Chapter 2
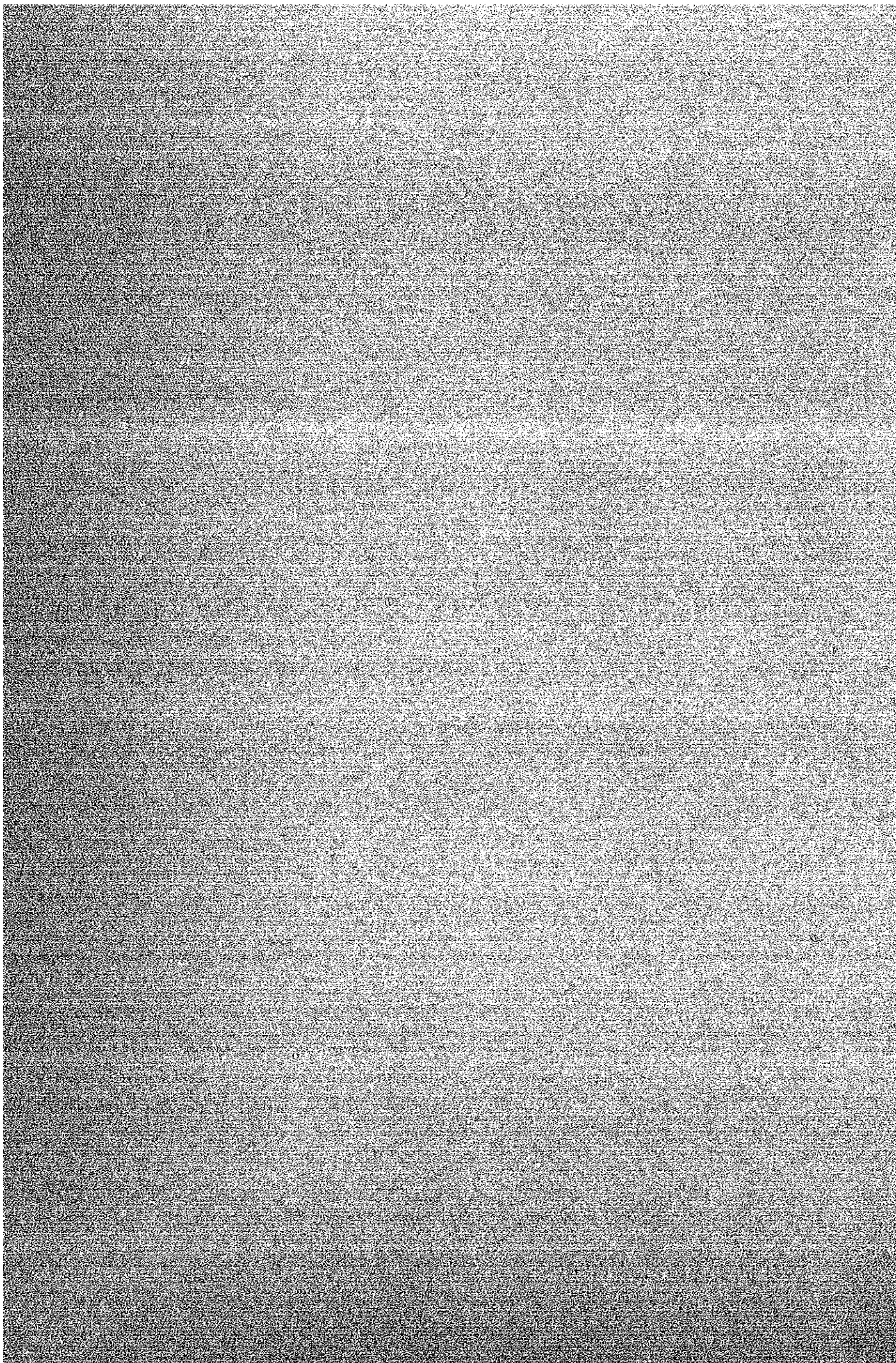
OUTLINE OF SURVEY AREAS

CHAPTER 2 OUTLINE OF SURVEY AREAS

1. Geographical Features and Socio-Economic Background

Two districts, Kavrepalanchok in the hills and Dhanusa in the Terai, were selected for this survey. Kavrepalanchok is located in a central development region, Bagmati zone, with altitudes ranging from 1,007 to 3,018 meters; while Dhanusa belongs to a central development region, Janakpur zone. Previously, as malaria was prevent in the Terai and living conditions were extremely primitive because of the jungled area, population was not too dense. However, an anti-malarian program was initiated in 1958 and vigorously promoted throughout the 1960's. As a result, mortality rates in the Terai declined, and natural population growth rate increased.

Table 2-1 shows the comparison between the Terai and the mountains/hills in terms of area, population, and food production. Most of the population in Nepal is living in the mountain and hill areas which account for 78% of the total land area.

However, the food production ratio is obviously greater in the Terai. Recently, the Terai has been developing rapidly partly due to government policies, and the excess population from the hills has moved into the Terai. Due to such social migration, population in the Terai has also increased.

The above situation is not unique and includes the Kavrepalanchok and Dhanusa. Table 2-2 shows demographic indicators to verify such trends. Birth rates by district are not available in Nepal. So as an indicator of fertility, the child-woman ratio (0–4 population/15–49 female population x 100) is given.

The population growth rate in the past 10 years was higher in Dhanusa; child woman ratio is similar in both districts. Furthermore, the average family size is smaller in Dhanusa. Therefore, population growth stemming from social mobility has recently accelerated rapidly in Dhanusa.

Table 2-3 shows the population distribution of the five most popular languages in each district.

In Dhanusa, 86.1% of the total population use Maithali. Language structure of Maithali is very similar to Bihari in India. Based on geometrical conditions, Dhanusa is apparently strongly influenced by India.

Turning to the population composition by language, in Kavrepalanchok, those who speak Nepali, Tamang, and Newari are 63.4%, 23.5% and 9.6%, respectively. Nepali and Newari are Indo-European languages and spoken in the hill areas. The Nepali and Newari populations constitute a caste society. On the other hand, Tamang is a Tibeto-Burman language spoken

in higher mountain areas. Tamang people's occupations are described as follows: "They grow corn, Deccan grass, wheat, and potatoes; in low lying areas they cultivate paddy rice and keep cows, water buffaloes, goats, and pigs ... They have excelent handicraft skills with wood, bamboo, stone, and woolen fabrics, and have been meeting the demand in Kathmandu, a huge consumption center."[1] This fact suggests that Dhanusa is culturally, economically and socially influenced by India, while Kavrepalanchok has a more complex ethnical background. Population by language group is not included in survey items of the current study, so further information is not available.

With respect to the industrial structure, 94% of the population of Nepal live in rural areas, and 90% of the working population is engaged in agriculture. This industrial structure is common to both Kavrepalanchok and Dhanusa. Table 2-4 indicates the comparison of the two districts in terms of industrial structure.

In the Kavrepalanchok, 93.3% of the working population is engaged in agricultural work, and 80.5% in the Dhanusa. The ratio of the agricultural population is extremely high.

Table 2-5 shows the literacy rates of the two districts by sex and age groups.

Both male and female educational levels in Kavrepalanchok are higher than in Dhanusa. Since 1951, various policy measures have been implemented for the improvement of the educational level, and the National Education System Plan was adopted in 1971. This was the turning point, and since then notable positive changes have been made in the educational foundation, such as institution, financial system, assignments of teachers, and curricula.[2] As shown in Table 2-5, the literacy rate is higher in younger generations, excluding those between six and nine. This relates to the timing of the commencement of the national plan. In Nepal, it has only been 20 years since a modern educational system was implemented. As a result, the educational level is higher in the late teens and early 20's.

2. Medical Facilities

(1) Structure of Diseases

As reported in the "Basic Survey on Population and Family Planning in the Kingdom of Nepal," morbidity has been estimated based on several hospitals' statistics[3]. In order to improve this situation, a reporting system whereby each health post submits an injury and disease report to the Ministry of Health through their district office was introduced in April 1986. This system just started, and different health posts are reporting at different times. The statistics given here

show the total of the figures reported by four health posts each in the two districts covered.

As shown in Tables 2-6 and 2-7, the number of patients declined in October and November in both districts. As explained in the previous section providing a district overview, this period is the busy farming season. Therefore, it seems that people don't have time to visit a health post, and even if a patient is seriously ill, there is no one available to accompany him or her to a health post.

