

## A Study on Affecting Factors to Utilization of a Health Subcenter for Primary Health Care in Korea

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### Introduction

The recent improvement of Korea's economic conditions has brought numerous changes not only in the rural inhabitants' environment and standard of living but in their structure of consciousness as well.

It is true that the roofs of farmhouses have been reformed, the roads have been paved and widened, and the betterment of scientific farming methods and the earning activities outside the farm have led to the increase of rural householders' income. However, it is also a fact that the circulation and magnification of "mass media" have brought simultaneously the general increase of the tendency to consume and the increase of expenses, resulting not only in the blow given to the maintenance of domestic and economic security of rural households but also in the formation of various difficulties for the balanced development of rural community.

Regardless of the process and the means, it is extremely fortunate that an institutional device (medical care insurance system), by which the absolute majority of the nation can be provided with the right to enjoy its health in the near future and also the equivalent relative obligation, is available. Since trial and error, due to lack of preparation, is numerous, and since primary health and medical demands of rural householders are expected to be diverse, it is safe to assume that the proper establishment of function of the health subcenter—the public medical facility that offers health care—along with the

rural householders' proper understanding and cooperation toward health care may constitute a very significant background for the settlement and development of health care project in the rural community.

From this point of view, therefore, it is of much importance to investigate and analyze the influential factors in the utilization of rural health subcenter, the analysis being centered around the health care facilities and the image of health care personnel demanded by the rural community, the rural householders' means of everyday life and their financial resources for medical cost, and the government's medical system and policy. This study is reported in expectation that the obtained data may be of use to the settlement and development of other rural communities.

### Subject and Method of Survey

#### 1) Background of the district surveyed

The district in which the survey was carried out, Su Dong-Myun, Nam Yang Ju-Gun, Kyung Gi-Do, is a subcounty newly established in 1963, and it is a remote mountain farming village located about 10 Km north of Ma Suk Woo-Ri, Wha Do-Myun, Nam Yang Ju-Gun, Kyung Gi-Do, which is on Kyung-Choon Highway that connects Seoul and Choon-Chun.

It is a tiny subcounty district with a population of 1,491, 1,151 households (farmhouse percentage 78.4

%), and 19 administrative sections(22 natural villages). Even though it has an area of 5,800ha, it is a typical remote mountain village with 15% cultivated land, 80% forest land and 5% coarse land, making it almost certainly a doctorless village.

This district has, since 1972, been selected by Ewha Womans University's College of Medicine as a model district for rural community medicine, and has been developed as a place for community medical service and student training.

From June 1980 through August 1982, the government has reportedly dispatched public health doctors as health subcenter personnels, and, 4 years later, in June 1986, it has again sent public health doctors, who have been carrying out health care project under government's initiative ever since. The College of Medicine of Ewha Womans University is using this district as a student training spot of rural community medicine.

This is a district in which the community itself, with the aid of the health subcenter, has spontaneously endeavored to improve and solve the community's health and medical problems.

In 1971, the inhabitants themselves got organized and inaugurated a community development health society, offering mutual aid in medical fee to every household in the subcounty until the government enforced medical insurance, and they also hired village health care personnels who could function as a bridge between each household and the health subcenter.

## 2) Subject and method of survey

This study is an analysis of the medical records of total outpatients of the health subcenter in Su

Dong-Myun during 1976~1987 and the specific survey results of 284 householders, a 25% random sampling, out of 1,151 total householders in a rural community, Su Dong-Myun, about the affecting factors to utilization of a rural health subcenter for primary health care.

The collected survey data was manually compiled to statistics on the spot during April 22~28, 1988 by the reporter and the two figuring personnels.

## Results and Design of Survey

### 1) Change in utilization rate of health subcenter

As shown in Table 1 and Fig. 1, the utilization rate of health subcenter in the surveyed district was highest with 900 per 1,000 inhabitants in 1977, and showed a decreasing tendency yearly such as 846 in 1979, 708 in 1981, 618 in 1985, 594 in 1983 and 341 in 1987.

