A SUMMARY REPORT OF

THE 1976 BASELINE SURVEY FOR EVALUATION OF

THE KHDI HEALTH DEMONSTRATION PROJECT

by

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Acknowledgments

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1. Introduction

The Korean Health Demonstration Loan Project, which stemmed from a loan agreement signed between the governments of the Republic of Korea and the United States in September 1975, has two purposes:

1. To establish the capability within the Republic of Korea Government to plan, conduct, and evaluate low-cost integrated health delivery projects directed primarily toward low-income families.

2. To demonstrate successfully a multi-gun(county) low-cost integrated health delivery system that is replicable in other parts of Korea.

To accomplish the latter, Korea Health Development Institute(KHDI)has had field projects in three selected areas (demonstration gun area) since 1977. The 1976 KHDI Baseline survey's objectives were to collect and analyze basic data for evaluation of the KHDI project activity as follows:

a. To determine key indicators in terms of performance of the KHDI project activity and its impact as a basis

for comparison before and after the project, as outlined

in the KHDI project evaluation plan.

b. To provide basic data for situation analysis in demon-

stration and control areas.

c. To analyze factors affecting differences or changes in

key indicators over time or between areas.

This report contains results of the first of these objec-

tives (a) derived from the 1976 baseline survey.

2. Methodology

a. Analytical Framework

Classical controlled experimental design was used.

KHDI project is intended to improve the accessibility,

quality, costs, acceptability, continuity, and availabi-

lity of the health delivery system. The effect of exposure

to this activity (or treatment) is determined by comparing

any changes in those exposed (experimental or demonstra-

tion group) with changes in those not exposed (control

group) as well as before and after comparison. This

design is diagrammed as follows:

	Measurements before	Exposure to program	Measurements after
Experimental group	O_1	X	O_2
Control group	O_3		O_4

The total effect of an activity (the changes in the experimental group which do not appear in the control group) is

$$\left(\frac{O_2 - O_1}{O_1} \times \frac{100}{1}\right) - \left(\frac{O_4 - O_3}{O_3} \times \frac{100}{1}\right).$$

The baseline survey determined primarily the measurements of O_1 and O_3 before the project. The measurements cover a broad area of health service such as medical care, maternal and child health, and family planning to be produced by the health system. Health service and its outcome are categorized by eight cells in the following model.

Category	Outcomes of the health service		
	Total	Positive(P)	Negative(N)
1. Receiving adequate health service	R_1	$P.R_1$	$N.R_1$
2. Receiving inadequate health service	R_2	$P.R_2$	$N.R_2$
3. Not receiving any Health service but wanting health service	R_3	$P.R_3$	$N.R_3$
4. Not receiving any health service and wanting no health service	R_4	$P.R_4$	$N.R_4$
Total	R Totals	PR Totals	NR Totals

Different prefixes or suffixes can be assigned to the various "R" categories above for analyzing different subgroups within the population. For example "$M.NR_1$" is the sick population receiving adequate health (Medical care) service; "H. PR" totals are the healthy population; "$B.PR_1$" could be the number of births attended by health professionals, etc. Each use of a shredout code such as these will be specified according to the nature of a particular health service.

b. The Questionnaires

Three questionnaires were used in the baseline survey:
1) the household schedule, 2) the morbidity questionnaire
(including medical care utilization and costs questions),
3) the MCH questionnaire (including fertility, family
planning, maternal health, and child health questions).
Each of these questionnaires have many subdivisions
broken down into closed or structured questions.

A great deal of attention was given to the design
of the questionnaires. The U.S. H.E.W's "Health Inter-
view Survey Procedure", 1975, the 1974 Korean National
Fertility Survey's "Household Schedule", and the ques-
ionnaires of Child Health KAP Survey and Maternal Health
Practice Survey of the Danfa Comprehensive Rural Health
Project(conducted by Ghana and the University of Cali-
fornia at Los Angeles) were used as major guides in de-
signing questions.

c. The Sample

The sample design for the baseline survey aimed
for a local (at gun level) representive and probability

sample using a two stage design, first-stage or primary sampling units for ED's (enumeration districts) and second-stage for the households. The list of the 1975 census ED's, available at the Bureau of Statistics, EPB, served as the sampling frame.

