

# Gender Bias in Health and Nutrition Care

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The data presented by Shanti Ghosh indicate that in many households across the country, boys generally enjoy preference over girls in the matter of health care. Mortality and morbidity rates are apparently higher and severe clinical forms of protein calorie malnutrition like kwashiorkor more prevalent in girls than in boys. The prevailing distortion in population sex ratio in all States of the Indian Union, excepting Kerala, is in line with these findings. It is generally believed that, with respect to health care and nutritional inputs, girls, at least in poor households, suffer relative neglect and that women in general get an inequitable share of the food available to the family.

It must, however, be confessed that on a subject of such great social significance and national importance, prevailing conclusions rest largely on impressions and inferences rather than hard scientific data based on quantitative measurements. Such evidence of the latter category as is available is scanty, and to some extent contradictory. Here is a subject which merits far greater attention from nutrition scientists than at present. Some of the available evidence has been critically examined below.

**Under-fives:** The reported observations of the National Nutrition Monitoring Bureau (NNMB) run counter to the general belief that with respect to nutrition, girls, as compared to boys, are at a disadvantage. Indeed, NNMB's observations point to just the opposite conclu-

sion, namely, that not only is there no evidence of discrimination against girls but that, if anything, it is the boys, and not the girls, who are at a disadvantage in all the States except Orissa!

The data on sex differential in prevalence of undernutrition as reported by NNMB from its surveys in 1981 relating to rural populations in seven States of the Indian Union (NNMB — "Report For the Year 1981", published by NIN in 1984) have been summarised in Table 1. For the classification of subjects into different grades of undernutrition as per the Gomez scale, as shown in the table, NNMB had used, not the conventional international (Harvard or NCHS) standard but a standard which it had adopted on the basis of its earlier surveys of "well-to-do" children in Hyderabad. The results arrived at by NNMB by such analysis have been examined in detail by Kakwani (N. Kakwani: WIDER (UNU) Working Paper 9, 1986), who concludes that "these results suggest the existence of a strong sex bias against male children"; and adds: "This is indeed very surprising in view of the common belief that there is discrimination against females in intra-family food allocation."

NNMB's surveys are conducted by competent well-trained teams of investigators under the direction of the National Institute of Nutrition. There can, therefore, be no reservations and doubts whatsoever about the validity and reliability of actual measurements themselves. We may, however, discuss

NNMB's analysis and interpretation of its data.

It could be argued that since the above data of NNMB pertain to surveys conducted in a single year (1981), the sample size was perhaps too small (a total of 2,516 children under five years belonging to both sexes from all seven States) to justify far-reaching conclusions. That this may not be a valid objection is shown by the fact that careful scrutiny of NNMB's data over a four year period covering a much larger sample (1975-1978) published by NIN in 1980 also led to the same conclusion.

In Table 2, the "Hyderabad Standard" used by NNMB for the categorisation of children into different grades of undernutrition according to the Gomez scale, the Harvard Standard, and the NCHS Standard which is conventionally now used have been compared. It will be seen that not only are the wt/age values for both boys and girls in the Hyderabad Standard lower than in the latter two, but what is more germane to the present discussion, the differences in wt/age between boys and girls in the Hyderabad Standard are of a higher order than in the NCHS Standard and to a greater extent so in the case of the Harvard Standard.

In Table 3 we have attempted a comparison of the results of analysis of NNMB's data using the Hyderabad, Harvard and NCHS Standard. Though we had analysed the data for all States, in view of space constraints we have included in the table data from only two States, viz. Kerala and Uttar Pradesh. Data from other States show identical trends.

The comparison will show that the flattering picture with respect to girls as compared to boys which emerges with the use of Hyderabad Standard disappears completely when the conventional NCHS Standard is used as the yardstick.

Table 1: Percentage distribution of 1-5 years children according to Gomez classification — 1981 — Boys (B) and Girls (G).

State	Number		Normal		Mild		Moderate		Severe	
	B	G	B	G	B	G	B	G	B	G
Tamil Nadu	229	197	8.7	11.7	38.9	46.7	42.8	34.5	9.6	7.1
Karnataka	247	222	11.3	17.1	41.3	49.5	41.3	28.4	6.1	5.0
Andhra Pradesh	285	251	11.9	19.5	42.1	53.8	41.0	23.9	4.9	2.8
Maharashtra	195	153	11.8	20.9	40.0	39.9	42.6	32.7	5.6	6.5
Orissa	55	61	14.5	19.7	50.9	37.7	32.8	37.7	1.8	4.9
West Bengal	168	164	14.3	20.1	44.0	53.7	39.9	23.8	1.8	2.4
Uttar Pradesh	161	128	13.0	31.3	50.9	48.4	35.5	18.0	0.6	2.3

Source: NNMB Report for the year 1981, NIN, ICMR, Hyderabad (published 1984).

