



PATTERN OF UTILIZATION OF HEALTH SERVICES AMONG OLD AGE GROUPS IN RURAL AREA OF NORTH OF IRAN

ABSTRACT

Introduction: Increasing life span has resulted in a notable growth of the elderly population in human societies. Strategic policy formation in all health care systems should be based on information relating to health utilization behavior and the factors determining these behaviors.

Materials and Method: In this cross sectional study, 2968 households in rural area of Guilan in which household head or senior person above 15 years old was interviewed using a structural questionnaire. Questionnaire was consisting of demographic variables, need of medical care and visit of health services in last month.

Results: In this study 12086 people (family size 4.7) were interviewed. 1624 subjects (13.4%) were old ages.

422 persons (26%) reported of at least one medical problem in the last month. 24 persons (5.7%) had not sought any medical attention and 2 (1.2%) had self-treatments. The main sources of medical attention were private clinics (46.8).

The most reasons for the visiting the health care centers was musculoskeletal pain (24.4%).

Conclusion: It was seemed that utilization of health centers with old age groups is more than two times in comparison to other age groups that it must be notice in future strategic planning of health care systems.

Keys words: Health care system, Health utilization, Rural, Elderly.

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İRAN'IN KUZEY BÖLGESİNDE YAŞLI NÜFUSUN SAĞLIK HİZMETİ KULLANIM DURUMU

Öz

Giriş: Uzayan yaşam süresi yaşlı nüfusun artışıyla sonuçlanmıştır ve bütün sağlık sistemlerindeki stratejik politikalar sağlığın korunması davranışı ve davranışı etkileyen faktörlere dayanmalıdır.

Gereç ve Yöntem: Guilan kırsal bölgesinde 2968 evden oluşan kesitsel çalışmada aile reisi veya 15 yaş üstündeki bireyler anket formu ile değerlendirildi. Anket formu demografik veriler, sağlık hizmeti gereksinimi ve son ayda sağlık hizmeti kullanımına yönelik bölümleri içermektedir.

Bulgular: Bu çalışmada 12086 kişi ile görüşüldü (ortalamaya ait büyüklüğü 4.7). 1624 kişi (%13.4) yaşlı idi. Son ay içinde 422 kişide en az bir sağlık sorunu olmuştur. 24 kişi (%5.7) sağlık hizmetine gereksinim duymamıştı. 2 (%1.2) kişi kendi kendini tedavi etmişti. Sağlık hizmeti %46.8 sıklıkla özel kliniklerden alınmıştı. Sağlık merkezlerine başvuru nedenleri arasında kas iskelet sistemi ağrıları %24.4 oranı ile ilk sırada yer almaktaydı.

Sonuç: Yaşlı grubun sağlık hizmeti kullanımı diğer yaşlara göre iki kat daha fazla idi. Bu durum sağlık sistemlerinin gelecek planlarında gözönünde bulundurulmalıdır.

Anahtar sözcükler: Sağlık sistemi, Kırsal, Yaşlı, Sağlık.

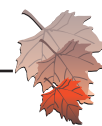
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INTRODUCTION

Recent declines in fertility rates and increases in life expectancy, combined with the dynamic evolution of past variations in birth and death rates are producing a significant shift in the global age structure. The number of people over the age of 60 is expected to reach 1 billion by 2020 and almost 2 billion by 2050 (representing 22 percent of the world's population). The proportion of individuals aged 80 and over (the so-called "oldest old") is projected to rise from 1 percent to 4 percent of the global population by 2050 (1). Problems and trends particularly associated with this age group are thus ones of growing importance, and deserve special attention and consideration. Notably, elderly patients have disproportionately high need for and usage of health care. It has been found that most Medicare recipients suffer more than one chronic disease, and seek active physician care for treatment of their medical conditions (2). In old age, complex medical conditions are relatively frequent, which may indicate multiple drug therapy and increased health care usage. Many studies revealed that elderly people are the major health service users in the community (1, 3-9).

Evidence is accumulating that many sociodemographic factors may affect the health care services received by individuals aged 65 years and older, including race, education, age, availability, accessibility, health insurance, income and gender (6, 9-14).

Older people are paradoxically often excluded from studies on health care use, since the need for health care services increases with age. Studies that include the elderly are therefore necessary to identify factors which determine the use of health care. Information on the under use of health care in elderly is important, as good care is likely to improve the quality of life, increase the number of years without functional limitations and diminish existing health differences (7).