The sampling fraction applied the rate of 0.063 (6.3%)* to the households of esch sub-population. The universe to be studied and experimented with is located in three selected Guns (counties) chosen after careful analysis of certain criteria, together with a control area of ten Myons, equivalent to an average Gun. Six sub-populations were agreed upon, to divide the demonstration and control areas into analytically manageable units. Of these, four were from demonstration areas and two from control areas. One sub-population was designated for each of the demonstration Gun areas (3 total) and one sub-population was chosen from an island in the demonstration Gun. For the control area, one mainland and one island area were assigned as sub-populations to be surveyed. (See table I).

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*The sampling rate applied to the universe of households of 0.063(6.3%) was determined after considering the homogeneity of the cluster, to assure less than five percent relative error among the major survey items.

Next, the actual number of households were listed (col. C).
From these columns, the desired number of households to be sur-
veyed in each sub-population was calculated by applying the
sampling fraction of 0.063 (col. D). Column E was determined by
using approximately ten percent of the ED's in each sub-popula-
tion, (except in the case of the island control area where a
minimum of two PSUs were allocated to be sampled in each Myon).
Column F was calculated by dividing figures in col. D by those
in col. E. Finally the particular households to be surveyed
were decided by taking the households in their ordinal number
(as assigned in census) and filling the quota (the figures in
col. F).

Table 1. Sample Design of Baseline Survey

Sub-population (A)	Number of 1975 census enumeration districts (EDs) (B)	Total number of households in census (C)	Number of households sampled (D)	Number of PSUs sampled in base-line survey (E)	Average number of households sampled in each P.S.U. (F)
Control, mainland	211	17,204	1,080	20	54
Control, island	9	821	52	2	26
Hongchon demonstration, mainland	281	21,885	1,372	28	49
Gunee demonstration mainland	158	12,706	800	16	50
Okgu Demonstration, mainland	250	20,252	1,274	26	49
Okgu Demonstration, island	21	1,347	84	2	42
Total:	‒	74,215	4,662	94	‒

d. The Organization and Execution of the Field Work

The household interviews were conducted during a 40-day period of November 12 to December 21, 1976, by a team approach. Each team was comprised of five interviewers and one supervisor, with field operations under control of roving KHDI personnel. The nine,six-member teams covered a total of 94 PSUs, averaging 10 or 11 PSUs per team.

KHDI selected and trained the survey personnel. First, résumés of interested applicants were solicited through the newspapers. Out of 290 replies, about 145 women were invited to personal interviews on the basis of age, education level, place of birth and growth, experience in conducting surveys and the legibility of their handwriting. During the interview, the candidate's personal appearance, general attitudes, health and personal sensitivity towards others were considered. From these interviews, 66 candidates were chosen to attend 4 days of orientation and training given by KHDI. The final screening at the end of the training period was a written examination which yielded 45 qualified interviewers.

The nine supervisors came from three sectors. Two were from KHDI staff, four women were chosen by virtue of past field

operation experience, and three men were selected from the School
of Public Health, Seoul National University. All received speci-
fic training for a five day period.

At the local level, interviews were coordinated by team su-
pervisors and local community officials. The interaction among
neighborhood leaders, interviewers and household members enhanc-
ed introductions and cooperation.

In each case a household was visited twice, with visitations
spaced one week apart. At the first home visit, information about
the household, fertility, family planning and Maternal/Child
Health was gathered. This was the "single round" inquiry. In most
cases the housewife was the only respondent. During this first
visit giving special attention to the morbidity survey, a ques-
tionnaire and special calendar with both lunar and solar time
periods printed on it was given to the respondent. These tools
were then discussed with the respondent and marked in red pencil
to specifically indicate the time period of concern. Because
the 15 day period is the most common reference time span in rural
Korea this interval was used. It began 7 days before the first
visit and ended on the last visit. Events relating to morbid
conditions were recalled and other morbid conditions were recorded

by the respondent for discussion with the interviewer on the second visit. The deliberate marking of the calendar was used to stress to the subject the importance of both the critical time period and his notation of any morbid condition at that time.