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for comparison. With the Harvard Standard, it will be seen that it is the girls who appear to be decidedly worse off.

It may be perhaps argued that the Harvard Standard, or for that matter the NCHS Standard may not be necessarily appropriate for Indian children. It will be noted that between the two international standards themselves, there are differences. It is obvious that the girl subjects of the Harvard Standard were relatively obese in comparison to those of the NCHS. The validity of the present international standards, as far as Indian under-fives are concerned, has yet to be tested in the same way as their validity with respect to older children (over five years of age) was established by Vijayaraghavan *et al* (*Ind. Jour. Med. Res.*, 59, 1971).

While, pending such validation, we may thus have some reservations regarding the use of international standards, there can be no doubt whatsoever that the Hyderabad Standard being used by NNMB since 1976 based on a sample derived from just one part of the country, is far too small and not adequately representative for the purpose of arriving at a National Growth Standard for Indian under-fives. In India, as in other developing societies (unlike

in developed countries not subject to environmental constraints on growth where the secular trend with respect to growth has almost plateaued off), there are different orders of nutritional deprivation and "affluence" among different population segments within each country. Not all the relatively "affluent" can be considered to have as yet achieved full genetic growth potential. Under these circumstances, the establishment of 'indigenous' growth standards in developing countries would call for careful attention to the sample frame; even the standard so arrived at may need frequent updating in view of the continuing secular trend. Till such time as we are able to establish a truly valid 'national' standard it may be prudent to use the conventional international standards which are currently in wide use; this is especially justifiable in view of the mounting evidence that genetic differences as between populations with respect to growth are relatively of minor importance (*Lancet*, 1. 142. 1984), when considered in the context of environmental constraints on growth.

On the basis of these considerations, we may not accept the conclusion that boys rather than girls are being discriminated against which emerges from the

analysis using the Hyderabad Standard. We may not also accept the conclusion emerging with the use of the Harvard Standard that there is bias against girls for the reason that the more recent NCHS Standard from the same country throws doubt on the validity of figures on under-five girls in the Harvard Standard. It would seem reasonable to conclude on the basis of analysis of NNMB data, using the NCHS Standard, that these data provide no significant evidence of any bias against either sex.

It is also noteworthy that the NNMB data show that Kerala, the only State in the country with a normal sex ratio and the State with the highest level of female literacy and an exceptional record in the field of health care and family planning, reveals nearly the same growth pattern and same order of sex difference with respect to growth as Uttar Pradesh, which is almost at the other end of the spectrum. If discrimination against girls with respect to nutritional inputs was significant, we should have seen greater differences between girls and boys of Uttar Pradesh than those of Kerala.

**Children over four years old:** In Table 4, weights of girls as percentages of weights of boys of the same ages, as

**Table 2: Comparison of weight for age standards for boys and girls (1-5 years) — Harvard, NCHS and Hyderabad.**

Age Months	Harvard			NCHS			Hyderabad		
	B	G	(Kg) (B-G) Difference	B	G	(Kg) (B-G) Difference	B	G	(Kg) (B-G) Difference
18	11.43	11.11	0.32	11.5	10.8	0.7	10.50	9.80	0.7
30	13.61	13.43	0.18	13.5	13.0	0.5	12.50	11.30	1.2
42	15.56	15.38	0.18	15.7	15.1	0.6	14.75	13.30	1.45
54	17.42	17.46	-0.04	17.7	16.8	0.9	17.25	15.65	1.60

**Table 3: Percentage distribution of 1-5 year old children in different grades of malnutrition according to Gomez classification using three different standards.**

Grade	Harvard *		Kerala NCHS **		Hyderabad***		Harvard		Uttar Pradesh NCHS		Hyderabad	
	B	G	B	G	B	G	B	G	B	G	B	G
	Normal	5.0	2.5	4.4	4.3	11.8	21.2	9.7	4.8	9.0	7.6	17.3
Mild	35.1	29.2	33.9	35.5	41.9	47.6	36.9	33.1	35.5	38.0	40.9	44.3
Moderate	47.1	52.8	48.2	49.1	38.1	27.7	38.9	46.6	40.5	42.1	32.8	24.0
Severe	13.0	15.6	13.5	11.1	8.2	3.5	14.5	15.5	14.9	12.4	9.0	4.8
N	525	487	525	487	525	487	946	768	946	768	946	768

\* have been calculated on the basis of mean and standard deviation values assuming a normal distribution.

\*\* report for the year 1979, NIN, ICMR, Hyderabad.

\*\*\* 50th percentile of Harvard Standards.

\*\*\*\* WHO — International Growth Reference (NCHS) — 50th percentile (Nut/78.1).