The reason for such decrease in the utilization rate of health subcenter is considered to be the commencement of type 1 medical insurance facilities, which is due to the limitations of man power, facilities and

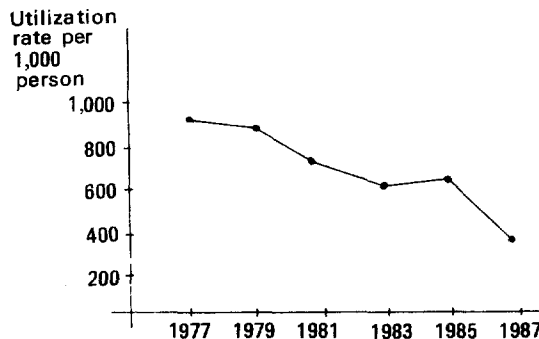


Fig. 1. Utilization rate of health subcenter in Su Dong-Myun during 1977~1987.

Table 1. Comparison of utilization rate of health subcenter in Su-Dong Myun During 1977~1987

Year	1977	1979	1981	1983	1985	1987
Population	5,816	5,572	5,187	5,265	4,641	4,591
No. of New patient	5,235	4,713	3,673	2,993	2,870	1,565
Utilization rate per 1,000 person	900	846	708	594	618	341
Average visiting frequency	1.9	1.9	1.9	1.6	1.6	1.7

Table 2. The age specific utilization rate of Su Dong Myun health subcenter during 1976~1986

Age	Year	No. of new patient			Utilization rate per 1,000 person		
		1976	1981	1986	1976	1981	1986
0~ 4		1,386	877	764	2,067.4	2,402.7	2,308.2
5~ 9		491	496	963	612.8	840.9	930.8
10~14		354	394	234	416.2	552.7	437.4
15~24		544	400	160	708.5	401.2	153.7
25~34		451	377	208	834.6	641.2	313.7
35~44		429	374	213	683.7	657.3	439.2
45~54		295	326	214	616.4	618.6	373.5
55~64		232	212	172	595.4	463.9	385.7
65 and over		175	218	234	550.6	572.2	555.8
Total		4,357	3,674	2,563	724.2	708.3	524.7

equipments in health subcenter, the rural medical facility.

It can be of utmost significance for the development of rural health subcenter project to find out if the reason for the decrease in utilization of rural health subcenter lies in the health subcenter, or in the inhabitant himself's frame of consciousness, or in the government's policy.

### 2) Age specific utilization of health subcenter

The age specific utilization rate, as illustrated in Table 2, showed the highest in the group of age

of 0~4 with 2,067.4 per 1,000 inhabitants in 1976, 2,402.7 in 1981, and 2,308.2 in 1986, respectively. In the other age groups, no significant difference was found in the specific rate.

Such high rate in the age group of 0~4 may be explained by the fact that, whoever the patient was, the treatment was possible only through a guardian, which led one to choose the safe treatment provided by health subcenter. The parents' idea of giving priority to their children is deemed to be in profound operation here.

### 3) Choice rate of medical facilities

According to the survey data of 284 random samplings of householders in the district surveyed, in the choice rate of medical facilities for primary health care, health subcenter was the highest with 43.3%, and hospital, with 29.6%, generalist clinic, with 15.5%, and specialist clinic, with 11.6%, were in decreasing order (Table 3).

As for the frequency of utilization of health subcenter

Table 3. The choice of medical facilities for primary medical care

Medical facilities	No.	Percent (%)
Health subcenter	123	43.3
Hospital	84	29.6
Generalist clinic	44	15.5
Specialist clinic	33	11.6
Total	284	100.0

Table 4. Frequency of utilization of health subcenter and impression to heal

Frequency of utilization of health subcenter			Impression to health subcenter service		
Frequency	NO.	Percent (%)	Impression	No.	Percent (%)
Frequently	25	8.8	Good	60	21.1
Occasionally	238	83.8	Common	173	60.9
Never	21	7.4	No good	39	13.8
Total	284	100.0	Not interest	12	4.2
			Total	284	100.0

ter and the impression to health subcenter service according to the householders surveyed, 83.8% admitted occasional utilization, 8.8% replied "frequently", and 7.4% said they never utilize it (Table 4).

In the survey of the impression to health subcenter, the number of people who replied "common" was the largest with 50.9%, and "good", with 21.1%, "no good", with 13.8%, and "not interested", with 4.2%, were in decreasing order (Table 4). To sum it all up, 92.6% of rural inhabitants have visited the health subcenter at one time or another, but the percentage of the people who acknowledged a preference for the place was a mere 21.1%.

#### 4) Choice reasons of primary medical care facilities

The rural inhabitants' choice reasons of health subcenter or generalist clinic for primary medical care are as shown in Table 5. "Sincerity and kindness of health subcenter staff" was the highest with 57.8%, "near distance from living place" was next with 24.6%, and "good medical facilities" (9.2%) and "low medical cost" (8.4%), respectively.

