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Utilization pattern of health care resources of residents in a designated rural area

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일부 농촌 지역주민의 보건의료자원 이용양상

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= 초 록 =

농촌지역은 도시지역에 비하여 의료자원의 부족으로 보건의료자원의 이용 접근성이 낮다고 할 수 있다. 따라서 일부 농촌지역주민의 질병이환과 이환시 보건의료자원의 이용양상을 분석하는 것은 매우 의의가 있다고 하겠다.

본 연구방법은 포천군 주민의 보건의료자원의 이용과 치료원의 이용 양상을 분석할 목적으로 1995년 8월 4일~20일까지, 1,200가구를 대상으로 가구 면접조사를 실시하였다. 분석대상가구수는 1,019가구였으며 훈련받은 조사원에 의하여 조사되었으며 경기도 포천군 지역은 연세대학교 보건대학원 및 간호대학의 연구사업지역으로 본 분석 자료는 연세대학교 연구자료의 일부를 사용하였다.

연구 결과는 다음과 같다.

성별인구분포는 남자가 49.9%, 여자가 50.1%이고 연령별 분포는 60세 이상이 16.5%로써 전국의 노인인구 비율보다 높았다. 교육 상태는 13년 이상 교육이수율이 남자가 여자보다 높았으나 전체 조사 대상 인구는 교육수준이 높았다. 가족 형태는 핵가족이 70.9%로써 농촌지역임에도 매우 높았다. 지난 15일간의 이환상태를 조사한 결과 급성이환율은 5.4%(54/1,000)이며 3개월 이상 만성이환율은 130/1,000으로 나타났다. 급성이환시 증상별 분포는 호흡기계질환이 36.4%, 소화기계가 20.9%, 여러 가지 복합 증상이 33.0%을 나타낸 반면 만성이환율은 관절염 및 류마티즘이 21.2%, 기타골격계가 12.6%로서 높았다. 급성이환시 의료이용양상은 포천군관내의 의료기관이용이 62.6%, 약국이용이 15.2%, 보건소 이용이 4.0%였으며 의료기관이 주요 이용자원이었다. 아무 조치를 취하지 않은 비율은 6.1%로서 높지 않았다. 즉 급성질환인 경우 전체이환자의 76.5%가 1회 방문으로 문제를 해결한 것으로 나타난 반면 나머지 23.5%가 2회 이상 의료자원을 이용한 것으로 나타났다. 3개월이상 만성이환자는 포천군관내 의료기관의 이용율이 56.3%, 관외의료관이용이 19.3%인 반면 한방기관이용이 7.6%로서 급성이환시 한방이용비율인 4.0%보다 높았다. 1회 방문이 67.4%인 반면 2회이상 보건의료자원을 이용한 비율이 33.6%로서 만성질환이용시 보건의료자원의 이용 빈도가 높은 것으로 나타났다. 본 분석결과 포천군 주민의 주요 보건의료자원의 이용은 의료기관으로 나타났고 미치료율이 타농촌지역에 비하여 낮았으며 만성질환시 급성이환시보다 한방의료이용이 높았음을 나타났다.

Ⅰ. Introduction

It is well known that the concept of primary health care has been strengthened and is more widely known in the world since 1978. WHO declarated "health for all by year 2000 through primary health care".

The Korean government has made great effort to develop the various health care policies such as manpower development, physical facilities, legislation, budgeting, logistics of supply etc., in order to achieve health for all targets.

As a means for that target, the medical care insurance program was introduced in 1977. Up to 1997 the entire population has been covered by either medical care insurance or medicaid.

It means that the people can receive medical care services excepting highly sophisticated care in rural as well as in urban areas, if it is necessary.

In general, the utilization of health care services is influenced by health status, need, demographic characteristics, physician availability, organization characteristics of health care services, and financing mechanisms(Barbara S. Hulka, 1985)

However, the shortage of manpower and facilities still exists in rural areas, therefore, the geographical accessibility and the availability for utilizing health care would be lower in rural areas than in urban.

It is very meaningful that the utilization patterns of medical care services for a certain period should be analyzed in order to provide basic information for improving health care services in rural areas.

Note : the study area means Yonsei University's research project area and the principal investigator of the research is Dr. Mo-Im Kim, who is the dean of the graduate school of health science and management.

Ⅱ. Purpose of study

The general purpose of this study was to find out the level of utilization of medical care service in relation to the behavioral pattern for health care of the people in rural area. The study area* is located in the northern part of Kyunggi province, approximately two hours by public transportation from Seoul. The total population is 123,754 and economic status is higher than the other rural areas.