On the 15th day (eight days after the first interview) another survey was used to collect data for morbidity rates. At this time the interviewer and subject reviewed the calendar together. If the calendar had not been used by the subject, the interviewer carefully inquired about morbid conditions for the entire 15 day period prior to the second visit.

On the other hand, if a morbid ocndition was noted, the interviewer proceeded to secure specific data on the health problem, its treatment and medical expenditure. All of the initial questions were devised from condition appreach-that is, which kind(s) of morbid condition(s) had affected routine activity. After the calendar was completed and those questions asked, another questionanaire utilizing the personal approach was used. With this approach, the primary concern were the resultant restrictions upon routine activity caused by the previously categorized conditions.

As in many population surveys it was necessary to rely heavily

on proxy interviews, since all household members were rarely on
hand for questioni...;. In these cases the housewife was consi-
dered the most reliable source of information.

This "double round" interview was deemed most appropriate
for several reasons. In two sessions the idea of the calendar
could be explained thoroughly, used, and checked for reliabili-
ty. The calendar format is believed to minimize the omission
of certain details of acute (morbid) conditions due to oversight
or lapse in memory. The second interview was also likely to be
more relaxed and more productive because of rapport established
in the first session. In this way information could flow more
easily and corrections and additions for the entire questionna-
ire were made possible.

In both demonstration and control areas, interviews were
completed with a total of 4,621 households, giving an overall
response rate of 99.1% (see table 2).

Table 2. The Results of Sampling Implementation by Area

Area	Households sampled	Interviews completed	Response rate(%)
Demonstration area			
Hongchon	1,372	1,368	99.7
Gunee	800	795	99.4
Okgu	1,358	1,356	99.9
Total	3,530	3,519	99.7
Control area	1,132	1,102	97.3
Grand totals	4,662	4,621	99.1

The mean time of completion of interviews by type of questionnaire is shown in Table 3.

Table 3. Mean Time Taken for Interview Completed by Type of Questionnaire and Area

Type of Questionnaire	Demonstration area				Control area
	Hongchon	Gunee	Okgu	Total	
First visit		− minutes −			
Household survey	8.6	13.2	8.0	9.4	10.2
Fertility,MCH,and Family planning survey	14.2	17.4	15.9	16.3	18.4
Total	22.8	30.6	23.9	25.7	28.6
Second visit					
Morbidity,utilization and costs survey	11.3	13.4	9.6	11.1	13.5

3. Major Findings

a. Morbidity or Relative Healthiness

1) The survey findings show high morbidity, sex-age differential, and high prevalence of chronic conditions in three demonstration areas and a control area during a 15-day period. The morbidity level was higher in females than males in terms of morbidity rate and mean sickness days. Age-specific morbidity rate has a U-shape, showing high rates in infants and the aged. Most prevalent conditions are different in the nature of their condition group: respiratory conditions are found in acute; arthritis and joint pain in chronic.

2) For evaluation of the KHDI project, major indicators of morbidity or relative healthiness (See Appendix for Operational Definition of Healthy and Sick Persons) as a comparison basis are also shown. Each indicator represents a percent or mean with a statistical significance of difference (X^2 test) between each survey area. Several symbols are used: 0 for no statistical difference, * significant at $P \leq 0.05$, and ** significant at $P \leq 0.01$,

(a) Proportion of persons with conditions causing activity

limitation or receiving medical treatment per 100 persons

during a 15-day period.

	Hongchon	Gunee	Okgu	All dem. area	Control area
	26.4% N=7,451	18.4% N=4,058	19.1% N=7,347	21.8% N=18,856	21.0% N=5,956
Hongchon	–				
Gunee	**	–			
Okgu	**	0	–		
Control area	**	**	**	0	–

(b) Incidence rate (morbid conditions onset per 100 persons)

during a 15-day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	12.6% N=7,451	7.6% N=4,058	9.8% N=7,347	10.5% N=18,856	8.2% N=5,956
Hongchon	–				
Gunee	**	–			
Okgu	**	**	–		
Control area	**	0	**	**	–

N=Sample size.