\*\*\*\*\* Growth pattern of well-to-do Hyderabad pre-school children — Hanumantha Rao, D., Satyanarayana, K., Gowrinath Sastry — 1976 — Indian Journal of Medical Research — 64, 629-638.

Table 4: Weights of girls as percentage of weights of boys of the same age.

Age (in years)	(Weight of girls/weight of boys of same age) x 100				
	NCHS	Kerala	Uttar Pradesh	West Bengal	Maharashtra
4+	94.9	97.1	95.0	96.0	97.8
5+	94.4	98.6	103.4	93.8	95.7
6+	94.9	95.7	99.2	97.4	98.5
7+	97.1	101.9	96.1	97.4	100.5
8+	99.6	94.6	100.7	96.9	99.1
9+	102.7	98.7	97.6	95.6	99.4
10+	104.2	101.0	98.6	98.9	97.7
11+	104.5	100.5	104.8	102.1	104.8
12+	103.5	102.4	104.8	104.5	104.5
13+	101.0	105.3	101.5	105.0	105.4
14+	96.8	104.9	101.3	108.0	109.3
15+	92.4	106.4	95.7	102.0	102.2

Source: (1) WHO — International Growth Reference.

(2) NNMB Report for the period 1974-79. NIN, ICMR, Hyderabad (published in 1980)

calculated from data published by NNMB, have been compared with the corresponding percentage values calculated from NCHS data for American children. Because of space constraints, we have presented data with respect to four States only; other States show the same trend. It will be clear that with respect to body weight, relative to boys of the same age, girls in the Indian States are no worse off than their American counterparts. Of course, considering that the Indian populations surveyed were far from being affluent, the actual weights of Indian children, both boys and girls in the different age groups, were considerably less than those of NCHS; but what is important for our present purpose is the finding that relative to the boys, the girls were not worse off.

It will also be noticed that weights of girls begin to exceed weights of boys around the 9+ year in the case of NCHS, and around the 11+ year (10+ in Kerala) in the case of Indian girls. By the end of the 13th year, in the case of NCHS, the boys were again in the lead, while Indian girls continued to maintain the lead over boys even up to the end of the 14th year. These data are in line with the well-known fact that menarche and consequently the prepubertal growth spurt are delayed in undernourished populations.

An exercise similar to the one above with weights, was also carried out with the height data. Heights of girls as percentages of heights of boys of the same ages, as calculated from the NNMB data were compared with the corresponding percentage values calculated from NCHS data for American children. Again there was no evidence that girls were re-

latively more stunted than boys. Both the sexes showed nearly the same order of height for age deficits when compared to their respective standards.

**Adults:** From an analysis of NNMB data for 1975-1979 and 1980, Kamala S. Jaya Rao (*Bulletin of the Nutrition Foundation of India*, July 1984) had concluded that "as far as food intake goes, women are no worse than men"; and that "the NNMB data do not support the contention that rural Indian women are more undernourished than the men". The latter conclusion was based on the finding that "body size deficit" was less in women than in men. Body size deficit was calculated as body weight for height compared to a standard (provided by Jelliffe, D.B. — Assessment of the Nutritional Status of the Community, WHO 1966). Vaidyanathan who had also come to a conclusion somewhat similar to that of Kamala S. Jaya Rao (*A. Vaidyanathan: Food Consumption and the Size of People — Some Indian Experiences*; Centre for Development Studies Working Paper No. 188, Trivandrum) had again apparently relied on wt/ht ratio. There could be some reservation with respect to the validity of wt/ht ratio (body-size) in the case of undernourished populations, subject to considerable degrees of stunting.

Kamala S. Jaya Rao had also drawn attention to the fact that the NNMB diet survey data show that, with respect to calorie inadequacy, "it is consistently seen that either both sexes suffer to the same extent or the figure (proportion suffering from calorie inadequacy) is actually less in females". She also points out that "even in the pre-school group,

where the incidence of severe protein calorie malnutrition is higher among girls, calorie intake is not comparatively lower in girls". These observations do not support the general impression that girls and women are being denied a fair share of the family pot. Kamala S. Jaya Rao has argued that the higher prevalence of protein calorie malnutrition reported in girls (C. Gopalan & A.N. Naidu *Lancet*, 2. 1077. 1972) "is obviously due to lower food intakes but probably due to a general neglect of their health". The poorer health and nutritional status of girls and women could be more attributable to 'neglect' with respect to health care (and obstetric care) rather than deliberate encroachment on their share of the family food by the males.

### Concluding Comments

Conflicting and confusing as some of the evidence on the subject may be, the conclusions that stand out from available data, may be summarised as follows:

- Mortality rates in females throughout childhood and reproductive period are higher than in males, as reflected in the distorted sex ratio and the Registrar General's figures, though there is some improvement in this regard in recent years.