Regarding the changes in the number of patients, however, it should be noted that the cases counted here are not divided by age groups nor sex. In Kavrepalanchok, the ratio of infectious disease is high. Thus, it might be taken into account that, due to the housing situation in the district, the infection rate among the family must be much higher than the figures presented. Moreover, the statistics show an extremely small number of disease reports on pregnant women. The low rate of disease among pregnant women probably suggests the fact that having medical check-ups before and after childbirth is not common, and/or that the rate of pregnant women who do have them is extremely low. In order to more accurately understand the situation, it should be kept in mind that the report made through the district offices and the Ministry of Health is conducted independently of the report made by the MCH clinic, which is open once a week (Tables 2-6 and 2-7).

Nepal has a subtropical monsoon climate. In both Dhanusa and Kavrepalanchok, June through September is the rainy season and the dry season usually lasts from October through May. Temperatures vary according to the altitude. In Kavrepalanchok in the hills, the annual differential in monthly temperatures is as little as 14 degrees. In contrast, in the Terai the temperature in winter is between 10 to 20 centigrades while it is above 40 centigrades in summer. Seasonal changes in disease structure cannot be clarified because a report covering an entire year is not as yet available. However, in Dhanusa where temperature differentials and seasonal changes between dry and rainly seasons are more distinct throughout the year, some seasonal changes are observed in the disease structure as well. For instance, in the rainy season from June through September, the ratio for patients with an infectious disease increases, especially infectious diseases of the digestive system. It is probably because in the rainy season rivers sometimes overflow and drinking water becomes contaminated since there are no advanced water processing facilities in the district. In addition, in summer food storage methods are not appropriate and pose the danger of food poisoning, which is also related to diseases in digestive organs.

It should also be taken into account when looking at these statistics that health posts do not have adequate equipment for medical check-ups and are not able to provide appropriate treatment of serious diseases and complications. For instance, the infectious rate of vermination is high in both districts. It is reported that some kinds of parasites consume proteins and carbo-

hydrates in the intestines and hamper the absorption of vitamin A. Parasites not only cause malnutrition but sometimes get into capillary blood vessels in the brain or the heart causing cerebral or myocardial infarction. An anti-parasites program is vitally important, and simultaneous and continuous medication of vermicide is necessary. There are no microscopes or other equipment for stool examinations in health posts so the actual number of parasitic disease must be much larger. Moreover, as shown in the footnote for the Table, diseases were not classified into minor categories in the report of Sabaila Health Post. This happened only in May, but it is true that in all health posts classification of diseases is often difficult due to the limited capacity of the health posts to provide medical treatment coupled with an equipment shortage.

The health posts' reporting period in the districts differs to some extent and thus, the comparison of the disease structure in August-November for which statistics from both districts are available is given in Table 2-8.

In major categories, the ratio of infectious and respiratory diseases is high in Kavrepalanchok while the ratio of skin disease is high in Dhanusa. Most of the houses in Kavrepalanchok are dirt-floored, and a kitchen located inside the house usually has bad ventilation. This seems to be a cause of respiratory diseases. Especially in the winter when the temperature is low, many cases of respiratory disease are reported. Heating, housing structure, clothing and undernourishment are the causes of respiratory disease. Furthermore, in many cases, the ground floor of the house is used as a shed for animals, generating unsanitary conditions.

On the other hand, Dhanusa is a breeding place of mosquitos and other harmful insects due partly to its subtropical climate, and it seems that scratching of bites often causes infection. It can be easily observed in both districts that skin diseases are caused by malnutrition and unsanitary conditions of the skin resulting from the lack of hygienic education. Guidance on cleanliness is given to those who visit the health posts, and it is imperative to focus public education on sanitation.

Eye diseases are commonly found in both districts. The possible causes of eye disease are inappropriate housing structure in Kavrepalanchok, and dust and hygiene habits in both districts. At the same time, deteriorated nutritive conditions accelerate the development of eye disease.

(2) Health Post Facilities and Its Activities

As medical facilities to provide initial treatment, health posts are playing an important role in Nepal. This survey includes the following items concerning health posts.

  1) Qualifications and career record of the individual in charge of the health post, and
       whether he or she offers medical services at places other than in the health post.

2) The number of panchayats, and the distance to the furthest panchayat.

3) Average number of patients per day.

4) Common diseases and causes of death of children under five.

5) Medical services available around the health post (pharmacies, medical practitioners).

6) Local support (whether there is a health committee, and whether it is useful).

7) Health post staffing (number of posts and vacancies).

8) Health post facilities (whether the health post owns a building and has enough medicine, equipment, and supplies).

Tables 2-9 and 2-10 show the results of the above questionnaire (Tables 2-9, 2-10).

With respect to diseases common to children under five which are related to 2-(1) of this chapter — Structure of Diseases, diarrhoea is commonly observed in both Kavrepalanchok and Dhanusa. Diarrhoea is also counted as one of the major causes of death. Other diseases often observed are malnutrition, which is reported by health posts in Nala, Sabaila, and Tarapatti; and lower respiratory tract infections, reported by all health posts in Kavrepalanchok. Death-causing cycle assumption can be made based on those results. (Fig. 2-1)

Disease structure within each health post has been made clear, but local set-ups of medical services are inadequate. A problem common to health posts is the shortage of manpower and facilities. All health posts lack equipment and supplies, such as medicine, medical instruments, and examination beds. This makes it difficult to provide satisfactory treatment of the above diseases. Health posts are all the more important in Kavrepalanchok because there are no medical practitioners in that area, and no pharmacies around the Bhumlutar Health Post. Standards and readiness of health posts must be improved.

As mentioned above, one of the causes of skin diseases is unsanitary conditions. As part of a hygiene educational program, it may be possible to use panchayat based health workers (PBHW), who are providing guidance on mother and child health as well as on family planning. PBHWs are employed on an annual contract basis and requested to be able to read and write. Each panchayat recommends PBHW candidates, and the District Office makes the final decision. Since the work of a PBHW is to provide information about mother and child health care and to motivate appropriate family planning, female PBHWs tend to be preferred. However, due to the present educational level outlined above, it is difficult to choose appropriate candidates. This is one of the reasons why many of the posts are vacant.

All health posts except Bhumlutar, Ghodaghas, and Tarapatti use rented buildings. Starting with storage for medicine and other supplies, it is necessary to set up appropriate facilities to provide satisfactory medical services. When there are no such facilities available, local support from each panchayat is indispensable, as health posts currently depend on it. One of the opera-

tional problems is whether there is a health committee in the district and, if there is one, whether it is useful or not. According to the interview results of the individuals in charge of health posts, other than the health posts in Khopasi, Nala, and Tarapatti, there is no indication on whether health committees are active and effective. Interest in a health committee to medical services seems to reflect the attitude of local residents toward health posts and overall medical services. In addition, in Sabaila Panchayat, a sample point of this survey, there is the problem of medical services being administered by quacks. There is an Ayurvedic Clinic in Sabaila, and medical conditions are relatively favorable. Furthermore, it is a matter of serious concern that a situation exists in which treatments administered by doctors without proper qualifications are attracting many patients. Medical treatment by quacks should be stopped. To accomplish this, medical services offered by health posts need to be expanded on and improved.

(3) Maternal and Child Health and Family Planning

In this section, based on the activities of the NFP/MCH project, the state of mother and child health and family planning will be discussed.

Tables 2-11 and 2-12 show project expenditures of each district for the last five years. Excluding general overhead costs, personnel expenses on a contract basis including payments for PBHWs account for a large portion. Expenses for sterilization are the second largest share. Expenditures for mother and child health and education are relatively small. In Dhanusa, however, UNFPA is promoting MCH intensification program, and it is noteworthy that expenditures for mother and child health were more than 10% of total expenditures in 1985-86 (Tables 2-11, and 2-12).

Tables 2-13 and 2-14 show achievements in the fields of mother and child health and family planning in each district. There are large annual fluctuations. Thus, it is difficult to point out a specific time-series trend. However, it is noteworthy that the medical check-up rate before and after delivery and of children under five has been increasing. Only a small number of immunizations are reported here, and this is probably because other institutions, such as immunization camps, are giving inoculations (Table 2-13 and 2-14).