Any other community would hand out the same

results, but especially in a rural community, good attitude of the medical personnel, rather than much knowledge or skill, offers easier access to the inhabitants, which can be more effective and efficient seen from the perspective of health and medical service.

Table 5. Choice reasons of health subcenter or generalist clinic for primary medical care

Reason	No.	Percent (%)
Sincerity and kindness of health subcenter staff	164	57.8
Near distance from living place	70	24.6
Good medical facilities	26	9.2
Lower medical cost	24	8.4
Total	284	100.0

#### 5) Effect of distance between living places and health subcenter

The utilization rate of Su Dong-Myun health subcenter by distance from living places, as illustrated in Table 6, was the highest in Ribsouk 3, the nearest town within 2km of health subcenter, with 1,444.8 per 1,000 inhabitants in 1976, 1,286.6 in 1981, and 857.1 in 1986. It was followed by the next nearest

Table 6. Utilization of Su-Dong Myun health subcenter by distance from living places during 1976~1986

Distance (Km)	Year Rie	No. of new patient			Utilization rate per 1,000 person		
		1976	1981	1986	1976	1981	1986
0~2.0	Ribsouk 3	1,033	826	594	1,444.8	1,286.6	857.1
	Unsoo 1	831	798	399	919.2	939.9	488.4
	Ribsouk 2	--	--	183	--	--	693.2
	Ribsouk 1	490	349	124	827.7	772.1	568.9
	Oebang 1	226	312	191	398.6	578.8	465.9
2.1~4.0	Unsoo 2	--	--	86	--	--	364.4
	Songchon 1	224	219	97	351.6	382.4	143.6
	Gidoon	199	169	58	376.9	382.4	143.6
	Soo san 1	328	161	192	609.7	408.6	543.9
	Soo san 2	225	183	193	595.2	563.1	765.9
4.1~6.0	Nebang 1	295	239	190	833.3	739.9	591.9
	Songchon 2	77	145	87	278.0	591.8	404.7
	Oebang 2	136	188	76	413.4	723.1	308.9
6.1 and over	Nebang 2	49	85	93	248.7	402.8	476.9
Total		4,357	3,674	2,563	724.2	708.3	524.7

Unsoo 1, Ribsouk 2, and Ribsouk 1. Yearly utilization rate of Unsoo 1, Ribsouk 2 and Ribsouk 1 was in the order of Unsoo 1(919.2) and Ribsouk 1(827.7) in 1976, Unsoo 1(939.9) and Ribsouk 1(772.1) in 1981, and Ribsouk 2(693.1), Ribsouk 1(568.9) and Unsoo 1(488.4), respectively.

As seen above, rural inhabitants revealed a tendency to utilize medical facilities near in distance from their living places. However, it should be pointed out that as the means of transportation improved and economic ability of homes bettered recently, inhabitants who utilized medical facilities with good facilities or equipment have been increasing in number.

#### 6) Daily farm work and primary medical care

The rural inhabitants' utilization of primary medical care is closely related to their farm work. It is not infrequent that they cannot receive primary medical treatment because of their daily farm work.

Interrelation of these two aspects of life, as shown in Table 7, is as follow. The number of people who replied that primary health care "was interfered by daily farm work" showed the highest rate of 59.8%, and those who replied "not interfered" and "unknown" was next with the rate of 20.1% each.

Primary health care is virtually following the tail of daily living conditions. In other words, daily life precedes primary medical care in the order of priority.

Needless to say, this kind of inhabitant consciousness is a subjects of health education which must certainly be reformed in the near future.

#### 7) Propositions for the "Development of Health Subcenter"

As illustrated in Table 8, for the enhancement of utilization rate, the householders surveyed demanded the health subcenter to have good attitude of health subcenter personnel(28.5%, the highest rate, excepting those of non-repliers), to observe the time and/or extend the duty hours(10.9%), to provide proper medical facilities(9.5%) and the others(7.1

Table 7. Influence for primary health care by daily farm work

Primary health care by daily farm work	No.	Percent(%)
By interfered	170	59.8
Not be interfered	57	20.1
Unknown	57	20.1
Total	284	100.0

Table 8. Demands for development of rural health subcenter

Contents of demands	No.	Percent(%)
Good attitude of health subcenter personnel	81	28.5
To observe the time and/or extend the duty hours	31	10.9
Good medical facilities	27	9.5
Others	20	7.1
No answer	125	44.0
Total	284	100.0

%).