Specific objectives were as follows:

First, to identify the level of utilization of medical care in treating illness. Second, to make an analysis of the level and pattern of source of treatment.

Ⅲ. Method

1) Selection of variables

Dependent variables: utilization of health care facilities such as clinics, hospitals, pharmacies, Korean oriental medical clinics or hospitals, self treatment and others.

Independent variables: demographic and socio-economic variables of the households such as age, sex, level of schooling, medical insurance and medicaid.

2) Glossary of definitions

Acute sickness: newly developed symptoms and signs manifested during the 15 days immediately proceeding the field interview plus all morbid conditions that were found during the field interview.

Chronic disease: symptoms and signs manifested over a 3 months period proceeding the field interview found during the field interview.

3) Sampling of Households

The total population of the study area is 123,745(37,265 households) of which, 3 out of 12 townships were selected by cluster random sampling. The final sample consisted of 1,019 household(3,849 household members).

4) Collection of Data

The items and contents of the questionnaire were reviewed, revised, pre-tested then finalized.

The social survey method was employed to achieve the objectives. Ten field surveyors were selected from university students. They received a two-day training prior to the actual fieldwork.

The field survey was conducted from the 4th to the 20th of August, 1995.

The total number of 1200 households were finalized for the field survey, of which, 1,024 household were completely surveyed out in the field. In the field survey, 1,019 households were analyzed with a survey completion rate of 85.3%.

IV. Results

1. General characteristics of the study households

In the age distribution of this population which class intervals of 0 to 9 years, age group of 10-19 years of age was the largest group, accounting for 15.7% and the population structure with a class interval of 5 years of age is shown in figure 1.

Noticeable, however, was the small population in the economically productive age group, 19 to 44 years of age, compared to that in the urban areas. Noteworthy also is the higher percentage of the older population, aged 60 years and more in the rural population, that is two times higher than that of the same age group in the urban population(refer to table 1).

Educational background showed that 80.6% of the respondents completed up to 12 years of schooling. Those with no schooling accounted for 9.6% of the respondents(refer to table 2).

The coverage of national medical insurance was as follows; 64.5% for regional medical insurance; 21.9% for vocational insurance; 9.1% for government employees and soldiers; 2.1% for low income group(medicaid); the remaining 2.4% had none(refer to table 3).

The reply to the question, as to the employment status of the household members disclosed that 71.7% had jobs and the remaining 28.3% were unemployed(refer to table 4).

The family pattern of the households showed that 70.9% of the respondents were nuclear families and the remaining 29.1% were extended families. The average number of members per household was 3.8 persons(refer to table 5).

Families with elderly, aged 65 years or more, accounted for 20.1% of the respondents. Families with elderly aged 65 years or more with a chronic disease acounted for 34.7% of the respondents(refer to table 6).

2. Morbidity status

1) Status of illness

First of all, the respondents were asked questions such as, "Were you sick during the past 15 days?" Is anybody receiving medical treatment?" If they responded "Yes", then they were asked about the major symptoms and whether he or she consulted a physician and/or any treatment.

The results from the survey showed that the number of sick cases during the 15 days were 209 out of 3870 members interviewed, corresponding to 5.4% of the total cases. Of 209 sick cases, the number of persons who consulted a

physician was 74.2% or 147 persons. While 19.7% of the respondents visited a drug store and/or health agency, the remaining 6.1% has no treatment.

The number of cases with a chronic disease that lingered on more than 3 months was 499, corresponding to 13.0% of the total cases. Although this is a results of judgements of the patients based on their own subjective symptoms, the survey reveals the fact that the prevalent rates were lower than that of the nationwide rural date due to the variation of the survey seasons and high economic status.

The female population was the higher prevalence rate of both acute - and chronic diseases than that of the male population(refer to table 7, 10)

2) Types of illness

There were some difficulties in classifying the major symptoms and types of diagnoses which had to be confirmed by means of interviewees.

However, the most frequent symptoms of the acute diseases were the disease of respiratory system which constituted 36.4% of the total illnesses, followed. In order by, the disease of digestive system and other acute symptoms such as cold, fatigue from overwork, ear, throat, eye disease and skin diseases etc, accidents/poisoning, infectious and parasitic diseases(refer to table 8).

In terms of the chronic diseases, arthritis / rheumatoid were the highest ranked disease which accounted for 21.2%. Other muscular skeletal diseases were the second highest, accounting for 12.6%, followed. In order by, diabetes, hypertension with stroke etc(refer to table 12).