There are differences between the two districts in terms of family planning. The ratio of female sterilization is higher in Dhanusa, while the male sterilization rate is higher in Kavrepalanchok. One of the reasons is that there is a difference in the social status of men and women living in the hills and the Terai. The acceptance rate of the IUD is small in both districts, and use of the IUD seems to be delayed, especially considering the difficulty in performing follow-up. However, considering the geographical conditions and the availability of transporta-

tion in Kavrepalanchok in the hills, the opportunity to be sterilized and accessibility of pills and condoms seems to be limited. In this regard, activities of PBHWs have a significant advantage in making up for this disadvantageous situation.

Note)
1) Hiroshi Ishii, ed., *More Facts about Nepal*, Tokyo, 1986, Kobundo, pp 9-11 and pp 120-121.
2) Nirmal Nath Rimal ed., *Nepal District Profile, Education*, National Research Associates, Kathmandu, 1986, pp 1-2.
3) The Japan International Cooperation Agency, *Report for Basic Survey on Population & Family Planning in the Kingdom of Nepal*, 1985, p. 32.

Figure 2-1   Casual Cycle of Infant Death

1.   Preconditioning Factor   [Malnutrition]

2.   Initial Illness   [Diarrhoea]   →
                                          ←   [Lower Repiratory Tract Infection]

3.   Fatal Blow   [Dehydration]   [Pneumonia]

                              [Death]
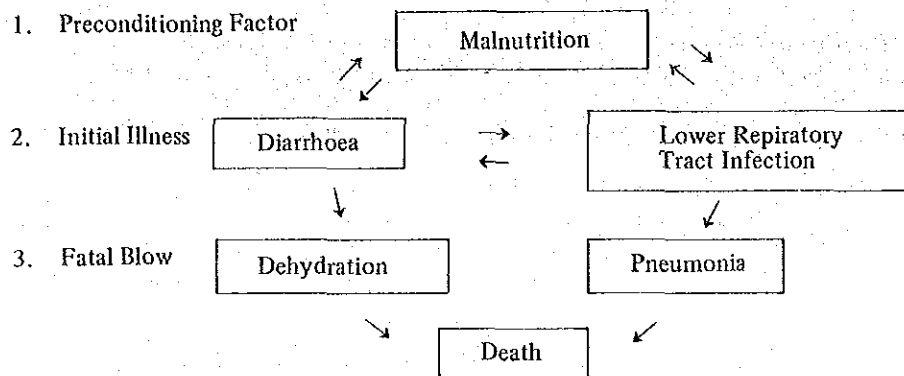
Source)   Terence H. Hull & Jon E. Dohde, *Prospects for Rapid Decline of Mortality Rates in Java*, Population Institute, Gudjah Mada University, Yogyakarata, 1978

Table 2-1   Comparison between the Mountains/Hills, and Terai (1981)

Area	Area Ratio	Population Ratio	Food Production Ratio	Production Ratio of Paddy
Mountains and Hills	78	56	37	22
Terai	22	44	63	78

Source)   Kyoko Inoue, "Economic Development Plan of Nepal," *Asian Trends*, Fall 1983, Vol. 24, p. 106.

Table 2-2   Demographic Indicators, Kavrepalanchok and Dhanusa

Demographic Indicators	Kavrepalanchok	Dhanusa
Population	307,150	432,569
Population Density (persons/km^2)	220.0	366.6
Population Growth Rate 1971 – 81 (%)	25.28	30.84
Average Number of Family per Household	6.2	5.4
Number of Household	49,545	79,785
Child-Woman Ratio	58.70	60.28

Source) Central Bureau of Statistics, His Majesty's Government of Nepal, *Statistical Pocket Book of Nepal 1986*, Kathmandu

Central Bureau of Statistics, His Majesty's Government of Nepal, *Population Census-1981, General Characteristics Tables, Vol. I - Part 1, Kathm*andu, 1984

General Characteristics Tables, Vol. I - Part 1, Kathmandu, 1984

Table 2-3   Population Distribution by Mother Tongue, Kavrepalanchok and Dhanusa

Kavrepalanchok		Dhanusa	
Mother Tongue	Population (%)	Mother Tongue	Population (%)
Nepali	194,853 (63.4)	Maithali	372,515 (86.1)
Tamang	72,042 (23.5)	Nepali	38,140 (8.8)
Newari	29,611 (9.6)	Tamang	3,251 (0.8)
Rai, Kirati	1,723 (0.6)	Bhojpuri	2,848 (0.7)
Maithali	1,668 (0.5)	Magar	1,594 (0.4)
Others/Unstated	7,253 (2.4)	Others/Unstated	14,221 (3.3)

Source) Central Bureau of Statistics, HMG, *Population Census-1981, Social Characteristics Tables*, Vol. I, Part III, Kathmandu, 1984.

Table 2-4　Population Distribution by Occupation, Kavrepalanchok and Dhanusa

(%)

Occupation	Kavrepalanchok	Dhanusa
Agriculture	93.3	80.5
Service	2.5	14.2
Commerce	1.7	2.9
Manufacturing	0.2	1.2
Others	2.3	1.2

Source) Central Bureau of Statistics, HMG, *Population Census-1981, Economic Characteristics Tables*, Vol. I, Part VII, Kathmandu, 1984.

Table 2-5　Population Distribution by Literacy and Age, Kavrepalanchok and Dhanusa

(%)

Age Group	Kavrepalanchok		Dhanusa	
	Male	Female	Male	Female
6 – 9	29.5	16.6	25.3	10.4
10 – 14	53.3	25.9	42.1	15.6
15 – 19	49.3	17.1	41.6	11.7
20 – 24	41.6	11.4	35.4	7.7
25 – 29	37.5	9.6	29.8	6.5
30 – 34	32.9	6.9	26.1	5.0
35 – 39	29.5	6.4	24.1	4.0
40 – 44	25.8	5.3	19.0	2.8
45 – 49	23.9	4.5	18.4	2.9
50 +	19.3	4.3	14.7	1.7
All Ages	35.8	12.3	28.5	7.3

Source) Central Bureau of Statistics, HMG, *Population Census-1981, Social Characteristics Tables*, Vol. I, Part IV, Kathmandu, 1984.

Table 2-6 Main Diseases Reported by Four Health Posts, Kavrepalanchok (July to December 1986)   % in the parentheses

Name of disease	July/Aug.*	Aug./Sept.	Sept./Oct.	Oct./Nov.	Nov./Dec.	Total
Digestive Infection	507 (25.0)	202 (5.6)	154 (7.1)	117 (6.8)	50 (2.9)	1,030 (9.2)
Tuberculosis	3 (0.1)	5 (0.1)	1 (0.0)	3 (0.2)	29 (1.7)	41 (0.4)
Leprosy	2 (0.1)	7 (0.2)	—	2 (0.1)	2 (0.1)	13 (0.1)
Diphtheria	2 (0.1)	6 (0.2)	1 (0.0)	(0.0)	—	9 (0.1)
Whooping Cough	8 (0.4)	9 (0.3)	5 (0.2)	12 (0.7)	5 (0.3)	39 (0.3)
Measles	13 (0.6)	17 (0.5)	3 (0.1)	5 (0.3)	2 (0.1)	40 (0.4)
Malaria	4 (0.2)	—	—	—	1 (0.1)	5 (0.0)
Parasitosis	88 (4.3)	150 (4.2)	176 (8.2)	156 (9.1)	247 (14.1)	817 (7.3)
Diseases of the Respiratory System	242 (12.0)	485 (13.5)	329 (15.3)	156 (9.1)	161 (9.2)	1,373 (12.2)
Diseases of Skin	43 (2.1)	374 (10.4)	436 (20.2)	370 (21.7)	455 (26.0)	1,678 (14.9)
Diseases of Eyes	20 (1.0)	83 (2.3)	68 (3.2)	59 (3.5)	88 (5.0)	318 (2.8)
Others	1,092 (54.0)	2,254 (62.8)	982 (45.6)	829 (48.5)	711 (40.6)	5,868 (52.2)
Total	2,024	3,592	2,155	1,709	1,751	11,231

* Excluding Nala Health Post
Source) District Office, Public Health, Kavrepalanchok

Table 2-7 Main Diseases Reported by Four Health Posts, Dhanusa (April to November 1986)   % in the parentheses