(c) Acute morbidity rate (acute conditions per 100 persons) during a 15 day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	14.9% N=7,451	8.7% N=4,058	11.1% N=7,347	12.1% N=18,856	9.6% N=5,956
Hongchon	–				
Gunee	**	–			
Okgu	**	**	–		
Control area	**	0	**	**	–

(d) Chronic morbidity rate (chronic conditions per 100 persons) during a 15-day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	16.3% N=7,451	12.4% N=4,058	10.0% N=7,347	13.0% N=18,856	14.4% N=5,756
Hongchon	–				
Gunee	**	–			
Okgu	**	**	–		
Control area	**	*	**	**	–

(e) Mean restricted activity days per person with morbid condi-

tions during a 15-day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	8.49 days SD=6.22 N=1,969	8.44 days SD=6.49 N=750	8.59 days SD=6.21 N=1,400	8.51 days SD=6.27 N=4,119	9.63 days SD=6.05 N=1,253
Hongchon	—				
Gunee	0	—			
Okgu	0	0	—		
Control area	**	*	**	**	—

(f) Proportion of the mean un-restricted activity days as 100

of mean sickness days per person with morbid conditions

	Hongchon	Gunee	Okgu	All dem. area	Control area
	12.7% N=1,969	15.3% N=750	9.6% N=1,400	12.2% N=4,119	9.6% N=1,253
Hongchon	—				
Gunee	0	—			
Okgu	**	**	—		
Control area	**	**	0	*	—

b. Utilization of Medical Care Service and The Costs

1) The utilization of medical care service was characterized by a low medical treatment rate, a high rate of unmet needs, long treatment days per sickness, a high utilization rate of pharmacists or druggists for treatment, heavy burden of medical expenditures, and relatively high rate of satisfaction of treatment.

2) Low medical expenditures, easy accessibility (in terms of time taken to reach the pharmacy or druggist), and high satisfaction of outcomes of treatment resulted in high utilization of the pharmacy or druggist as a source of treatment under the patient-initiated system.

3) Most patients who were administered hospital care were not referred by a physician. Hospital fees usually resulted in incurrence of debt. A high proportion of medical expenditures flowed out to the cities.

4) Major indicators concerning utilization of medical care service and the costs as a comparison basis for evaluation purpose are as follows:

(a) <u>Medical treatment rate</u> per 100 morbid conditions during
a 15-day period

1) <u>All kinds of morbid conditions</u>

	Hongchon	Gunee	Okgu	All dem. area	Control area
	47.6% N=2,312	50.4% N=855	55.9% N=1,552	51.0% N=4,719	41.5% N=1,430
Hongchon	—				
Gunee	0	—			
Okgu	**	**	—		
Control area	**	**	**	**	—

2) <u>Acute conditions</u>

	Hongchon	Gunee	Okgu	All dem. area	Control area
	66.4% N=1,078	63.5% N=355	72.8% N=815	67.4% N=2,268	58.6% N=572
Hongchon	—				
Gunee	0	—			
Okgu	**	**	—		
Control area	**	0	**	**	—

3) Chronic conditions

	Hongchon	Gunee	Okgu	All dem. area	Control area
	31.3% N=1,214	40.6% N=500	37.3% N=737	35.6% N=2,451	30.1% N=858
Hongchon	—				
Gunee	**	—			
Okgu	**	0	—		
Control area	0	**	**	**	—

(b) Receiving Rate[+] of medical treatment per 100 medical treatment needs perceived during 15-day period.

1) All kinds of morbid conditions

	Hongchon	Gunee	Okgu	All dem. area	Control area
	61.9% N=1,799	64.0% N=669	66.5% N=1,306	63.8% N=3,774	50.6% N=1,172
Hongchon	—				
Gunee	0	—			
Okgu	*	0	—		
Control area	**	**	**	**	—

+ Receiving rate=Ed/D X 100

        Ed=number of morbid conditions which received medical treatment during a 15-day period
        D=Ed + number of morbid conditions which did not receive medical treatment but wanted treatment.

