

Health Conditions of Mothers and Children in Sikkim

A joint AIIPH&PH and UNICEF Survey Report

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All India Institute of Hygiene and Public Health
110 Chittaranjan Avenue
Calcutta 700 073

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DR. N. S. DEODHAR

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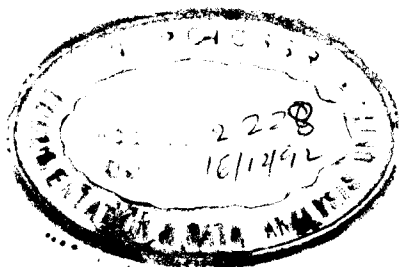
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CHAPTER I

INTRODUCTION AND METHODOLOGY

A preliminary meeting of the Directors of Health Services of North-Eastern States/ Union Territories, representatives of the UNICEF, some experts in Health Survey Methodology and the faculty of the All India Institute of Hygiene and Public Health was held at the Institute premises on October 27-28, 1978. The object was to get their views on the survey project, to consider operations and logistics of the Surveys, to discuss methodology, etc. The background and working papers were prepared by the Faculty of the All India Institute of Hygiene and Public Health, Calcutta. This meeting was attended, among others, by officers from the Health Directorates of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Sikkim and Tripura. The State/UT representatives gave a gist of problems they considered important. The general consensus was that hardly any statistical data existed to quantify the extent or type of health problems and there was an overwhelming need to undertake large scale sample surveys to create these data.

The main health problems mentioned by different States/UTs were high infant mortality, infective hepatitis, malaria, goitre, tuberculosis, hookworm infestation, and eye diseases. It was generally felt that many of these health problems, and particularly their extent, could be attributed to social taboos and tribal customs.

There was considerable discussion on the objectives of the surveys. It was finally decided that the proposed survey should have the following objectives:

- (a) To identify the health conditions of mothers and children for which effective preventive or curative measures could be taken.
- (b) To identify common causes of morbidity and mortality.
- (c) To suggest steps to be taken to evolve suitable health programmes.

The household was considered an appropriate unit for collection of the information. The items for which data were to be generated included: (a) demographic characteristics, (b) socio-economic characteristics, (c) morbidity owing to certain specific diseases, (d) nature and extent of physical disabilities, (e) immunisation status, (f) family planning practices, (g) source of drinking water, (h) food practices during certain illnesses, (i) available health facilities and their utilisation, (j) cultural practices related to delivery and child rearing, (k) choice of weaning foods, (l) habits of personal hygiene. It was also decided to carry out certain simple laboratory tests to determine the actual health status.

In April 1979, the Government of India accorded a formal sanction to launch survey studies on health conditions of mothers and children in the North-Eastern region of the country. UNICEF provided the financial assistance and the All India Institute of Hygiene and Public Health gave the technical guidance and support. This support covered all aspects of the study namely, development of appropriate instruments, sampling design, training of the staff, coordination of the field work, analyses of data and report writing. Besides, the Institute maintained day to day liaison with

the State/UT Governments on all matters including assessment of financial resources required by the States/UTs for the survey. For ensuring smooth and speedy conduct of the surveys, the Government of India appointed a coordination committee with the following members.

1. Dr. N. S. Deodhar (*Chairman*),
Director,
All India Institute of Hygiene and Public Health, Calcutta
2. Dr. (Miss) N. J. Sethna (*Member*),
Professor of Maternal & Child Health,
All India Institute of Hygiene and Public Health,
Calcutta
3. Dr. (Miss) E. V. Sebastian, (*Member*),
Deputy Commissioner (MCH),
Department of Family Welfare,
New Delhi
4. Dr. (Miss) Sindhu Phadke (*Member*),
Resident Programme Officer, UNICEF,
Calcutta

Since all items of work pertaining to technical guidance and support for the surveys (except development of the instruments) were expected to be handled by the Statistics Department of the All India Institute of Hygiene and Public Health, Calcutta, the Chairman of the coordination committee appointed Dr. S. S. Srivastava, the Professor of Statistics at the Institute as the Project Manager for the survey studies.

Based on the guidelines evolved during the preliminary meeting, the All India Institute of Hygiene and Public Health developed five different schedules for collection of the information. The specific information elicited through each of these five schedules was as follows:

Schedule I (State Schedule)—

This schedule was completed at the State or Territory headquarters.

Infrastructure for the health care delivery system existing in a State or Union Territory.

Schedule II (Institution Schedule)—

Schedule II was canvassed at various health institutions at different levels where the people from the sampled villages were expected or likely to visit or were referred to.

Availability and utilization of services in health institutions like primary health centres, hospitals, dispensaries serving the population/villages selected in the sample.

The information was collected using institutional records which also threw some light on community's morbidity pattern as per these records and on the linkages in referral services.

Schedule III (Family Schedule)—	Information on socio-economic, demographic and epidemiological variables related to overall family health problems.
Schedule IV (Mother Schedule)—	Morbidity/mortality incidence in the antenatal, natal and post-natal periods together with information regarding social and cultural practices pertaining to sicknesses and deliveries.
Schedule V (Child Schedule)—	Information on health/ill-health status of infants and children.

Schedules III, IV and V were administered at the household level.

A formal meeting of the Directors of Health Services from various North-Eastern States/UTs was held on September 6-7, 1979 at the All India Institute of Hygiene and Public Health. The purpose of the meeting was to have detailed discussions on the contents of the schedules developed by the Institute, the overall sampling design, the dates of surveys in various States and the general administrative arrangements pertaining to the conduct of the surveys.