Name of disease	April/May	May/June	June/July	July/Aug.	Aug./Sept.	Sept./Oct.	Oct./Nov.	Total
Digestive Infection	178 (11.9)	289 (14.2)	203 (7.5)	263 (9.6)	213 (8.6)	115 (5.6)	89 (5.0)	1,350 (8.8)
Tuberculosis	5 (0.3)	6 (0.3)	3 (0.1)	3 (0.1)	2 (0.1)	1 (0.0)	—	20 (0.1)
Leprosy	5 (0.3)	3 (0.1)	4 (0.1)	5 (0.2)	7 (0.3)	7 (0.3)	3 (0.2)	34 (0.2)
Diphtheria	—	5 (0.2)	—	—	—	—	—	5 (0.0)
Whooping Cough	5 (0.3)	—	5 (0.2)	—	—	—	—	10 (0.1)
Measles	4 (0.3)	—	—	—	2 (0.1)	—	—	6 (0.0)
Malaria	3 (0.2)	4 (0.2)	6 (0.2)	5 (0.2)	7 (0.3)	4 (0.2)	18 (1.0)	47 (0.3)
Parasitosis	85 (5.7)	125 (6.1)	148 (5.5)	207 (7.6)	137 (5.5)	113 (5.5)	118 (6.6)	933 (6.1)
Diseases of the Respiratory System	78 (5.2)	115 (5.6)	123 (4.5)	135 (4.9)	80 (3.2)	94 (4.6)	158 (8.9)	783 (5.1)
Diseases of Skin	435 (29.0)	466 (22.9)	848 (31.3)	957 (34.9)	808 (32.6)	781 (38.3)	709 (39.9)	5,004 (32.7)
Diseases of Eyes	25 (1.7)	90 (4.4)	190 (7.0)	71 (2.6)	91 (3.7)	43 (2.1)	21 (1.2)	531 (3.5)
Others	675 (45.1)	933 (45.8)	1,180 (43.5)	1,095 (39.9)	1,133 (45.7)	882 (43.2)	663 (37.3)	6,561 (42.9)
Total	1,498 [71]*	2,036	2,710	2,741	2,480	2,040	1,779	15,284 [71]*

* In case of Saballa HP, diseases in Infective & Parastic Disease are not divided into small unit.
Source) District Office, Public Health, Dhanusa

Table 2-8　Difference in Main Diseases* Between Kavrepalanchok and Dhanusa

% in the parentheses

Name of disease	Kavrepalanchok	Dhanusa
Digestive Infection	473　(6.3)	417　(6.6)
Tuberculosis	9　(0.1)	3　(0.0)
Leprosy	9　(0.1)	17　(0.3)
Diphtheria	7　(0.1)	—
Wooping Cough	26　(0.3)	—
Measles	25　(0.3)	2　(0.0)
Malaria	—	29　(0.5)
Parasitosis	482　(6.5)	368　(5.8)
Diseases of the Respiratory System	970　(13.0)	332　(5.3)
Diseases of Skin	1,180　(15.8)	2,298　(36.5)
Diseases of Eyes	210　(2.8)	155　(2.5)
Others	4,065　(54.5)	2,678　(42.5)
Total	7,456 (100.0)	6,299 (100.0)

* Total Number of Patients from August to November, 1986
Source)　District Office, Public Health, Kavrepalanchok and Dhanusa

Table 2-9 Health Post Information, Kavrepalanchok

Name of Health Post		Bhumlutar	Dapcha	Khopasi	Nala
H.P. in Charge	Experience	15 years	7.75 years	11 years	8.25 years
	Qualification	Health Assistant	10th Class Passed	Intermediate in MS	Intermediate in MS
No. of Panchayats Covered		6	5	10	10
Distance of Furthest Panchayat		9 km	12 km	51 km	8 km
Ownership of H.P. Bldg.		Own Building	Rented	Rented	Rented
Average No. of Patients per Day		50	45	30	50
Major Causes of Diseases (Children Under Five)		Tetanus Whooping Cough Diarrhoea Bronchitis Dysentry	Diarrhoea Skin Disease Pneumonia Dysentry Parasitosis	Diarrhoea A.R.I. Skin Disease	Parasitosis Skin Disease Diarrhoea/Dysentry A.R.I. Malnutrition
Major Causes of Death (Children Under Five)		Diarrhoea Tetanus Measles A.R.I.	Diarrhoea A.R.I.	Diarrhoea Measles A.R.I.	Diarrhoea Measles A.R.I. Malnutrition
Drag Supply		Insufficinet	Insufficient	Insufficient	Insufficient
Existence of Pharmacy in the Locality		No	Yes	Yes	Yes
Presence of Private Practioners in the Locality		No	No	No	No
Existence of Health Committee		No	Yes	Yes	Yes
Usefulness of H.C.		—	Helpless	Helpful	Helpful
Medical Practice outside Health Post		No	No	Yes	Yes
HP Regular Staff and Vacant	Health A.	1	1 (1)	1	1
	A.H.W.	1	0	2 (1)	2*
	A.N.M.	No Answer	0	2	2
No. of Vacant in the Parentheses	V.H.W.	No Answer	4 (1)	6 (5)	No Answer
	Mukhiya	No Answer	No Answer	1 (1)	No Answer
	Peon	No Answer	1	No Answer	No Answer
Manpower		Not Enough	Not Enough	Not Enough	Not Enough
Storage Facility		Yes	No	No	No
Necessary Equipment		Yes	Yes	No	No
Problems in Health Post		• Technical Manpower • Furniture • Insufficinet Place	• Own Bldg. needed • Lack of Manpower • Lack of Medicine	• Own Bldg. needed • Lack of Equipment • Lack of Medicine • Necessity of Suitable Training	• Own Bldg. needed • Lack of Equipment • Lack of Medicine • Lack of Manpower

Note) * 1 person working another Health Post.

Table 2-10   Health Post Information, Dhanusa

Name of Health Post		Godar	Ghodaghas	Sabaila	Tharapatti
H.P. in Charge	Experience	5 years	17 years	8 years	6 years
	Qualification	S.L.C.	S.L.C.	S.L.C.	Intermediate
No. of Panchayats Covered		7	11	12	8
Distance of Furthest Panchayat		11 km	16 km	8 km	9 km
Ownership of H.P. Bldg.		Rented	Own Building	Rented	Own Building
Average No. of Patients per Day		30	30	25	40
Major Causes of Diseases (Children Under Five)		Diarrhoea Ear Disease Parasitosis Malnutrition	Diarrhoea External Wound Skin Disease Cough and Cold	Diarrohoea Skin Disease Cough Malnutrition Parasitosis	Diarrhoea Skin Disease Malnutrition Parasitosis Fever/Dysentry
Major Causes of Death (Children Under Five)		Diarrhoea A.R.I.	Diarrhoea A.R.I.	Diarrhoea	Diarrhoea A.R.I. Fever
Drag Supply		Insufficient	Insufficinet	Insufficient	Insufficient
Existence of Pharmacy in the Locality		Yes	No	Yes	Yes
Presence of Private Practioners in the Locality		No	Yes	Yes	Yes
Existence of Health Committee		Yes	Yes	Yes	Yes
Usefulness of H.C.		Helpless	Helpless	Helpless	Helpful
Medical Practice outside Health Post		Yes	No	No	Yes
HP Regular Staff and Vacant	Health A.	1	1	1	1
	A.H.W.	2 (2)	2* (1)	2	2
	A.N.M.	2 (2)	2* (1)	2 (2)	2 (1)
No. of Vacant in the Parentheses	V.H.W.	No Answer	6 (5)	6 (6)	6 (6)
	Mukhiya	1	1	1	1
	Peon	3	2	2	3
	Sweeper	No Answer	1	1	No Answer
Manpower		Not enough	Enough	Not enough	Not enough
Storage Facility		No	Yes, but insufficient	No	Yes
Necessary Equipment		No	Yes	Yes	No
Problems in Health Post		• Own Bldg. Needed • Lack of Staff • Lack of Medicine • Lack of Equipment • First Aid is not Available	• Facility of Quarter • Drinking Water • Lack of Storage • Lack of Equipment • Necessity of Suitable Training	• Lack of Medicine • Own Bldg. Needed • Lack of Staff & Equipment • Disturbance of Treatment by Qacks	• Lack of Medicine • Lack of Equipment • Maintenance of HP Needed

Note) * 1 person working another Health Post.

