproportionately. High rates of infant mortality and U5MR are, in general, inversely associated with income. These inequities are also accompanied by wide gaps across gender and caste

(Gwatkin, 2000; Subramanian et al., 2006). Annual rate of decline in IMR, CBR, CMR, MMR and NNMR has been lower in Rajasthan than the national averages at all the points of time. In the state, as also observed in national averages, slightly faster rates of decline have been registered in rural areas (Table-2). However, the gap still persists, since the absolute level was much higher in rural areas.

Table 2: Mortality Decline in Rajasthan vis a vis National Average

S. No.	Annual Rate of Decline (%)	Rajasthan			India		
		Total	Rural	Urban	Total	Rural	Urban
1	IMR 1981-2012 2001-2010	-2.278	-1.980 -3.728(M)	-2.078 -3.825(F)	-2.955	-3.149 (M)	-3.246 (F)
2	CBR 1981-2012	-1.390	-1.587**	-0.598**	-1.587	-1.489**	-0.896**
3	CDR (1981-2012)	-2.469	-1.193**	-0.299**	-1.784	-0.995**	-0.299**
4	TFR (04-09)	-2.858	-2.566	-2.274	-2.858	-2.566	-0.995
5	CMR (05-09)	-4.972	-6.012	-0.399	-5.067	-5.256	-4.305
6	MMR (97-09)	-11.2192	-	-	-14.015	-	-
7	LEB 1987-2006	-0.697	-	-	-0.598	-	-
8	NNMR (04-09)	-0.399	-	-	-1.784	-	-
9	PMR (04-09)	-0.8959	-	-	-0.8959	-	-

Note-** Indicates data from period 2004 to 2010; CBR stands for Crude Birth Rate; CDR for Crude Death Rate, TFR for Total Fertility Rate, CMR for Child Source- Self computed

In order to find out the rate of decline in rural and urban IMR in Rajasthan over a period of 40 years, $\log(R/U)$ is to be considered as a function of time such that $\log(R/U) = f(\text{Time})$. Table 3 shows that there is difference in rate of decline in rural and urban IMR over a period of 40 years.

Table 3: Regression Results

Dependent Independent	Log Rural IMR	Log Urban IMR
Intercept	5.036* (197.38)	4.417* (88.176)
Time	-.022* (-19.880)	-.018* (-8.036)

Note: * Significant at 1% levels; Values represent in parentheses are t- values.

Further on the basis of Table 3, the rate of decline in rural IMR is found to be -2.176 as compared to -1.784 for the urban counterpart. Therefore the analysis reveals that there is considerable decline in rural and urban IMR in Rajasthan over the four decades. However the pace of decline is not the same for both which shows that differences in rural-urban IMR continue to persist in the Rajasthan state.

Healthcare Divide Pertaining to IMR & U5MR

The state has also shown a considerable decline in the IMR particularly in rural areas over the past four decades. In 1972 it was 132 which came down to 54 in 2012. IMR in the urban areas declined from 76 to 31 during the period of 1972 to 2010. Similarly Male and female infant mortality rates have also declined. Differences across districts with respect to rural-urban and male-female, infant and under five mortality rates is also confirmed by coefficient of variation for the period of 1990 to 2011 (Table-4). However their extent of differences has narrowed down over the three decades. In totality, in the case of IMR, the value of coefficient of variation has declined considerably during 1990 to 2011. While in the case of U5MR, the value of coefficient of variation increased during 1990 to 2001 and further declined in 2011 which reveals the widening of inequality during the 2001 period. Differences in male-female infant mortality rates across districts have lowered down as reflected by the declined value of coefficient of variation over the three decades. Rural IMR has also decreased but Urban IMR has increased from the period 2001 to 2011. U5MR in rural areas declined during 2001 to 2011. While differences in urban U5MR has remained unchanged. Differences in male U5MR increased during 1991 to 2001 while it declined during 2012. There is a significant decline in female U5MR during the period of 1990 to 2012.