Iran is reforming its health care system, with primary care as a major focus. The general health service in it has been organized through a public/private mixture of providers based on an out-of-pocket payment system. The national health insurance system cover partially costs of curative care. The Physicians to population ratio for the whole country is 8.9 per 10,000 (15).

The total population of Iran was estimated to be 70 millions in the last national census with approximately 6 millions old ages; it is expected to double by 2025 and already

accounts for the largest share of total health care expenditures. Studies of aging and use of health care in such settings are relevant because population aging is imminent, formal care for older adults is early in its development, the reach and quality of health infrastructures vary, life expectancy at birth increased to 70.4 years among women and 67.6 years among men in Iran (15). Thus, systematic studies of the utilization of health services and the factors involved in seeking health care are urgently needed in this population. Health care of elderly program was integrated in primary health care system from three years ago and this study was done before initiating of this program.

This study performed before the introduction of Popular Health Insurance in rural area of Iran. Rural elders have higher poverty rates, lower levels of education, more limited transportation, and poorer health status than their urban counterparts. It seems that many majority rural old ages find access to health care a serious problem because of distance and lack of transportation, maldistribution of health care providers and facilities, and lack of other resources. The objectives of the present study were to describe the prevalence of symptoms and the use of health services and self-medication in response to these symptoms in a population-based sample of elderly people in Guilan province, North of Iran that has the most elderly ratio in Iran. This study is part of a larger research carried out by the Guilan manager and planning organization to assess health care utilization in Guilan.

MATERIALS AND METHOD

In a cross-sectional survey 2968 households in rural area of Guilan, north of Iran, was selected. Guilan with 2400000 inhabitants that more than 30% live in rural area has the highest elderly rate in Iran. Study subjects were selected through probabilistic multistage cluster sampling, stratified by region of residence and size of rural population of town. Households were selected at random in each cluster in which household head or senior person above 15 years old was interviewed. Data were collected by home-based personal interview with subjects performed by trained and certified personnel. Before conducting the interview, informed consent was obtained in all cases from subjects. Subjects were replaced for interviews only because of subject's institutionalization or refusal to participate.

Data were collected from January 2004 to March 2004 by



home-based personal interview using a structured questionnaire. Field work was undertaken by interviewers who underwent training. Of the 12086 people (family size 4.7) were interviewed, 1624 subjects (13.4%) were non-institutionalized old ages (≥ 60 years).

To obtain information on health services use individuals were asked whether they had any medical problems that sought medical advice in last month or had received a home medical visit. Earlier studies have shown a good agreement between self-reported diseases and clinical records among the elderly (16). The main outcomes were measures of healthcare utilization during the last months: use of medical care (in-outpatient, yes/no), number of ambulatory care visits, number of visits to general practitioners (among respondents with at least one ambulatory care visit), consultation of specialists (yes/no), hospital admission (yes/no), in-outpatient surgery (yes/no). They were also asked about chief complaints and self-medication. Predisposing factors include age, gender, marital status; educational level and occupation are defined, not as direct causes of utilization, but rather as determinants of the propensity to use such service

Analyses were performed using the SPSS package, version 11.5. First, characteristics of the study sample were described, and then frequency distributions were used to highlight the socio-demographic status of participants who had or not experienced a medical problem within the past three months. Secondly, chi-square tests were used to detect statistically significant proportions of people who used health care facilities in relation to various independent variables.

RESULTS

In our study more than 13% of study sample were old ages. Age –sex population pyramid of this study was in concordance with this pyramid of total population of the province. One thousand six hundred twenty four old ages participate in this study that 49.3% were male, 50.3% were farmer. The most of them were illiterate or had < 5 grade of education and 211 individuals (13%) lived alone. Mean age of participants was 63.8 ± 6.3 years (From 60 to 99 years) (Table 1).

Overall, 422 persons (26%) indicated that they had experienced a problem within the last month who 24.2% seeking a medical centers. Women in general seemed to be most affected than men ($p < 0001$).