- Government (free) health institutions which are equally open to both girls and boys, generally attract more boys than girls, indicating that parents, at least the poorest rural households, seek institutional medical attention more frequently for their sons than their daughters.

Severe clinical manifestations of undernutrition such as kwashiorkor are apparently more prevalent in girls than in boys (probably for the reason above, that they more often fail to get prompt medical treatment for superadded infections).

Such national diet survey data as are available, however, do not indicate that diets of girls are more inadequate than those of boys, and do not support the view sometimes propagated that in the matter of intrafamilial food allocation, poor parents deliberately discriminate against girls to the point of "slowly starving them", though there are some local reports to the contrary.

Anthropometric survey data from different States across the country do not show evidence of greater degrees of growth-retardation in girls than in boys, a finding in keeping with the above.

On the basis of the above conclusions, the view that girls in poor households are generally worse off than boys with respect to *prompt institutional health care during acute illness* would seem justified.

It may, however, be too simplistic to dismiss this current scenario as evidence of 'wilful neglect' and 'positive discrimination' against the female child on the part of her poor parents (especially her mother). The poor are by no means inhumane. Deeply enmeshed in the poverty trap and facing formidable social and economic hardship, they have constantly to make agonising compromises and painful choices to eke out a miserable living and ensure at least the survival of the family. The mother's failure to trek to the distant health centre and wait in long queues every time the child falls ill, risking her daily wage which she direly needs for feeding the family, may be one of such painful choices. She may decide instead to opt for 'home remedies'. In households where incomes are largely derived through manual labour and where daily wages are related to productivity, it is understandable that the boy rather than the girl is prized as the potentially better wage-earner. The entire blame for the poor health-care of both boys and girls (of the girls to a greater extent than the boys) in rural households cannot be laid at the mother's door. It is well-known that presently the outreach and quality of our health services in rural areas is woefully inadequate and domiciliary visits by health workers are either nonexistent or so few and far between to make much

impact on the children's health.

Under these circumstances, what the poor need are not strident self-righteous sermons from the rich but concrete steps which will lift them out of their present poverty and relieve them of the necessity to make those agonising choices which they are now constrained to make with all the attendant unhappiness and misery.

The cause of the female child in our poor households will be served only if her problem is viewed and addressed as an integral part of the 'poverty syndrome' afflicting the family and the community and not as a manifestation of behavioural aberration on the part of her parents. It will be poor strategy to sidetrack what essentially must be a battle against poverty and socio-economic inequality into a skirmish between sexes within poor households themselves; such digression which pits one half of the poor against the other half, will only help vested interests and obscure the basic central issue.

It must be remembered that even if there is no 'discrimination' against girls and if they happen to be only just as badly off as boys, their lot would not have improved significantly. Health and nutritional status of both boys and girls in poor communities are far from satisfactory; such differences between sexes in this regard as may exist are relatively insignificant when compared to the total quantum of ill-health and undernutrition in either sex. Our concern is not just to ensure that boys and girls in our poor households suffer *equally* from ill-health and undernutrition, but that *both* of them enjoy adequate health care and nutrition.

The real "discrimination" against the female in our society (not necessarily with respect to health care) is practised not by the poor but by the middle classes and even the rich — discrimination and harassment motivated by obscurantism and greed for money (e.g. dowry and bride-burning). It is suspected that the increasing acceptance of the "small family norm" by the well-to-do is also being facilitated by rising numbers of selective abortions of female foetuses, though precise scientific evidence to this effect is hard to come by, for obvious reasons. It is the rich and the middle classes (certainly not the poor) that provide the clientele for the amniocentesis clinics guiding this operation. It is to these classes rather than to the poor that our reformers must direct their at-

ention. The problem of the female child in poor households is part of the problem of poverty and needs to be treated as such.

It must also be remembered that in rural India today, gender differences (unfavourable to girls) with respect to levels of literacy, school enrolment, school drop-outs and opportunities for vocational training, are far more glaring than differences in morbidity, mortality and health care. Anti-poverty programmes must go hand in hand with innovative intensive programmes for education and vocational training of girls. It is ultimately only through better education and acquisition of income-generating skills that girls will achieve economic strength and gain their rightful place in the decision-making processes within the family.

The girls of today will not only usher in the generation of tomorrow but will also shape it. They are bound to contribute in an increasing measure to the ranks of our future work force. Considerations of national self-interest as much as concern for norms of any civilised society, demand that the handicaps which girls currently suffer from, whether such handicaps spring out of obscurantism, greed or poverty, should be eliminated from our society.

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### Announcement

The Office of the Foundation (now located at the Council of Social Development building in Lodi Estate, New Delhi) is shortly being shifted to the India International Centre, Lodi Estate, New Delhi — 110003. All correspondence may however, continue to be addressed to B-37 Gulmohar Park, New Delhi, as hitherto.

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