Table 4: Descriptive Statistics

Variables	Mean			S.D.			C.V.		
	1990	2001	2012	1990	2001	2012	1990	2001	2012
IMR (R)	-	81.62	60.03	-	16.27	8.08	-	19.939	13.46
IMR (U)	-	61.37	42.1	-	11.04	11.778	-	17.985	27.976
IMR (M)	83.09	71.62	52.41	21.3	17.36	9.83	25.63	24.241	18.7559
IMR (F)	89.69	84.25	60.13	22.1	14.42	8.366	24.59	17.110	13.9131
U5MR(R)	-	119.7	79.47	-	27.96	9.446	-	23.356	11.88
U5MR(U)	-	85.53	54.27	-	18.17	11.873	-	21.247	21.87
U5MR(M)	113.2	102.1	69.72	25.9	28.32	11.49	22.91	27.734	16.48
U5MR (F)	125.9	125.2	81.03	28.4	25.81	9.998	22.56	20.623	12.33
IMR	86.31	78.06	56	20.1	15.67	8.546	23.21	20.07	15.26
U5MR	119.4	113.4	75.06	26.1	26.57	10.08	21.86	23.42	13.43

Note= Based on own calculations.

Parametric t test is used to assess whether there are differences between rural/urban and male/female health outcomes. In order to run the test, data should be normally distributed therefore, to fulfill this fundamental assumption (normally distributed data) of Paired t test, normality test is applied. All the variables follow normal distribution except IMR urban 2012, IMR male 12 and U5MR urban12. Further, Box-cox Transformation has been used to normalize these three variables (IMR urban 2012, IMR male 12 and U5MR urban12).

It is clearly evident from the Table-5 that there are differences among rural-urban and male-female health outcomes over the period of 1990 to 2011. T values are significant in case of all the variables except one pair of sample. There are no differences found in U5MR male-female during 1990 time period. However, in 2000 and 2011 differences in male-female U5MR are found to be significant. Rural-urban differences in U5MR are found during 2000 and 2011 time

period. In the case of Infant Mortality Rate both male-female and rural-urban differences are found significant from the period of 1990 to 2011. The analysis reveals that rural-urban and male-female mortality differentials have become smaller to some extent.

Table 5: Paired t Test Results

Variables	Paired Differences					t	d.f	Sig. (2-tailed)
	Mean	S.D.	S.E.	95% Confidence Interval of the difference				
				Lower	Upper			
IMRM90 - IMRF90	-6.59375	17.78158	3.14337	-13.00469	-.18281	-2.098	31	.044
U5MRM90 - U5MRF90	-19.02106	132.70701	23.45951	-66.86704	28.82492	-.811	31	.424
IMRR2000 - IMRU2000	20.25000	10.46037	1.84915	16.47863	24.02137	10.951	31	.000
IMRM2000 - IMRF2000	-12.62500	6.95492	1.22947	-15.13252	-10.11748	-10.269	31	.000
U5MRR2000 - U5MRU2000	34.21875	18.11386	3.20211	27.68801	40.74949	10.686	31	.000
U5MRM2000 - U5MRF2000	-23.06250	11.26495	1.99138	-27.12395	-19.00105	-11.581	31	.000

IMRR2011 - IMRU2011	58.286 21	7.8710 8	1.4616 2	55.292 21	61.280 21	39.8 78	2 8	.00 0
IMRM2011 - IMRF2011	- 7.7187 5	6.2694 1	1.1082 8	- 9.9791 1	- 5.4583 9	- 6.96 5	3 1	.00 0
U5MRR2011- U5MRU2011	58.924 69	9.0372 2	1.6781 7	55.487 11	62.362 26	35.1 12	2 8	.00 0
U5MRM2011- U5MRF2011	- 11.312 50	7.8798 9	1.3929 8	- 14.153 51	- 8.4714 9	- 8.12 1	3 1	.00 0

Note- S.D. means Standard Deviation; S.E. means Standard Error

Regional Variations in Infant and Under Five Mortality Rate

Another striking feature of IMR in Rajasthan is that there are considerable regional variations. The estimates presented in the Table-6 show a large degree of variation in IMR across districts.