Table 2-11 Expenditure of FP/MCH Project, Kavrepalanchok (1981–86)

Rs., % in the parentheses

Year	General	Contract	V.S.C.	Sterilization	I.E.C.	MCH	Total
1981–82	441,648.82 (61.8)	249,842.58 (34.9)	—	23,513.33 (3.3)	—	—	715,004.73 (100.0)
1982–83	424,500.95 (42.9)	468,241.35 (47.3)	—	91,181.86 (9.2)	5,380.00 (0.5)	—	989,304.16 (100.0)
1983–84	581,148.22 (49.8)	37,197.12 (3.2)	—	187,326.75 (16.0)	2,034.00 (0.2)	—	1,167,706.09 (100.0)
1984–85	703,144.91 (51.3)	500,960.83 (36.5)	3,000.00 (0.2)	162,140.70 (11.8)	2,730.00 (0.2)	—	1,371,976.44 (100.0)
1985–86	733,315.21 (38.3)	823,703.08 (43.0)	101,931.50 (5.3)	252,353.98 (13.2)	2,730.00 (0.1)	—	1,914,033.77 (100.0)
Total	2,883,758.11 (46.8)	2,439,944.96 (39.6)	104,931.50 (1.7)	716,516.62 (11.6)	12,874.00 (0.2)	—	6,158,025.19 (100.0)

Source) FP/MCH Dhulikhel District Office

Table 2-12 Expenditure of FP/MCH Project, Dhanusa (1981–86)

Rs., % in the parentheses

Year	General	Contract	V.S.C.	Sterilization	I.E.C.	MCH	Total
1981–82	330,172.80 (29.0)	410,742.22 (36.0)	43,347.20 (3.8)	355,921.00 (31.2)	—	—	1,140,183.22 (100.0)
1982–83	337,476.00 (23.9)	488,232.00 (34.6)	62,334.00 (4.4)	521,133.00 (36.9)	3,117.00 (0.2)	—	1,412,292.00 (100.0)
1983–84	731,266.00 (35.9)	516,043.00 (25.3)	89,727.00 (4.4)	698,274.00 (34.3)	2,343.00 (0.1)	—	2,037,653.00 (100.0)
1984–85	821,872.00 (34.1)	774,160.00 (32.2)	124,401.00 (5.2)	683,849.00 (28.4)	2,684.00 (0.1)	—	2,406,966.00 (100.0)
1985–86	476,234.00 (15.9)	1,321,867.00 (44.3)	370,163.00 (12.4)	489,872.00 (16.4)	2,640.00 (0.1)	325,299.00 (10.9)	2,986,075.00 (100.0)
Total	2,697,020.80 (27.0)	3,511,044.22 (35.2)	689,972.20 (6.9)	2,749,049.00 (27.5)	10,784.00 (0.1)	325,299.00 (3.3)	9,983,169.22 (100.0)

Source) FP/MCH Dhanusa District Office

Table 2-13   Achievement of FP/MCH Project, Kavrepalanchok (1982–86)

		1982–1983	1983–1984		1984–1985		1985–1986	
		Achieve-ments	Achieve-ments	Growth Rate (%)	Achieve-ments	Growth Rate (%)	Achieve-ments	Growth Rate (%)
Vasectomy		323	340	5.3	780	129.4	531	−31.9
Laparoscopy		183	217	18.6	242	11.5	283	16.9
Pill Distributed	New	1,095	778	−28.9	1,370	76.1	1,885	37.6
	Old Continue	1,552	1,089	−29.8	2,352	116.0	2,136	−9.2
Condom Distributed	New	1,866	1,922	3.0	3,277	70.5	4,035	23.1
	Old	857						
I.U.D.		—	5	—	3	−40.0	3	0.0
Depoprovera		—	53	—	140	164.2	141	0.7
Follow Up	Pill	4,071	3,340	−18.0	3,494	4.6	5,955	70.4
	Condom	2,180	2,559	17.4	2,230	−12.9	4,373	96.1
	Extra	558	885	58.6	1,027	16.0	1,911	86.1
Antenatal	New	457	727	59.1	1,239	70.4	3,353	170.6
	Old	640	775	21.1	1,238	59.7	5,024	305.8
Children Under 5 Years	New	2,087	2,816	34.9	3,201	13.7	9,090	184.0
	Old	2,524	2,775	9.9	3,734	34.6	9,860	164.1
D.P.T.	New	1,408	1,245	−11.6	171	−86.3	891	421.1
	Old	663	604	−8.9	111	−81.6	591	432.4
B.C.G.		—	596	—	169	−71.6	530	213.6
Measles		—	—	—	—	—	—	—
Anemia		147	—	—	—	—	—	—
O.R.S.		1,003	1,987	98.1	2,687	35.2	5,308	97.5
Motivation		86,440	93,453	8.1	129,346	38.4	125,727	−2.8

Source) FP/MCH Project Dhulikhel District Office

Table 2-14 Achievement of FP/MCH Project, Dhanusa (1982—86)

		1982—1983	1983—1984		1984—1985		1985—1986	
		Achieve-ments	Achieve-ments	Growth Rate (%)	Achieve-ments	Growth Rate (%)	Achieve-ments	Growth Rate (%)
Vasectomy		94	98	4.3	172	75.5	156	−9.3
Laparoscopy		3,380	3,557	5.2	3,711	4.3	2,767	−25.4
Pill	New	1,692	2,105	24.4	2,355	11.9	3,061	30.0
Distrbuted	Old	15,593	14,252	−8.6	18,741	31.5	17,195	−8.2
	Continue	16,275	14,441	−11.3	17,628	22.1	16,215	−8.0
Condom	New	13,399	9,619	−28.2	13,471	40.0	14,290	6.1
Distributed	Old	128,186	118,025	−7.9	203,456	72.4	236,346	16.2
I.U.D.		24	16	−33.3	19	18.8	46	142.1
Depoprovera		8	31	287.5	20	−35.5	138	590.0
Follow Up	Pill	11,944	11,736	−1.7	13,982	19.1	13,034	−6.8
	Condom	3,737	3,141	−15.9	4,449	41.6	5,711	28.4
	Extra	553	2,114	282.3	198	−90.6	—	−100.0
Antenatal	New	4,554	6,150	35.0	10,916	77.5	18,622	70.6
	Old	3,295	4,072	23.6	7,235	77.7	10,326	42.7
Children	New	9,869	10,256	3.9	18,260	78.0	23,255	27.4
Under 5 Years	Old	7,187	6,784	−5.6	12,027	77.3	14,152	17.7
D.P.T.	New	825	395	−52.1	230	−41.8	242	5.2
	Old	278	85	−69.4	124	45.9	43	−65.3
B.C.G.		2	379	18,850.0	132	−65.2	90	−31.8
Measles		—	—	—	—	—	—	—
Anemia		1,401	1,898	35.5	3,186	67.9	4,031	26.5
O.R.S.		3,607	3,394	−5.9	5,849	72.3	8,714	49.0
Motivation		283,295	328,280	15.9	400,338	22.0	524,971	31.1