2) Acute conditions

	Hongchon	Gunee	Okgu	All dem. area	Control area
	79.8% N=919	80.1% N=281	81.1% N=731	80.3% N=1,931	71.6% N=468
Hongchon	–				
Gunee	0	–			
Okgu	0	0	–		
Control area	**	**	**	**	–

3) Chronic conditions

	Hongchon	Gunee	Okgu	All dem. area	Control area
	43.2% N=880	52.3% N=388	47.8% N=575	46.6% N=1,843	36.6% N=704
Hongchon	–				
Gunee	**	–			
Okgu	0	0	–		
Control area	**	**	**	**	–

(c) Medical treatment rate rendered by physicians per 100 medical treatments including all sources of treatment during a 15-day period.

	Hongchon	Gunee	Okgu	All dem. area	Control area
	11.7% N=1,195	13.7% N=456	13.4% N=968	12.7% N=2,621	10.8% N=658
Hongchon	–				
Gunee	0	–			
Okgu	0	0	–		
Control area	0	0	0	0	–

(d) Mean time (in minutes) taken to reach all sources of medical treatment employed during a 15-day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	43 SD=97.8 N=1,160	44 SD=78.0 N=456	36 SD=69.8 N=961	40 SD=84.9 N=2,577	59 SD=88.7 N=656
Hongchon	–				
Gunee	0	–			
Okgu	0	0	–		
Control area	**	**	**	**	–

(e) Mean time (in minutes) taken to reach physician's offices

for out-patient care during a 15-day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	75 SD=72.5 N=115	73 SD=61.5 N=51	41 SD=26.5 N=102	61 SD=59.0 N=268	105 SD=153.3 N=51
Hongchon	−				
Gunee	O	−			
Okgu	**	**	−		
Control area	O	O	**	*	−

(f) Utilization rate of all sources of medical treatment

(employed in a Myon or Eup the same as the resident's)

per 100 medical treatments during a 15-day period

	Hongchon	Gunee	Okgu	All dem. area	Control area
	75.4% N=1,195	64.6% N=456	41.6% N=968	61.1% N=2,621	47.3% N=658
Hongchon	−				
Gunee	**	−			
Okgu	**	**	−		
Control area	**	**	*	**	−

(g) Satisfaction Rate of Outcomes[+] of medical treatment employed during a 15-day period

1) Medical treatment employed by all sources

	Hongchon	Gunee	Okgu	All dem. area	Control area
	71.2% N=1,192	66.7% N=461	71.3% N=968	70.4% N=2,621	64.3% N=658
Hongchon	-				
Gunee	0	-			
Okgu	0	0	-		
Control area	**	0	*	**	-

2) Out-patient care rendered by physicians

	Hongchon	Gunee	Okgu	All dem. area	Control area
	64% N=115	60% N=51	67% N=102	65% N=268	63% N=51
Hongchon	-				
Gunee	0	-			
Okgu	0	0	-		
Control area	0	0	0	0	-

+ Outcomes of medical treatment, in which the recipient himself or
  herself considers the result of medical treatment, are divided
  into two categories: satisfied includes complete recovery and
  feeling some restoration to health; not satisfied contains no
  restoration to health and feeling worse than prior to treatment.

(h) Mean medical expenditures for out-patient care rendered

by physician during a 15-day period in all survey areas.

Per case   :   4,249 won (SD=6,700)

N=268

Per visit :   1,800 won

(i) Rate of patients with hospital care referred by physician

during one year in all survey areas.

37%

N=143

C. Maternal and Child Health

1. Data are from interviews with women having an infant or
child aged under three years at the time of the survey, in three
demonstration areas and a control area. The data cover prenatal
care, pregnancy, delivery, postnatal care, maternal health, and
child health.

2. A high proportion of women experienced severe symptoms in
relation to pregnancy and delivery. Among the symptoms "severe
dizziness" was much seen during pregnancy and "severe pain"

after delivery. However most women did not want to get help from professionals for prenatal and postnatal care. Only few births were actually attended by health professionals. In home delivery, most equipment for cutting the umbilical cord was not sterilized.