Table 6: Ratio of Rural to Urban IMR (RRU_{IMR}) and Female to Male IMR (RFM_{IMR}), 2011

Region/Dist.	RRU_{IMR}	RRU_{U5MR}	RFM_{IMR}	RFM_{U5MR}
Ajmer Division				
Ajmer	1.66	1.46	1.58	1.37
Bhilwara	1.62	1.57	0.95	1.02
Nagaur	1.53	1.36	1.34	1.37
Tonk	2.54	3.1	0.88	0.97
Bikaner Division				
Bikaner	1.75	1.37	1.26	1.41
Churu	1.48	1.35	1.16	1.14

Ganganagar	1.58	1.11	1.26	1.22
Hanumangarh	1.41	1.46	1.12	1.17
Jaipur Division				
Jaipur	1.52	1.47	1.29	1.4
Alwar	1.38	1.21	1.12	1.21
Jhunjhunu	1.28	1.26	1.23	1.12
Sikar	1.24	1.01	1.34	1.29
Dausa	1.42	1.45	1.45	1.26
Jodhpur Division				
Barmer	1.23	1.30	1.13	1.12
Jaisalmer	1.40	1.44	1.32	1.32
Jalore	1.63	1.71	1.18	1.08
Jodhpur	1.61	1.51	1.3	1.25
Pali	1.54	1.81	1.09	1.02
Sirohi	1.97	1.76	1.09	1.13
Udaipur Division				
Udaipur	1.52	1.98	1.1	1.04
Banswara	-	1.12	-	1.13
Chittorgarh	1.84	2	0.98	0.91
Dungarpur	0.83	0.97	1.06	1.07
Rajsamand	1.18	-	-	1.16
Kota Division				
Baran	0.81	1.05	1.05	1.08
Bundi	1.89	1.95	1.01	1.02
Kota	1.76	2.09	1.03	1.12
Jhalawar	1.69	2.04	1.06	1.07
Bharatpur Division				
Bharatpur	1.16	1.2	1.17	1.41
Karauli	0.98	1.11	1.12	1.21
Dholpur	1.24	1.42	1.12	1.29
Sawai-	1.42	1.62	1.07	1.14

Madhopur

Note- Self Computed

In order to study the rural urban differentials, the ratio of rural IMR/U5MR to that of urban IMR/U5MR has been calculated (Table-6). A very distinct feature emerging from the table is that irrespective of administrative regions or district, the ratio for rural to urban areas has always exceeded one except for Baran, Dungarpur and Karauli districts, indicating that the levels of infant mortality is always higher in rural areas than the urban areas for all the four administrative divisions and 30 districts. In Baran, Dungarpur and Karauli districts, the value of the ratio for rural to urban areas was 0.81, 0.83 and 0.98 indicating that IMR in urban areas was higher than that of rural areas. Silmiliary, in the case of U5MR, the value of the ratios for rural to urban areas has also exceeded one except for Dungarpur district, indicating that the level of U5MR is always higher in rural areas than the value of urban areas for all the six administrative divisions and 31 districts. In Dungarpur, the value of the ratio for rural to urban areas was 0.97 indicating that U5MR in urban areas was higher than that of rural areas. The analysis further suggests that there exist significant variations across districts in terms of rural-urban gaps in IMR and U5MR. For example the ratios of rural-urban IMR are found as high as 1.75 to 2.54 in the districts of Bundi, Bikaner, Chittorgarh, Sirohi, and Tonk, indicating that the levels of rural IMR is almost twice the level of urban IMR. Tonk district in Ajmer region is on the top of the list with 2.54 as the rural-urban IMR ratio. On the other hand, much wide gaps have been observed across districts in terms of rural-urban U5MR. The ratio varied from 2 to 3.1 in the districts of Kota, Jhalawar, Chittorgarh and Tonk, reflecting the higher U5MR in rural areas than their urban counterpart. Tonk district ranked on the top of the list with 3.1 as the rural-urban U5MR ratio. In order to study the gender differentials in the state, the ratio of female IMR/U5MR to that of male IMR/U5MR has been calculated. It shows that in most of the district's the value of the ratios for female to male has exceeded one, indicating that mortality among the females is higher than that of males. The value of the ratios for female to male IMR has always exceeded one except for Bhilwara, Chittorgarh and Tonk, indicating that the level of mortality among females is higher than that of males. Overall the mortality rates are higher among the rural and the females across all the districts.