Source) FP/MCH Project Dhanusa District Office

Chapter 3

METHODOLOGY
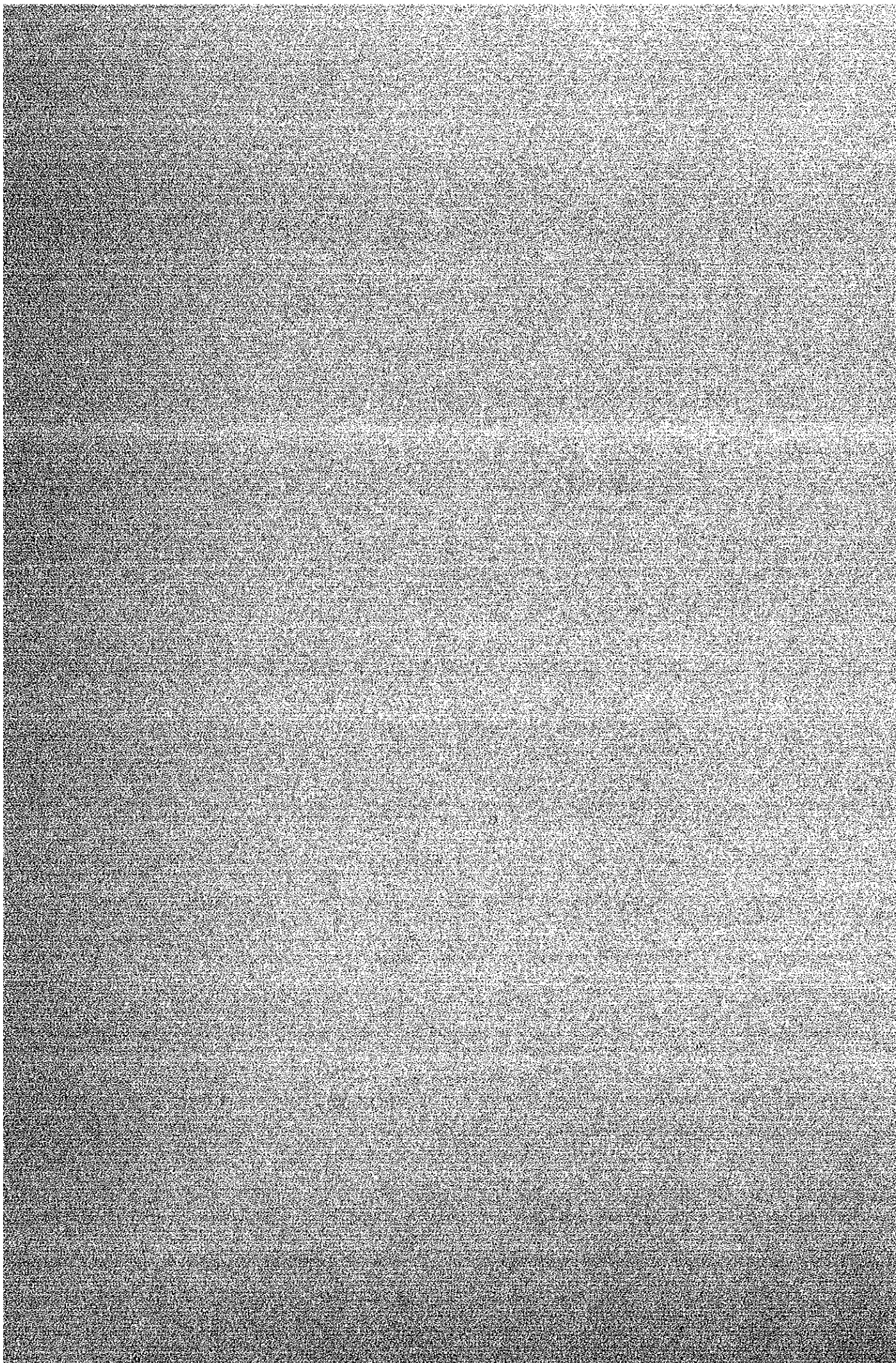
CHAPTER 3 METHODOLOGY

1. Organization of Survey

This survey was conducted as a joint effort of members of the NFP/MCH Project. Experts from JICA and JICA survey team were dispatched to the surveyed areas. Elements such as the designing and printing of the questionnaire, training of interviewers, sampling, interviewing and coding were carried out in Nepal. The coded data was brought back to Japan for computer input and analysis which was conducted by members of JICA survey team.

Questionnaire design and the person in charge of each section are shown in the note of this chapter[1]. Details of each item will be discussed in Section 3.

(1) Screening and Training of Investigators

A field survey team is comprised of a supervisor, an editor and interviewers. Supervisors and editors were selected from the NFP/MCH Project and received training in Kathmandu from October 28 through 31.

The training content follows:

  1) Outline of the NFP/MCH and JICA Projects
  2) Outline of the survey questionnaire and sampling method
  3) Method of field editing

Details of the training are described in the appendices at the end of this report. The above training was conducted by staff members of the NFP/MCH Project Evaluation Division and JICA experts.

The recruitment of interviewers took place in two districts, Kavrepalanchok and Dhanusa. Recruitment was conducted from November 5 through 16 in Kavrepalanchok and November 12 through 21 in Dhanusa. Qualifications of applicants were as follows; women having a SLC (School Leaving Certificate certifying that an individual completed 10th grade) or above; men having an IA (Intermediate Art) or SLC and some experience in social surveying. Screening in both areas was conducted by staff members of the NFP/MCH Project Evaluation Division and JICA experts. Interviews were held on November 21 and 23 in Kavrepalanchok and Dhanusa, respectively.

In Kavrepalanchok, of 115 applicants 15 women and nine men for a total of 24 were employed and in Dhanusa four women and 12 men for a total of 16, were selected from 31

applicants. Due to the nature of the survey, women interviewers were deemed preferable. The difference in the number of interviewers was caused by geographical conditions within the two areas, necessitating more in Kavrepalanchok.

Number of selected interviewers by sex are shown in the appendices.

Training was provided from November 24 through December 5 for interviewers in Kavrepalanchok and November 25 through December 4 for those in Dhanusa.

Main subjects of the training were:

1) Outline of the NFP/MCH and JICA Projects.

2) Objectives of the survey and explanation of the program.

3) Basic knowledge on family planning, diseases common in infants and preventive measures (immunization), medical treatments (ORT and others).

4) Explanation of each item of the questionnaire.

5) Group discussion and role playing.

6) Field practice.

Details of the training are shown in the appendices. Training was conducted by staff members of the NFP/MCH Project Evaluation Division and JICA experts.

(2) Survey Schedule

Interviewers appointed through the screening mentioned in Chapter 2 were divided into three groups in Kavrepalanchok and two in Dhanusa. Each group conducted an interview under the control of one supervisor and one editor. A supervisor's tasks included clarification of boundaries between wards, drawing up a household list and selecting households. An editor offered guidance on interviewing and checked questionnaires. Details of sampling are mentioned in the following section. The survey schedule and the allotment of surveyed areas are shown in the appendices.

Preparation of the code book, and printing of the coding sheet were completed on December 31. Instructions to coders started on January 1. Office editing and coding started from January 2. The coding check was completed on January 23. The schedule of the above matters are shown in the appendices.

2. Sampling Method

A total of 3,200 households, 1,600 each in Kavrepalanchok (in the hills) and Dhanusa (in the Terai), were selected for survey by a three-stage sampling method. In the first stage, four

health posts having a MCH Clinic were purposively selected from health posts in each area.

Health posts are under the direct supervision of the Health Ministry, while MCH Clinics are run by NFP/MCH project.

Panchayats covered by each health post are shown in Table 3-1 and 3-2. The number of panchayats covered by the four health posts in Kavrepalanchok is 26 and that in Dhanusa is 42. Ten panchayats were selected by Probability Proportional size in each district (Tables 3-1 and 3-2).

$$I = \frac{\Sigma Pp}{Np}$$

ΣPp, accumulative value of population is 52,186 in Kavrepalanchok and 187,686 in Dhanusa. NP is the number of panchayats selected and 10 for each area. I is an interval of sampling panchayats, 5218.6 in Kavrepalanchok and 18768.6 in Dhanusa.

Wards were selected in the second stage. Each panchayat is comprised of nine wards. Four wards were selected from the nine by Simple Random Sampling. Ward numbers of each panchayat are shown in Table 3-3. (Table 3-3)

Of the total households, 40 were sampled in each selected ward by Systematic Interval in the third stage. Interval (Si) is obtained from the following formula.

$$Si = \frac{\Sigma NH}{SH (= 40)}$$

In the above formula, NH means the accumulative value of households in each ward and SH is the number of households selected. The determination of Si was made by a supervisor and editor at the time of the field survey. What should be specifically mentioned is how target households were identified. The boundaries of panchayats in Nepal were modified for the election held in 1982. Consequently, the household list in the 1981 Census could not be used. Moreover, maps of the surveyed areas were not sufficient. Therefore, sampling of households in surveyed areas was conducted through the following process:

1) After arriving at a panchayat to be surveyed, a survey team confirmed boundaries of the wards in the panchayat and, in coordination with panchayat members (one selected from each ward) and Panchayat Based Health Workers (PBHW), defined households belonging to each ward.

2) A household list of wards selected by an interviewer on each survey team was prepared.

3) From the household list, 40 households were selected by Systematic Interval, and the survey commenced.

The number of households selected through the above process is as follows:

3,200 households = 2 districts x 10 panchayats x 4 wards x 40 households

There is a difference in the number of households per ward in the two districts in this survey. The mean number of households per ward was 61.6 in Kavrepalanchok and 111.1 in Dhanusa. In geographical terms, households were scattered in Kavrepalanchok and were centralized in the Dhanusa District, although there were some exceptions. Therefore, there were five wards having less than 40 households in Kavrepalanchok District. This is why the number of households actually selected is fewer in Kavrepalanchok, despite the above-mentioned sampling method.