3. Most women were aware of or had heard of at least one name of a vaccination. Health field workers were greatly influential in this exposure of information. There was a close correlation between the women's knowledge and actual vaccinations given.

4. For infant health the breast-feeding period was long and the starting time of supplement feeding for the bady was late. The supplement foods contained much starch with little protein, iron, and vitamins.
During the past three months, many infants or children (aged less than three years) had severe fever or severe diarrhea. However only a small proportion of the infants or children had medical treatment rendered by physicians, while self-medication without doctor's prescription was mostly used for treatment.

5. Major indicators of maternal and child health (with statistical significance for evaluation purpose) are as follows:

(a) Proportion of births attended by health professionals
    (doctor, health worker, midwife, and nurse) during 1973–
    1976.

	Hongchon	Gunee	Okgu	All dem. area	Control area
	16.9%	14.0%	25.5%	19.6%	10.2%
	N=461	N=193	N=401	N=1,055	N=333
Hongchon	–				
Gunee	0	–			
Okgu	**	**	–		
Control area	**	0	**	**	–

(b) Complete vaccination rates by type and age of infant and
    child (actually vaccinated as a schedule)

Smallpox (based on age 2–3)

	Hongchon	Gunee	Okgu	All dem. area	Control area
	67.2%	57.1%	39.2%	54.3%	50.2%
	N=134	N=56	N=125	N=315	N=102
Hongchon	–				
Gunee	0	–			
Okgu	**	*	–		
Control area	**	0	0	0	–

Polic (based on age 2-3)

	Hongchon	Gunee	Okgu	All dem. area	Control area
	19.4% N=134	32.1% N=56	22.4% N=125	22.9% N=315	11.8% N=102
Hongchon	-				
Gunee	0	-			
Okgu	0	0	-		
Control area	0	**	*	*	-

BCG (based on age one)

	Hongchon	Gunee	Okgu	All dem. area	Control area
	40.0% N=160	78.7% N=61	23.9% N=138	40.4% N=359	25.0% N=112
Hongchon	-				
Gunee	**	-			
Okgu	**	**	-		
Control area	**	**	0	**	-

DPT (based on age 6-12 months)

	Hongchon	Gunee	Okgu	All dem. area	Control area
	3.6% N=84	18.6% N=43	13.5% N=74	10.4% N=201	6.0% N=67
Hongchon	—				
Gunee	**	—			
Okgu	*	O	—		
Control area	O	*	O	O	—

Measles (based on age one)

	Hongchon	Gunee	Okgu	All dem. area	Control area
	20.6% N=160	32.8% N=61	23.2% N=138	23.7% N=359	8.0% N=112
Hongchon	—				
Gunee	O	—			
Okgu	O	O	—		
Control area	**	**	*	**	—

d. Family Planning

1. Interviews were conducted with currently married women aged
under 45 for data covering their fertility, attitude toward chil-
dren, fertility control practice, and characteristics of users or
non-users of contraception.

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2. The fertility level is slightly different according to survey area. The total fertility rate is comparatively high in Hongchon (4.1 per women), but low in Gunee (3.5) and Okgu (3.6) while it is 3.9 in the control area.

Women experiencing induced abortion constitute a range of 23-29 percent in four survey areas.

3. Current users of contraception are 36-41 percent of the respondents, but there is a wide gap between current practice and the need of family planning practice, as shown in the following table:

Category	Demonstration areas				Control area
	Hongchon	Gunee	Okgu	All dem. area	
1) Current user	40.1	35.5	40.7	39.4	40.2
Satisfied	37.6	32.3	36.9	36.2	35.5
Non-satisfied	3.5	3.2	3.8	3.2	4.7
2) Non-user					
1) Wanting contraception	15.6	8.3	11.6	12.8	14.7
a. Wanting no more children	13.0	6.6	10.4	10.8	13.5
b. Wanting more children	2.6	1.7	1.2	2.0	1.2
2) Not wanting contraception	35.3	44.1	48.1	37.7	31.9
a. Wanting no more children	11.3	18.9	13.1	13.5	10.7
b. Wanting more children	24.0	25.2	25.0	24.2	21.2
3) Infecund	9.0	11.5	9.6	9.9	13.2
Total	100	100	100	100	100
(N)	(947)	(471)	(797)	(2,215)	(667)