CONCLUSION

Health outcomes continue to improve in the Rajasthan because of improved social conditions, advancing medical and scientific knowledge, a highly trained professional workforce and massive investment in the health care system. However, these improvements mask a widening gap between the health outcomes of the rural-urban and male-female population. Various socio-economic factors attribute to the inequalities in availability and accessibility of the health

facilities across states, regions, cities and also across social and religious groups. Social determinants of health are interconnected and can influence health both directly and indirectly. For example, poverty is linked to poor housing, access to health services or diet, all of which are in turn linked to health. Similarly, educational disadvantage can limit access to employment, raising the risk of poverty and its adverse impact on health. Despite progress in improving access to health care, inequalities by socio-economic status, geography and gender continue to persist (Joe, et al., 2008). The growing inequalities in health and health care are taking its toll on the marginalized and socially disadvantaged population. Thus inequality in health status between population groups is embedded in social and economic inequalities.

Over the period of time Rajasthan has fared well in terms of its population health but it is lagging far behind to national averages. The analysis of rural-urban differentials in IMR shows that the rate of decline of IMR in urban areas in 1972-2010 remained slower (-1.784) than the rate of its decline in rural areas (-2.176) for the same period. As a result rural-urban mortality differentials have become smaller to some extent. However, the pace of decline is not the same for both rural and urban IMR. Differences across districts with respect to rural-urban and male-female, infant and under five mortality rates are also confirmed by Coefficient of Variation for the period of 1990 to 2011. However their extent of differences has narrowed down over the three decades. Paired-t Test also confirmed that in the case of Infant Mortality Rate both male-female and rural-urban differences are found significant from the period of 1990 to 2011. There are no differences found in U5MR male-female during 1990 time period. However, in 2000 and 2011 differences in male-female U5MR are found to be significant. Rural-urban differences in U5MR are found during 2000 and 2011 time period. The analysis of district wise data on IMR reveals that there are considerable regional variations. Irrespective of administrative regions or district, the ratio for rural to urban areas has always exceeded one except for Baran, Dungarpur and Karauli districts, indicating that the levels of infant mortality is always higher in rural areas than that of urban areas for all the four administrative divisions and 30 districts. Similarly, in the case of U5MR, the value of the ratios for rural to urban areas has also exceeded one except for Dungarpur district, indicating that the level of U5MR is always higher in rural areas than the value of urban areas for all the six administrative divisions and 31 districts. The female to male IMR ratio has always exceeded one except for Bhilwara, Chittorgarh and Tonk, indicating that the level of mortality among females is higher than that of males. Overall the mortality rates are higher among the rural areas across all the districts. Male and female differentials in IMR are also evident in many parts of Rajasthan, thus contributing to the gender bias of the state. There is no denying the fact that these poor health outcomes could also result from different socio-economic variables (Kateja, 2010). There are many factors affecting health. Some lie outside the confines of the health sector. The circumstances in which people grow, live, work and age” strongly influence how people live and die (WHO, 2008). Education, housing, food and

employment all have an impact on health. Readdressing inequalities in these will reduce inequalities in health. Also, underfunding alone is not a reason for poor health services in most of the states. The effectiveness of various government interventions and efforts is hampered by weak and often non-functional public health systems and non-availability of required manpower. In rural areas access to health services is nominal and health standards at the very best are grossly inadequate. The poor have limited access to the qualified private sector due to both the locational disadvantage and financial constraints. The results establish clear inequality between and within rural and urban areas. Acceptance of health as an intrinsic human right requires consideration of the mechanisms for achieving equity in health that is the reduction of unfair inequalities. Health inequality is largely explained by unequal access to material factors necessary for health such as good housing, adequate income, healthy food, opportunities for recreation and access to health services. As the social determinants of health interplay in generating and sustaining inequity in health outcomes so appropriate attention should be given towards social determinants when designing policies and programmes to reach equitable progress towards health outcomes. The study suggests adopting different health policy interventions in accordance with varying contribution of socio-economic factors on child health.

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