## Conclusion

In order to find out affecting factors to utilization of a rural health subcenter for primary health care, a study was carried out, through analyzing the specific survey data of 284 out of 1,151 total householders in a rural community, Su Dong-Myun, Nam Yang Ju-Gun, Kyung Gi-Do, Korea, and the medical records of total outpatients of the health subcenter in the district during 1976~1987.

The following results were obtained :

1) Since 1977, the annual utilization rate showed decreasing tendency such as 900 per 1,000 inhabitants in 1977, 846 in 1979, 708 in 1981, 618 in 1985, 594 in 1983 and 341 in 1987.

2) The age specific utilization rate showed the highest in the group of age of 0-4 with 2,067.4 per 1,000 inhabitants in 1976, 2,402.7 in 1981 and 2,308.2 in 1986, respectively. In the other age groups, no any significant difference was found in the specific

rate.

3) In the choice rate of medical facilities for primary health care, health subcenter was the highest (43.3%), and hospital(29.6%), generalist clinic(15.5%) and specialist clinic(11.6%) were in decreasing order.

4) Among the householders surveyed, 92.6% experienced to visit the rural health subcenter more than once. However, 21.1% of them said that the health subcenter is not proper medical facilities for their situation.

5) In choice reasons of the health subcenter for primary health care, dominant priority factors were sincerity and kindness of health personnels containing staffs(57.8%), near distance from living place (24.6%), proper medical facilities(9.2%) and lower medical cost(8.4%).

6) The utilization rate of health subcenter in the district, revealed a tendency that the nearer distance from the health subcenter, the more patients visit the health subcenter.

7) More than half(59.8%) of the householders surveyed, answered that primary health care was interfered mainly with the daily farm work in the district.

8) For the enhancement of utilization rate, the householders surveyed demanded the health subcenter to have good attitude of health subcenter personnel (28.5%), to observe the time and/or extend the duty hours(10.9%), to provide proper medical facilities (9.5%) and the others(7.1%).

용에 미치는 요인에 대한 설문조사 자료와 1976년부터 1987년까지 보건지소를 이용한 외래 초진 환자의 진료실적을 분석한 결과 다음과 같은 결과를 얻었다.

1) 농촌지역 주민의 보건지소 이용율은 인구 1,000명당 1987년이 900으로 최고율을 보이다가 1979년 846, 1981년 708, 1985년 618, 1983년 594, 1987년 341로 해가 거듭할수록 감소하는 경향을 보였다.

2) 농촌지역 주민의 연령별 보건지소 이용율은 인구 1,000명당 0~4세군이 1976년 1981년, 1986년 공히 2,067.4, 2,402.7, 2,308.2로 최고율을 보였으며 다른 연령군에서는 별차이가 없었다.

3) 조사대상 세대주의 1차진료기관 선정은 보건지소가 43.3%로 가장 높았고 다음이 병원 29.6%, 일반과의원 15.5%, 전문과 의원 11.6%순이었다.

4) 조사대상 세대주의 92.6%가 보건지소를 가끔 또는 자주 이용한 적이 있으며 보건지소가 좋다고 생각하는 주민은 21.1%에 불과하였다.

5) 조사대상 세대주의 보건지소나 일반과의원 선정기준은 성실하고 친절한 곳이 57.8%로 가장 높고 다음이 가까운 곳(24.6%), 시설이 좋은 곳(9.2%), 치료비가 싼곳(8.4%)순이었다.

6) 농촌지역주민의 보건지소 이용율은 보건지소와의 거리가 가까운 마을 주민일수록 자주 이용하고 있는 경향을 보였다.

7) 조사대상 세대주의 59.8%가 일상농사일이 일차진료에 영향을 미친다고 하였다.

8) 조사대상 세대주의 보건지소 발전 방안을 위해 보건지소에 바라는 소망은 보건지소 직원의 좋은 태도가 28.5%로 가장 높았고 다음이 근무시간 준수나 연장개선(10.9%), 시설 및 장비개선(9.5%), 기타(7.1%) 순이었다.

□ 국 문 초 록 □

우리 농촌

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위 사 형

산간 농촌지역 19개 행정리 1,151세대, 인구 4,591명, 농가비율 78.4%인 경기도 남양주군 수동면에서 면지역사회 표본추출 세대주 284명의 보건지소 이

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