3) Utilization pattern of medical care services

As shown in the table 9 "no treatment" for acute diseases constituted 6.1% and the remaining 93.9% of the population were treated, using one or more methods of treatment. Only the initial utilization of the medical care services constituted 81.5%, the remaining 18.5% of them have changed the source of treatment. The second utilization of services accounted for 13.6% and the third one was 4.9%.

The source of treatment varied as follows ;

The physician consultation of the medical clinic located in the living districts of the residents accounted for 33.3%, followed. In order by, community hospital(29.3%), drug store(15.2%), medical institutions located out of the districts(7.6%), oriented medicine(4.0%), health agencies(4.0%).

To treat the chronicially diseased, 96.7% or equaling 523 cases have been treated using one or more sources of treatment. In particular, in the case of a chronic disease, which lasted more than 3 months, 69.6% utilized one kind of the source of treatment and the remaining 30.4% utilized two or more sources of treatment.

This implies that the patients desire to utilize every treatment available when they are suffering from a lingering illness.

The chronic patients prefer to rely on the treatments of hospitals and clinics, particularly, in the case of symptoms under 15 days, the proportion of the use of oriental medical hospitals and clinics showed only 4.1%, whereas the symptoms lasted three months showed more than two and half time, or 10%.

These facts imply that the chronic disease patients prefer to utilize oriental medical treatments more than acute patients did.

Table 1. Number and percentage distribution by gender and age of household members

Characteristics	N(%)
Sex	
Male	1,932(49.9)
Female	936(50.1)
Age(yrs)	
0 - 9	534(13.8)
10 - 19	612(15.7)
20 - 29	568(14.7)
30 - 39	664(17.2)
40 - 49	436(11.2)
50 - 59	422(10.9)
over 60	632(16.5)
Total	3,868(100.0)

Table 2. Number and percentage distribution by education of household members

Education	Male	Female	Total
	N(%)	N(%)	N(%)
No schooling	106(28.7)	263(71.3)	369(100.0)
Preschooling	211(57.8)	154(42.2)	365(100.0)
1 - 6 yrs	512(47.6)	564(52.4)	1,076(100.0)
7 - 12 yrs	942(52.8)	841(47.2)	1,783(100.0)
over 13 yrs	154(61.6)	961(38.4)	250(100.0)
Total	1,925(50.1)	1,918(49.9)	3,843(100.0)*

Note : No response excluded

Table 3. Number and percentage distribution by medical insurance of household members

Type	N(%)
Regional medical insurance	2,490(64.5)
Vocational medical insurance	847(21.9)
Government officials/soldiers	349(9.1)
Medicaid	79(2.1)
None	94(2.4)
Total	3,859(100.0)

Note : No response excluded

Table 4. Number and percentage distribution by occupation of household members

Classification	Number (%)
None	345 (9.8)
Housewife	650 (18.5)
Students	793 (22.6)
Government employee/soldier	123 (3.5)
Farmer	696 (19.9)
Service related worker	87 (2.5)
Company employee	392 (11.2)
Professional	84 (2.4)
Private owner	335 (9.6)
Total	3,505 (100.0)

Note : Preshooler (365pers) excluded

Table 5. Number and percentage distribution by family structure and number of family members

Classification	Households N(%)
Family form	
Nuclear family	722(70.9)
Extended family	297(29.1)
Total	1019(100.0)
Family members	
1	55(5.4)
2	162(15.9)
3	213(20.9)
4	287(28.2)
5	166(16.3)
6 or more	136(13.3)
Total	1019(100.0)
Mean family members	3.8

Table 6. Number and percentage distribution by Households with the elderly and chronic diseased patient

classification	Household(A) N(%)	family members(B) N(%)	target members(C) N	C/B×100 (%)
Households with the elderly aged 65 or more	328(20.1)	1,308(22.1)	419	(32.0)
Households of the elderly aged 65 or more	55(3.4)	88(1.5)	88	(100.0)
Households with the chronic diseased patient	425(26.1)	1,554(26.3)	499	(32.1)
Households of the chronic diseased patient	57(3.5)	88(1.5)	88	(100.0)
Households with the aged or the chronic diseased patient	566(34.7)	2,152(36.4)	744	(34.6)
Households of the aged or the chronic diseased patient	198(12.2)	725(12.3)	326	(13.8)
Total	1,629(100.0)	5,915(100.0)	2,164	

Table 7. Number and percentage distribution of the acute symptoms during the past 15 days

Classification	Households	Family members
	N(%)	N(%)
Symptom	193(18.9)	209(5.4)
No Symptom	826(81.1)	3661(94.6)
Total	1019(100.0)	3870(100.0)