As for the interview results of the individual questionnaire, 29 women of 2,960 were not at home and interviews of three women were not completed.

3. Survey Items

The objective of this baseline survey, as mentioned earlier, was to collect fundamental data necessary for the implementation of the family planning and maternal and child health care programs and to set up 11 indicators to the project. Accordingly, it is inevitable that there is a great variety of survey items in the questionnaire. In order to comprehensively read the results of the analyses and examine their reliability, the detailed nature of the survey items must be known. In this section, we discuss an outline of the survey items, their distinctions and overall evaluation of the questionnaire used in the survey.

The questionnaire consists of two parts, a questionnaire on households and one on individuals (see the attached reference data). The household questionnaire is divided into two parts; the first part includes items on family members (Part 1) and the second part covers the socio-economic background of the family (Part 2). Part 1 shows the number, age, sex and marital status of family members as well as the type of family and where members slept the previous night. Part 2 covers educational levels and occupations of heads of family, possession of land, size of possessed land, source of drinking water, availability of latrine, and occurrence of birth and death by age and sex of family members during the past 12 months. As can be seen from the above, both Parts 1 and 2 of the household questionnaire aim at collecting fundamental data on the selected households.

However, that is not the sole purpose of the household questionnaire. Another objective is to find eligible women in family members. Questions in the household questionnaire can be answered by any member of a selected family who has an ability to do so. Since, however, the individual questionnaire includes concrete and detailed matters of family planning and maternal and child health, those items are limited to those women who meet specific qualifications as follows.

(1) Age from 15 to 49 years old

(2) Married

(3) Living with family members

(4) At home the night of the day prior to survey implementation

All the information in order to find eligible women in households was included in the survey items of the household questionnaire. In other words, the household questionnaire played an important role in identifying women who met all qualifications (eligible women). And the fourth qualification means that this survey was de facto type.

In the questionnaire, a considarable number of questions were included. The framework of the questionnaire and its surveyed items follow.

Part 3 Information on Respondent's Background: respondent's age, literacy, educational level and occupation; husband's age, literacy, educational level and occupation; distance from her home to the nearest health institution; the type of medical institution she uses; whether or not she is satisfied with the treatment received.

Part 4 History of Childbirth: age of first menstruation; age at marriage; the duration of period from marriage until the couple started living together; number of children ever born by sex; births, miscarriages and stillbirths during the part 12 months; whether or not a respondent is currently pregnant; the date and year of her last menstrual; number of children by sex she wants to have; ideal number of children by sex; comment on appropriate interval between births.

Part 5 Antenatal and Postnatal Care of Mothers: medical checkups during pregnancy; place of checkup; reasons for having medical checkup; type of medical checkup performed; a person who advised her on the medical examination; whether she was satisfied with the checkup or not; she was inoculated against tetanus or not; place of her latest delivery; a person who assisted in the delivery; postnatal checkup at a medical institution; she was satisfied with the checkup or not.

Part 6 Family Planning: heard of family planning; heard of contraceptive methods; contraceptive methods currently used and ever used; reasons for not using contraceptive methods; intentions for future use of contraception and the type of contraceptive method; activities of health workers.

Part 7 Oral Rehydration Therapy: knowledge of symptoms; causes and treatments of diarrhoea; preparation of oral rehydration solution (Jeevan Jal and Medicine Water); knowledge of how to use it and the source of knowledge; whether or not she gave fluids or breastmilk to a diarrhoea patient and reasons.

Part 8 Immunization: general knowledge of immunization; concrete knowledge of im-

munized; place where her children received immunization; reasons why she does not have her children immunized.

Part 9 Breastfeeding: whether or not she breast-fed her children; how long did she continue to breast-feed; reasons why she did not breast-feed; whether or not she feeds the first milk (Colostrum); advantages of breast-feeding.

Part 10 Nutrition and feeding habits: performance of the rice-feeding ceremony and the date of it; when solid foods were started and the type of solid food; whether or not she continues to breast-feed after starting solid food and the duration of breast-feeding; type of milk substitutes other than breast milk; whether or not a pregnant woman is given additional food and, if so, type; types of food prohibited to a pregnant woman and reasons; types of supplementary food to be given to a breast-feeding mother and types to be prohibited; knowledge of causes of "Runche" and "Sukenash" (both are diseases caused by undernourishment) and types of treatment; knowledge of cooking solid food; incidence of eye problems in children; nutritional status of children.

Part 11 Illness and Causes of Illness: incidence of diarrhoea, measles, worms, whooping cough, ARI and diphtheria among children during the past 12 months and place of treatment.

The first point one notices from the above-mentioned framework and questions in the individual questionnaire is that this baseline survey placed stress on matters related to maternal and child health such as immunization, nutrition, illness and health institution, in contrast with the previous survey which centered on questions concerning fertility, including birth history and family planning. This is the most remarkable feature of this survey. At the same time this means that information about medical and health care is considerably lacking in Nepal.

In this survey having such distinctive points, very creative and unprecedented questions are found here and there. Some of them are —

1) *Definition of Age*: Part 3 of the individual questionnaire is aimed at collecting information on the ages of respondents and their husbands after the household questionnaie asking related questions. Questions to respondents go into detail. First of all, the date and year of her birth is asked. If she does not know it, her age is questioned. If she does not know that either, an interviewer estimates her age based upon information gathered from her neighbors. One reason why such careful questions about age are set up is that this is very important information for population statistics. Another reason is that in Nepfl many people do not know their date of birth (age).

2) Relationship between age at marriage and cohabitation: In Part 4, questions about "marriage" and "period before living together with husband" are asked separately. This is because marriage does not always mean an actual marital life in a rural area of Nepal because of "marriage in infancy".

Therefore, in order to consider actual marital age having influence on fertility, the period of time which elapsed before the respondent started living with her husband is needed. These types of questions are prepared by only those who have a thorough knowledge of customs of the locale.

3) Antenatal and Postnatal Care of Mothers: From the viewpoint of maternal and child health, antenatal and postnatal care of mothers are extremely important. The reason questions regarding this matter are set up separately in Chapter 5 is not only that information of this kind is insufficient but also that it has become a crucial problem in Nepal. This Chapter reveals in detail how much medical institutions, especially health posts, contribute to the health care of expectant and nursing mothers, as well as where they gave birth to their children and who assisted in the delivery. The health post is the main and frontline health institution in the farm area of Nepal. Information about expectant and nursing mothers' confidence, in and satisfaction with, the institution was not obtained from surveys previously conducted. Although it is very important, information about the place of delivery and people who assisted is also difficult to obtain. Therefore information of this type is very beneficial to a FP/MCH Project.

4) Health Workers: Health workers are active in the first line of maintaining and improving people's health. Their activities are equally important as those of the health post in the farming region. The health worker system is one of the props and stays of medical and health policies in Nepal. Chapter 6 provides complete information by asking detailed questions about activities of health workers, such as how often they make house calls and whether they give health care and family planning guidance. Information of this kind is indispensable in working out measures for the future.

5) Oral Rehydration Therapy and Immunization: The main disease which children of Nepal suffer from is diarrhoea. Oral rehydration therapy is not a remedy for diarrhoea but it is recommended as symptomatic treatment. Especially in the rural area where medicine is scarce, oral l rehydration therapy is the only effective symptomatic treatment for diarrhoea. Although oral rehydration therapy is recommended by various institutions, we have not yet obtained enough information on the degree of people's knowledge for ways of preparing and using it

and how they obtained their information.

The same is true for immunization. Immunization of children has been vigorously conducted through immunization camps. Yet, details of people's knowledge of and attitudes toward it remain unaccounted for and we do not know to what extent it has filtered down to them. Consequently, information collected by this survey is of considerable benefit.

6) Breast-feeding: Since breat-feeding has the effect of extending the period of amenorrhea (the term of non-ovulation), a nursing mother does not easily become pregnant. As a result, the interval between childbirths becomes longer and the number of children one breast-feeding mother has during the period of reproduction (15 — 49 years old) decreases. The inhibitory effect of breat-feeding, along with changes in marriage patterns, including a decline in marital rate and a rise in the age of the first marriage, becomes a major causes of a lowering in the birthrate in a society where methods of contraception have not been widely disseminated. Therefore, in a country like Nepal, information on the duration of breast-feeding has significant meaning. In this survey people's attitudes were examined toward the first milk which improves an infant's power to resist disease. From this point of view, information on breast-feeding has to be obtained at any cost.