The schedules were modified in the light of the comments received in this meeting. However, it was recommended that different States/UTs could further modify or alter the schedules to suit their specific needs. Regarding the sampling design it was considered desirable to choose the sample size in such a manner as the districtwise estimates for various health indicators could be obtained. It was, therefore, decided to have multistage sampling design, with two stages for certain States and three stages for the others. Wherever two stage design was adopted, the first stage units were either villages or cluster of villages, and the second stage units were the households. In a three-stage design, the first stage sampling was done from the blocks (either Taluk Development or Community Development), the second stage units were the villages or cluster of villages from these blocks and third stage units were the households.

It was decided that a State/UT level meeting was necessary before launching the survey operations in any particular State/Union Territory. In these meetings, not only the five schedules were to be adapted specifically to the local needs and problems, but also the actual samples as per an agreed design were to be drawn. Besides, the decisions regarding the number of field workers to be deployed for the survey, their training needs, budgets and other administrative matters were to be discussed at these meetings.

1.2 Methodological and Operational Details

A State level planning meeting to finalise all details of Sikkim survey was held in Gangtok on October 10-11, 1979. As stated in the earlier section, the purpose of this meeting was first to explain aims, objectives and methodology of the survey to all State officials involved in supervision and coordination of the field work. The second purpose was to evolve final version of the five schedules and to finalise the sampling

design as well as the budget requirements for the State. The actual sample as per the agreed design was also drawn at this meeting.

The schedules as finalised in this meeting and used in the Sikkim survey are given in Appendix I. The sampling plan was a two stage stratified random sampling design. The four districts in the State were regarded as four strata. The first stage units were villages and the second stage units were households. According to the design, 10 per cent of the villages were selected randomly from each district and 25 per cent of the households were selected, also randomly, from within each of the selected villages. Thus, the overall sampling fraction was of the order of 2.5 per cent or 1 in 40 households in each district. The list of villages selected in each of the four districts is given in the following table:

TABLE 1.1
Districtwise list of Sample Villages

Sl. No.	Names of the selected villages			
	East District	North District	West District	South District
1.	Pakyong	Kazor	Upper Thambong	Highdam
2.	Ranka	Pentong	Dentam	Yangang
3.	Pancheykhani	Lachung	Srinagi	Kartikey
4.	South Regu	Lower Mangshila	Lingchom	Kateng
5.	Sichey Gaso	Singhik	Tikjek	Legship
6.	Namin	Gor	Mabong	Daring
7.	Dolopchen	Rongong	Berfok	Bell
8.	Tadong		Begha	Ramabong
9.	Chuba		Thashiding	Sangmo
10.	Syari		Singlitam	Passi
11.	Shazong		Thingling	Poklok
12.	Byong		Omchung	Kabrey
13.	Central Pandam			Dethang
14.				Donak
15.				Kitam

It was decided that the field workers would be trained at respective district headquarters and that the training programme will be organised on October 29-31, 1979. The actual field operations were scheduled to be conducted during the month of November, 1979. The reference month for survey was decided as September, 1979 and the reference year was taken as July, 1978 to June, 1979. All survey operations proceeded as per the schedule. The filled-in schedules were received at the All India Institute of

Hygiene and Public Health in December, 1979. At the Institute, the work on scrutiny and coding of schedules was taken up immediately. Preparation of code plans for open-ended questions, which were largest in Schedule III, turned out to be a time-consuming process and similar was the case with management of the tabulation programme. The data were computerised. Even so, the initial phase of programming was unduly prolonged running into several months and the actual processing work turned out to be more voluminous than anticipated. The last set of final tables were received at the Institute sometime in November, 1980.

It was anticipated that the survey would cover 2.5 per cent of households in each village, which would result in selection of approximately 1000 households in the State. The actual number of households surveyed turned out to be 970. The post-facts count of schedules of each type was as follows: Schedule I was one in number, Schedule II was 29 in number, and districtwise breakdown of other schedules is contained in Table 1.2 below.

TABLE 1.2
Districtwise number of Families, Mothers and Child covered in the sample

Schedule	Number of Schedules or responses				
	District				All Districts
	East	North	West	South	
Schedule III (Family)—	280	215	286	189	970
Schedule IV (Mother)—	261	207	274	186	928
Schedule V (Child)—	710	472	765	505	2,452

1.3 Information on Institutional Sample

What kind of facilities and services do the health institutions offer to the people, particularly in relation to the health problems of mothers and children? What is the extent of services available to people at large? These are the kind of questions for which answers were sought through the Schedule II. Table 1.3 gives the distribution of the type of sampled institutions by districts.

TABLE 1.3
Distribution of Health Institutions in the sample by type of the Institution and by District

District	Numbers				
	Hospitals	PHC*	Sub-centre	Dispensary	Total
East	2	5	0	0	7
North	1	1	3	1	6
West	1	4	4	0	9
South	1	4	2	0	7
All Districts	5	14	9	1	29

*PHC=Primary Health Centre.

The names of 14 sampled PHCs together with information on the number of villages and population covered by these, are given in Table 1.4.

TABLE 1.4
Districtwise distribution of sampled PHCs along with the number of sub-centres/dispensaries attached to them, and number of villages and population served by them

District	Name of sampled PHCs	Number of Sub-centres/ Dispensaries attached	Number of villages served	Population covered
East	Samdong	0	1	Not Available
	Rongpo	1	26	24,608
	Pakyong	3	33	10,000
	Song	3	17	7,900
	Rongli	1	37	Not Available
North	Phodong	2	5	5,000
West	Soreng	0	12	6,523
	Richenpong	1	21	10,000
	Tashiding	1	17	Not Available
	Sombaria	Not Available	15	10,000
South	Jorethang	1	29	23,000
	Namthang	2	60	7,215
	Ravangla	3	18	9,000
	Temitarku	1	7	1,963
All Districts	14 PHCs	19†	298	1,15,209

†Out of these 19, only 10 were included in the sample.

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