(See operational definition of users of contraception on Appendix)

4. Major indicators of Family-planning (with statistical significance) are as follows:

(a) Current practicing rate of family planning for currently married women aged under 45

	Hongchon	Gunee	Okgu	All dem. area	Control area
	40.1% N=947	35.5% N=471	40.7% N=797	39.4% N=2,215	40.2% N=667
Hongchon	--				
Gunee	0	--			
Okgu	0	0	--		
Control area	0	0	0	0	--

(b) Ratio of current users of loop and sterilization as % of current users of contraception

	Hongchon	Gunee	Okgu	All dem. area	Control area
	37.6% N=380	45.2% N=166	51.1% N=305	44.2% N=871	44.4% N=268
Hongchon	-				
Gunee	0	-			
Okgu	**	0	-		
Control area	0	0	0	0	-

(c) Ratio of current users of contraception as % of women having three or less children

	Hongchon	Gunee	Okgu	All dem. area	Control area
	38.3% N=428	25.2% N=239	17.4% N=322	29.5% N=1,130	31.5% N=273
Hongchon	–				
Gunee	**	–			
Okgu	**	*	–		
Control area	0	0	**	0	–

(d) The unmet needs[+] of contraception as % of women needing contraception

	Hongchon	Gunee	Okgu	All dem. area	Control area
	40% N=635	43% N=295	38% N=521	40% N=1,455	39% N=438
Hongchon	–				
Gunee	0	–			
Okgu	0	0	–		
Control area	0	0	0	0	–

+ The unmet needs = $(a+b+c) - Cu/(a+b+c) \times 100$

    a = Number of fecund women wanting no more children and wanting or currently practicing contraception.

    b = Number of fecund women wanting more children, but wanting or currently practicing contraception

    c = Number of fecund women wanting no more children and wanting no contraception

    Cu = Number of women currently practicing contraception

4. Summary

This report contains key indicators for comparison before and after the KHDI project. The data collected were derived from interviews with respondents in the sample in both demonstration and control areas during a 40-day period of November 12 to December 21, 1976.

The survey findings show high needs for medical treatment, but low utilization of exsisting medical service for treatment. There is also a high need for maternal and child health and family planning services. More detailed statistics and their interpretation will be published separately in a comprehensive report.

The 1976 data in these key indicators will be compared with the 1979 post-evaluation survey for detailed analysis and evaluation of the KHDI field health projects.

APPENDIX

Operational Definition of
Healthy and Sick Persons

a. H.PR. Healthy

    1) Healthy   : Absence of all sick indicators listed below.

    2) Functionally : No restricted activity days, presence of
        healthy   minor condition but received no medical
                    treatment.

b. S.NR. Sick Presence of any bed days and/or restricted
                  activity days and/or no restricted activity
                  days with medical care treatment within a 15-
                  day period.

    1) S.NR1 Received Adequate Treatment:

        Recipient himself or herself considers the

        result of medical treatment adequate regardless

        of type of services rendered:

        a) complete recovery

        b) feeling some restoration to health

    2) S.NR2 Received Indequate Treatment:

        Recipient himself or herself considers the

        result of medical treatment inadequate regard-

less of type of services rendered:

a) feeling no restoration to health

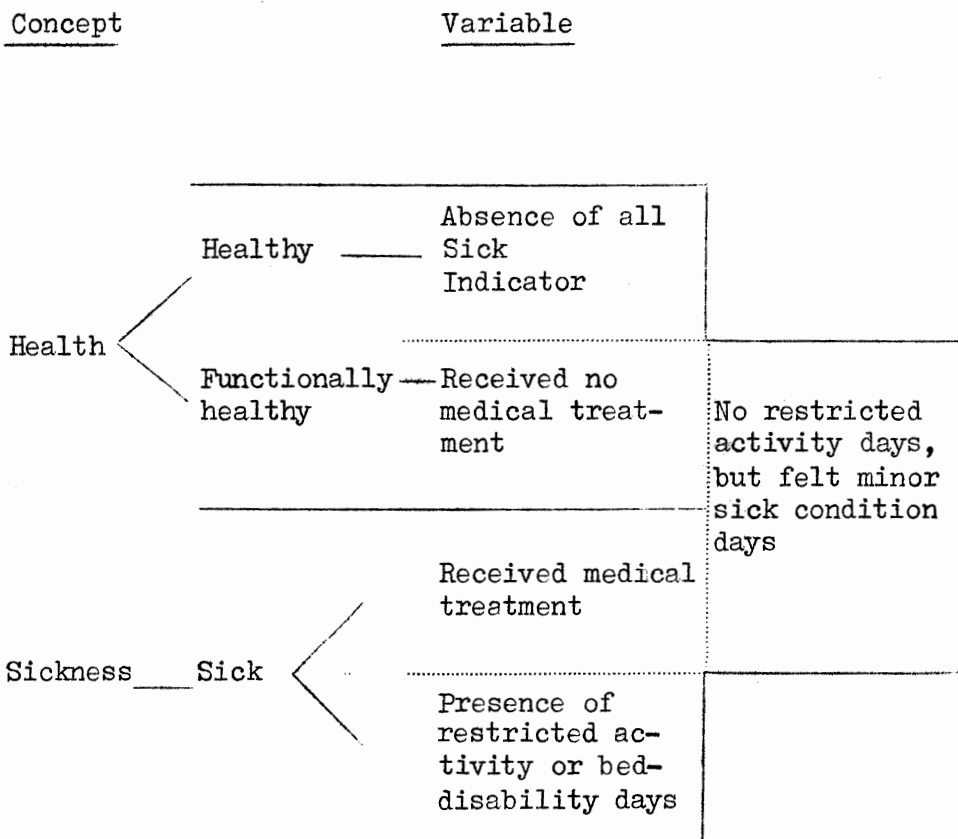b) feeling worse than prior to treatment

3) S.NR3 Not Received Any Treatment, but Wanted Treatment: Client wants to receive medical treatment, but does not receive it because of economic reasons, too busy, fear about going to physicians or intended to receive it but had taken no action at the time of survey.

4) S.NR4 Not Received Treatment and Wanted No Treatment: Client does't want to and doesn't receive any medical care treatment because he feels his is only a minor illness, feels he will recover spontaneously or feels that recovery will be too difficult.

Graphic Explanation of Healthy and Sick Persons

Concept   Variable

Health
- Healthy —— Absence of all Sick Indicator
- Functionally healthy — Received no medical treatment
- Sickness — Sick
  - Received medical treatment
  - Presence of restricted activity or bed-disability days

No restricted activity days, but felt minor sick condition days

References: 1) Robert Kohn and Kerr L. White, Health Care: An International Study, pp. 62-63, 1976
2) U.S. Department of Health, Education, and Welfare, Health Interview Survey Procedure: 1957-1975, pp. 127-135, 1975.
3) Kenneth F. Smith, Improving the Delivery of Health Services in Korea: An Analytical Framework. Korea Health Development Institute, 1976 (Mimeo)

Operational Definition of

Users of Contraception

Current Users

Satisfied: Current users of contraception at the time of survey
and satisfied with method of contraception using:

Non-satisfied: Current users of contraception at the time of survey,
but not satisfied with method of contraception using:
intended to switch current method to another.

Non-Users

Wanting
contraception: Non-users of contraception at the time of survey,
but intended to use contraception in 1976 or
1977. Excluded women intending use of contra-
ception in the non-defined future.

Wanting no
contraception: Non-users of contraception at the time of survey
and not intended to use contraception.
Included women intending use of contraception in
the non-defined future.

Infecund:
Perceived infecundity which women responsed
to the question: spontaneously sterile,menopause,
operation (not for sterilization), and other.