7) Nutrition, Food and Eating Habits: Part 10 includes investigation into a great variety of matters such as food and nutrition of infants and expectant and nursing mothers, as well as diseases (including eye problems) caused by malnutrition. Among others, one important question deals with eating habits in Nepal. In Nepal, the custom prevails of dividing food into two categories, cold food and hot food, which limits eating habits. That custom has no scientific background. As long as they follow such eating habits, an incomprehensible case never stops occurring, for instance food which should certainly be given to expectant and nursing mothers from the nutritive point of view is prohibited. Such is an obstacle to protecting the health of expectant and nursing mothers. Furthermore, it has not yet been clarified as to which foods are included in which category, and to what extent the custom has spread. If one can throw light upon the actual conditions of the custom, it becomes easier to devise a countermeasure to improve nutritive conditions of expectant and nursing mothers. This may be the first survey systematically collecting information of this kind.

8) Illness and Causes of Illness: Part 11 asks mothers with children under five about the number of times their children have suffered from diarrhoea, measles, worms, whooping cough, ARI or diphtheria during the past year, as well as the place of treatment. It is noteworthy that

emphasis is placed on the place of treatment. As a result, their actual confidence in medical institutions is determined thus enabling measures to find out what types of medical institutions should be regarded as important for preserving children's health.

As one can understand from the above, questions extend over a wide range of fields which have never been covered by previous surveys. Furthermore, almost of the information derived from this survey has never been obtained from statistics of various government offices and innumerable surveys conducted in the past. Or, even if obtained, data were not sufficient.

Judging from the results of our examination, the questionnaire of the "Baseline Survey on Population and Family Planning in Nepal" can be evaluated as follows. The questionnaire as a whole, including unique survey items, is appropriate and the best at this moment, so we can place high value on it. Upon scrutiny, however, we find some points should be improved. Since this questionnaire aims at covering all questions which, despite their importance, have insufficiently or never been covered in previous surveys, it was unavoidable to step into an unpredictable or unknown domain to a great extent. Consequently, even doing one's utmost to reduce the occurrence of points needing improvement, it would be difficult to prevent them completely. From the viewpoint of accumulating know-how necessary in conducting a survey of this type in the future, these points which should be improved are invaluable as reference data. This survey provides useful information for achieving the status quo now and in the future.

Note)
1) Questionnaire design is shown as follows:

Questionnaire Design

	Question	Person in Charge
1.	Household questionnaire	V. R. Dhakhwa
2.	Background Information of Respondents (Currently married women age 15–49)	V. R. Dhakhwa
3.	Antenatal and Postnatal Information	V. R. Dhakhwa
4.	Fertility History	B. B. Gubhaju
5.	Desire for Additional Children	B. B. Gubhaju
6.	Breast Feeding	B. B. Gubhaju
7.	Incidence of Morbidity of Children Under 5	T. B. Dangi
8.	Treatment of Disease	T. B. Dangi
9.	Food Habits of Women and Children Under 5	G. P. Regmi
10.	Knowledge of ORT, Knowledge and Incidence of Immunization	G. P. Regmi
11.	Nutrition	N. Watahiki
12.	Contraception	M. Mool
13.	Information on Health Posts	M. Mool

Table 3-1 Name of Panchayat in Survey Area, Kavrepalanchok

BHUMLTAR H.P.	POPULATION	CUM. POP.	SE. PANCHA
BAMGTHALI	1130	1130	
BHUMLUTAR	2427	3557	2560.8
BIRTA DEURALI	1555	5112	
CHOUBAS	1458	6570	
FALANTE BHUMLU	1068	7638	
GOTHPANI CHOUR	1715	9353	7779.4
KATTIKE DEURALI	1500	10853	
SALLYE MULABARI	2497	13350	12998
SAPING	2471	15821	

DAPCHA H.P.			
DAPCHA CHATREBANJH	2661	18482	18216.6
DARAUNE POKHARI	2687	21169	
KHANALTHOK	2771	23940	23435.2
SHYAMPATI SIMALCHOUR	2255	26195	
PURANOGAUN DAPCHA	2200	28395	

KHOPASI H.P.			
BALTHALI	1407	29802	28653.8
BHUMEDANDA	1500	31302	
CHALAL GANESTHAN	2775	34077	33872.4
KHOPASI	1739	35816	
SANKHU PATICHOUR	1785	37601	
SUNTHAN SARADA	1889	39490	39091

NALA H.P.			
ANEKOT	2355	41845	
DEVITAR	986	42831	
NAYAGAUN DEUPUR	2196	45027	44309.6
TUKUCHA NALA	2081	47108	
UGRACHANDI NALA	3288	50396	49528.2
UGRATARA JANAGAL	1790	52186	

Table 3-2 Name of Panchayat in Survey Area, Dhansa

GODAR H.P.	POPULATION	POP. CUM.	SE. PANCHA.
BARMAJHIYA	3667	3667	
BHARATPUR	9005	12672	6343.1
GODAR	6146	18818	
LABATILY	1927	20745	
UMA PREMPUR	8120	28865	25111.7
YAGYA BHUMI	9239	38104	
RAGHUNATHPUR	8175	46279	43380.3

GHODHAGHAS H.P.			
BAHEDABELA	3943	50222	
BAHUARBA	3268	53490	
DEBADIHA	7947	61437	
DEVAPURA RUPAITHA	4839	66276	62648.9
FULGAMA	5956	72232	
GHODHAGHAS	4173	76405	
LAGMA GADA GUTHI	3004	79409	
LOHANA	4084	83493	81417.5
MUKHIYA PATTI	3805	87298	
NAGARAYAN	3809	91107	
TULASIYAHI JANDI	3935	95042	
TULASIYAHI NIKAS	3073	98115	

SABAILA H.P.			
BALABAKHAR	4695	102810	100186.1
DHANUSHA DHAM	6396	109206	
GOVINDAPUR	3678	112884	
JHATIYAHI	3902	116786	
KAJURA RAMOL	3697	120483	118954.7
KHARIHANI	6211	126694	
MAKHNAHA	4663	131357	
PARSAHI	2793	134150	
PATERBA	2448	136598	
SABAILA	5957	142555	137723.3
SATOKHAR	4219	146774	
TIHLLA JUDHAUBA	2566	149340	

TARAPATTI H.P.			
ANDHO PATTI	2366	151706	
BAGHACHODA	3868	155574	
BHUTAHI PATERBA	3255	158829	156491.9
GOPALPUR	3436	162265	
HANSAPUR KATHPULLA	3218	165483	
KACHURITHERA	4014	169497	
MITHILESWOR NIKAS	4095	173592	
MITHILESWOR MAHUBAHI	2610	176202	175260.5
SUGHA NIKAS	2610	178812	
SUGHA MADHURARI	3386	182198	
TARAPATTI SIRSIYA	5488	187686	

Table 3-3   Selected Ward's Number

District	Panchayat		Selected Wards
DHANUSA	1.	BHARATPUR	3, 4, 6, 7
	2.	UMA PREMPUR	1, 5, 8, 9
	3.	RAGHUNATHPUR	1, 4, 5, 7
	4.	DEVAPURA RUPAITHA	4, 6, 7, 9
	5.	LOHANA	5, 6, 7, 8
	6.	BALABAKHAR	1, 2, 5, 9
	7.	KAJURA RAMOL	2, 3, 5, 9
	8.	SABAILA	1, 2, 4, 9
	9.	BHUTAHI PATERBA	1, 5, 7, 9
	10.	MITHILESWOR MAHUBAHI	1, 3, 6, 7
KAVREPALANCHOK	1.	BHUMLUTAR	2, 3, 4, 7
	2.	GOTHPANI CHOUR	2, 7, 8, 9
	3.	SALLYE MULABARI	1, 4, 5, 7
	4.	DAPCHA CHATREBANJH	1, 2, 6, 8
	5.	KHANALTHOK	2, 5, 6, 7
	6.	BALTHALI	1, 2, 8, 9
	7.	CHALAL GANESTHAN	1, 2, 3, 5
	8.	SUNTHAN SARADA	1, 4, 6, 9
	9.	NAYAGAUN DEUPUR	4, 7, 8, 9
	10.	UGRACHANDI NALA	2, 3, 6, 9