Tablo 1— Demographic characteristics of old ages

Variables	n	%
Age group (years)		
60-64	485	29.9
65-69	469	28.9
70-74	35	21.7
75-79	231	14.2
80-84	69	4.2
≥ 85	18	1.1
Gender		
Female	823	50.7
Male	801	49.3
Level of Education		
Illiterate or < 5 grade	1494	92.0
5-11	125	7.7
≥ 12	5	0.3
Occupational Status		
Independent worker	33	2.0
Employee	25	1.5
Farmer	817	50.3
Housewife	572	35.2
Without occupation	112	7.0
Others	65	4.0
Living Status		
Alone	211	20.6
Living with family	1413	79.4

Among individuals who reported having experiences a medical problem, 24 persons (5.7%) did not use any health system facilities, 1.2% reported self-medication and 46.8% chose private clinic (Table 2).

The most reasons for the visiting the health care centers regardless of sex, age were musculoskeletal pain (24.4%), hypertension (20.8%), Common cold (8.3%) and Chest pain (6.6%) (Table 3).

Among old ages who consulted medical providers, 45 individuals (11.5%) had hospital admission that the most reason was cardiovascular diseases. Women reported health problem more than men ($p < 0001$) but there were not any significant differences between utilization of health services with sex and age. Use of health system was more prevalent in low educational level persons ($p < 0.05$). No gender difference in hospital admission was found.

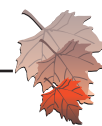


Table 2— Illness – related behaviors and choices of health care system among old ages who reported any medical or health problem during the past three months

Behaviors	n	%
Did not use any health system facilities	24	5.7
Self –medication	5	1.2
Use health care system		
Primary health care service	111	28.2
Health center	49	12.5
Private clinic	184	46.8
Governmental clinic	4	1.0
Governmental hospital	45	11.5

Self- medication was more prevalent among women than men ($p < 0001$).

DISCUSSION

In this study 24.2% of old ages had used health care system that this rate was lower than previous studies in other countries (5, 8, 16, 17, 18, 19) and other regions of Iran (19, 20). This lower use probably reflects habits, cultural, socio-economic factors and health status that influence on this issue.

According to extended public health care system in Iran, access to health care facilities seems to be less of a problem in rural area.

The most problem for seeking medical services were musculoskeletal problem and pain that these findings are similar to previous study (7). It seems that visiting habits were primarily oriented towards relief of pain or symptoms rather than preventive care. Also it maybe relevant to express data concerning utilization by people who have experienced medical problem within the last month.

In this study, utilization of health care and level of education had reverse relation. Probably people with low level of education had low level of physical and mental health that prone them for diseases and medical problems. It was notice in other studies (20, 21).

The most place of choice of old ages was private clinic. Private services appeared to be an important alternative source of care for the participants in the present study. It was also seen in other studies in Iran (19, 20). It is proposed to investigate reasons of interesting to private system in comparison to public services in future study.

It was shown that self-reported diseases among women were more frequently than men. Gender difference in use of

Table 3— Distribution of main health problems of the participants

Health Problem	n	%
Musculoskeletal pain	103	24.4
Hypertension	88	20.8
Common cold	35	8.3
Chest pain	28	6.6
Headache	22	5.2
GI problems	22	5.2
Diabetes	15	3.6
Trauma	14	3.3
Eye diseases	14	3.3

health services and reported of medical problems were emphasized in other studies (5, 7, 9, 20, 21, 22, 23) but we did not find any differences in use of health services between men and women. It maybe in relation to gender differences in self-medication.

5.7% old ages that experience any medical problem did not use any health system facilities that fortunately this rate is lower than other studies (19, 20).

Our study is the first to find the pattern of health care service use by old ages.

The collected data were self- reported and although there is evidence of the reliability of these data (16) but probably our study underestimated the extent of health system use on old ages. The validity of self reported medical problem by old ages may be questioned because of recall bias. However asking youth members of family probably minimized this bias.

The main strength of the study is that data came from a representative, population-based of persons aged 60 years and over.

In this study, medical insurance was not investigated. Repeated studies after performance of public rural insurance in this area and other area of Iran highly recommended.

To improve the health of these vulnerable populations more generally, policy makers will need to improve awareness among old ages of common illnesses in later life, encourage universal preventive measures to reduce the burden of later-life disease and disability, and extend the reach of high quality therapeutic services to accommodate unmet health care needs of older women and men. Both preventive and therapeutic services will need to consider cultural and ethnic differences in life circumstances and perceptions of need that likely influence the care-seeking of older women and men in all settings.



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