Table 8. Number and percentage distribution by age and gender of the acute patients

classification	N(%)
Sex	
Male	85 (40.9)
Female	120 (59.1)
Age(year)	
0 - 4	33 (16.1)
5 - 9	21 (10.2)
10 - 19	24 (11.6)
20 - 29	18 (8.8)
30 - 39	20 (9.8)
40 - 49	16 (7.8)
50 - 59	29 (14.1)
60 - 69	26 (12.7)
70 over	18 (8.8)
Total	205 (100.0)

Table 9. percentage distribution of persons with acute illnesses during the past 15 year

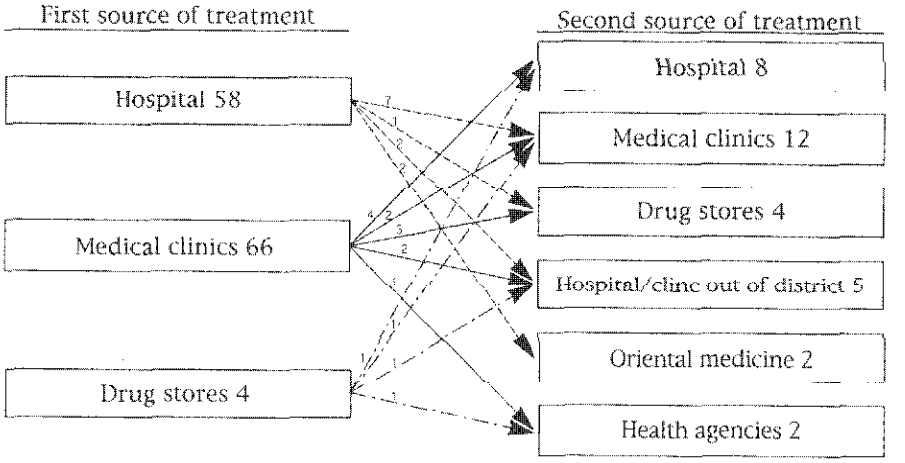
classification	N(%)
Infectious/parasitic diseases	8 (3.9)
Respiratory disorder	75 (36.4)
Digestive disorder	43 (20.9)
Accidentes/poisoning	12 (5.8)
Other acute symptoms	67 (33.0)
Total	205 (100.0)

Table 10. Percentage distribution by changing source of treatment during the past 15 days

Visit	1time	2times	3times	Total
	N(%)	N(%)	N(%)	N(%)
Hospital in living district of patient	58(29.3)	8(24.2)	4(33.3)	70(28.8)
Medical clinics in living district of patient	66(33.3)	12(36.3)	2(16.7)	80(32.9)
Drug stores	30(15.2)	4(12.2)	2(16.7)	36(14.8)
Oriental medicine	8(4.0)	2(6.1)	-	10(4.1)
Hospitals/clinics out of living district	15(7.6)	5(15.1)	4(33.3)	24(10.0)
Health agencies	8(4.0)	2(6.1)	-	10(4.1)
Self care	1(0.5)	-	-	1(0.4)
No treatment	12(6.1)	-	-	12(4.9)
Total	198(100.0)	33(100.0)	12(100.0)	243(100.0)

Table 11. Number and percent distribution by chronic symptom during over three months

	Houscholds	Family members
	N(%)	N(%)
Symptom / illness	425 (41.7)	499 (13.0)
No symptom / illness	594 (58.3)	3,370 (87.0)
Total	1,019 (100.0)	3,869 (100.0)



Figures 1. Sequence of the receiving two kinds of treatment of newly diseased 154 cases during 15 days

Table 12. Number and percentage distribution by age and gender of the chronic diseases

Classification	N(%)
Sex	
Male	199 (39.2)
Female	309 (60.8)
Age(year)	
- 19	16 (3.1)
20 - 29	13 (2.5)
30 - 39	60 (11.8)
40 - 49	69 (13.6)
50 - 59	134 (26.4)
60 - 69	126 (24.8)
70 - 79	75 (14.8)
80 +	15 (3.0)
Total	508 (100.0)

Table 13. Number and percentage distribution by chronic diseases and symptoms during over three months

Classification	N(%)
Rheumatoid/arhritis	117 (21.2)
Other musculoskeletal disorders	70 (12.6)
Gastroenteric ulcer/disorders	75 (13.6)
Respirationary system disorder	56 (10.1)
Diabertes	53 (9.6)
Hypertension/stroke	53 (9.6)
Circulatory system disorder	31 (5.6)
Migrain	18 (3.3)
Genito urinary diseases	22 (4.0)
Liver diseases	17 (3.1)
Malignant tumor	11 (2.0)
Senile disorders	11 (2.0)
Accident/poisoning	12 (2.0)
Emotional/psychological disorders	6 (1.1)
Total	552 (100.0)

Table 14. Percentage distribution by sorce of treatment during over three months

Classification	1times	2times	3times	Total
	N(%)	N(%)	N(%)	N(%)
Hospital in living district	186 (35.6)	24 (13.5)	5 (10.0)	215 (28.6)
Clinics in living district	109 (20.7)	57 (32.0)	8 (16.0)	174 (23.1)
Drug stores	51 (9.8)	20 (11.2)	8 (16.0)	79 (10.5)
Oriental medicine	40 (7.6)	23 (12.9)	12 (24.0)	75 (10.0)
Hospital/clinic out of district	101 (19.3)	45 (25.3)	17 (4.0)	163 (21.7)
Health agencies	16 (3.1)	7 (4.0)	-	23 (3.1)
Self care/folk technique	3 (0.6)	2 (1.1)	-	5 (0.7)
No treatment	17 (3.3)	-	-	17 (2.3)
Total	523 (100.0)	178 (100.0)	50 (100.0)	751 (100.0)

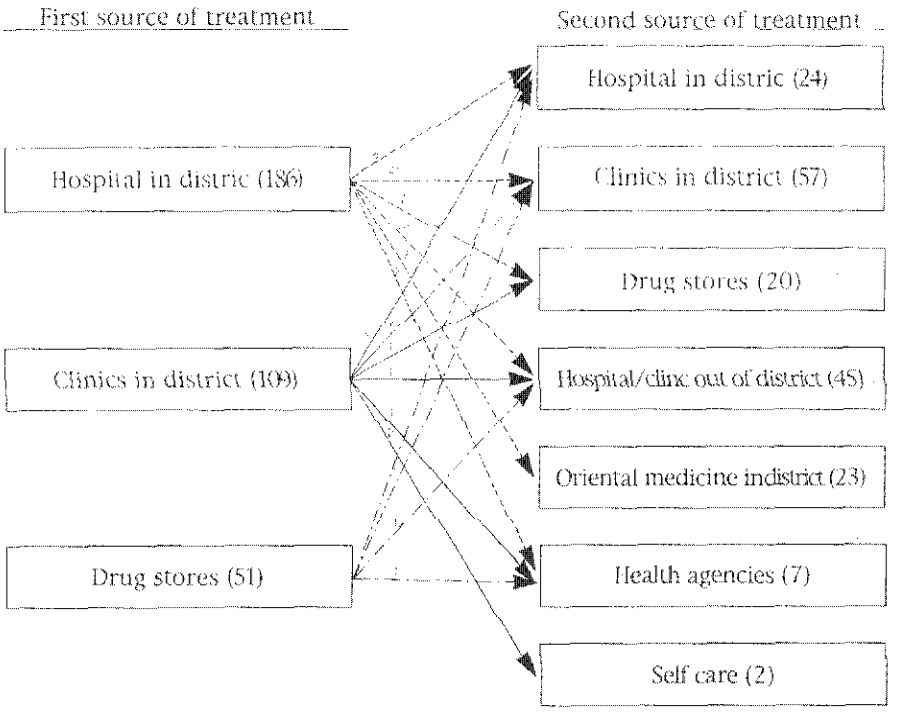


Figure 2. Sequence of the receiving two kinds of treatment of 346 cases during three months

V. Conclusion

The study showed that the morbidity rate of the population in the study area is not high compared to the other rural area, also the rate of no treatment is lower(6.1% for the acute the major symptoms and signs of illness of both the acute - and chronic disease was constituted same as the rural areas)

There was ditterences in the utilization pattern of medical care services of the population in this study area. It was found that they prefer to use the physician's medical care they prefer to use the physician's medical care services rather than a visit to a drug store and the traditional measures.

In fact, the most population trend to visit to drug stores to solve the common/minor symptoms and the acute diseases in rural areas.

However, the longer the symptoms and diseases' period of illness become, the proportion of the use of the oriental medical care was increased more, which the use of drug stores decreased significantly, such attitudes of patients' use of medical care coincided with several researches which were conducted in the past.

This study suggests that most of the respondents rely on modern medicine when they have health problems.

Many of the studies conducted in the United States revealed the facts that the primary health care respondents 80% of the total health care demand and between 30 to 40% of them could be solved by either taking preventive measures or giving medical doctor's treatment

which implies the enhancement of the service of self care is very important not only for maintaining good health but also for retrenching their medical expenses.

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