

Research Paper

Pattern of Outpatient Health Service Utilization by Older People in Iran



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ABSTRACT

Objectives Considering the rapid growth of Iran’s elderly population with consequent increase in the costs of health services, it is necessary to be aware of the pattern of outpatient health service utilization, in the elderly for resource allocation and health planning. This study aims to determine the pattern of outpatient service utilization for the elderly in Iran and explore determinant factors.

Methods & Materials This is a cross-sectional study using secondary analysis method and the data from 2015 National Study of Health Service Utilization. Study population consists of older people aged ≥60 years. Of these, 8205 were selected as study samples. The data were collected using personal and household questionnaires collecting information on subjects’ need for, referral to, utilization from, and satisfaction with outpatient services. Logistic regression analysis was used to identify factors related to the need, referral, benefit, and satisfaction with the received outpatient services.

Results Out of 8205 participants, 3172 (39%) reported the need for outpatient services, of which 66% referred for services; of these, 98% (N=2060) benefited outpatient services. Females, older subjects, villagers, unmarried and illiterate subjects were more in need of outpatient services, but their referrals to receive the services were not more than those of other groups. Lack of basic insurance, supplementary insurance, and a personal care had a significant impact on reducing the number of subjects referred to receive outpatient services. Inability to pay treatment costs (30%), self-treatment (28%) and lack of proper insurance coverage (13%) were the most important reasons for not referring to receive outpatient services. The highest satisfaction was related to the behavior of physicians and medical staff and the lowest satisfaction was related to the cost of outpatient services.

Conclusion Although the use of outpatient health services should be based on the need for these services, the present study showed that the older people with higher socio-economic status had higher utilization from the services in Iran. Therefore, there is an inequality in access to outpatient services in the elderly. The reasons for not using outpatient services and dissatisfaction with these services should be seriously considered by health policy makers.

Key words:
Need, Utilization, Outpatient health services, Elderly, Iran

Extended Abstract

1. Introduction

Due to the rapid growth of Iran’s elderly population, the demand for health services and the rate of health costs are increasing in this

country. The elderly are major consumers of health services and are put a heavy financial burden on the health system and insurance organizations [1, 7-10]. In order to be prepared to respond to the growing health needs of the elderly and to face the challenges ahead, it is necessary to be aware of the status and patterns of need and utilization for health services in the elderly to allocate resources in

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this area. Health service utilization studies help to identify related underlying factors and facilitators or barriers to utilization and to determine the appropriateness of the volume and quality of provided care [14, 15]. This study aims to investigate the pattern of outpatient health service utilization in the elderly in Iran, their level of satisfaction with the services, and the underlying factors related to the utilization and satisfaction.

2. Methods & Materials

This is a secondary quantitative study with cross-sectional design using the primary data of the “National Study of Health Service Utilization” conducted in 2015 by the National Institute for Health Research and the Statistics Research Institute. The study population consists of all older people aged ≥ 60 years in Iran. Of these, 8205 were selected by three-stage random sampling method from the provinces, cities and villages. Data collection tool in this study was two structured questionnaires, one was a household questionnaire completed by the head of the household and the other was a personal questionnaire only for family members who at the time of completing the questionnaire expressed a need for outpatient services during the past two weeks. For those who received the services, a questionnaire measuring the utilization and satisfaction with the received services was completed. The raw data of this study were first entered into Excel software for data cleaning and data management, and the accuracy and consistency of the data were checked and confirmed. Due to the fact that the number of missing data was very small, the features were ignored for those samples when analyzing the data. Finally, the data were entered into SPSS17 software for statistical analysis. Descriptive statistics such as mean, frequency and percentage were used for describing data, and multilevel logistic regression analysis in four models was used to examine the factors related to the need, referral, utilization, and satisfaction for outpatient services. To show the distribution of outpatient services for the elderly in Iran, a map prepared in GIS software was used.

3. Results

In this study, out of 8205 participants, 3172 (39%) reported the need for outpatient services, of which 66% referred for services; of these, 98% (n=2060) benefited from outpatient services. There was a relatively high distribution among the provinces of Iran in terms of benefiting from outpatient health services compared to the need for these services. People who did not refer to receive the outpatient services despite the need for them (n=1068) were asked about the reasons for not referring. Inability

to afford (30%), self-treatment (28%) and lack of proper insurance coverage (13%) were the most important reasons. Overall satisfaction of 54% of service recipients was low-to-moderate; in others (46%), it was relatively high. Older, illiterate and rich people were more dissatisfied with the received services than others.

The factors related to the need for outpatient services, referring to receive the services, using the services, and satisfaction with the services are presented in Table 1 categorized into 4 models. In the first model, the need for outpatient services had a significant relationship with gender, age, place of residence, marital status, literacy, basic insurance and owning a car ($P < 0.05$). The second model showed that, although females, older ones, villagers and the unmarried were more in need of outpatient services, their referrals to receive the services were not more than those of other groups. Moreover, while the illiterate needed more health services, but the number of literate subjects referred to receive services was significantly higher.

Lack of basic insurance, supplementary insurance, and a personal car had a significant impact on reducing the number of elderly people referred to receive outpatient services. In the third model, considering that 98% of the subjects were able to receive the needed services, their characteristics did not show a relationship with the health service utilization. In the fourth model, there was a significant relationship between the satisfaction level and the age of > 70 years, place of residence, marital status and literacy such that the elderly over 70 years of old, living in rural areas and unmarried had significantly less satisfaction than others.

4. Conclusion

Although the use of health services should be based on the need for these services, the present study showed that the socio-economic status of older people is an important determinant of access to and use of outpatient health services by them. The most common reasons for referring to receive outpatient services included inability to pay the expenses, self-treatment, and lack of health insurance. Therefore, it is expected that by taking measures to improve the living conditions of the older people, increasing their health insurance coverage, integration of insurance organizations, and promoting the Family Physician Program, the use of outpatient services by the elderly can be increased. It is necessary to identify the effective variables and take measures to improve their status. The results of this study can be helpful with reforming the health system and how resources are allocated to this age group.

Table 1. Results of logistic regression analysis to determine the factors related to the need for, referral to, utilization of, and satisfaction with outpatient health services

Variables	Model 1, Need for Outpatient Services		Model 2, Referral to Receive Outpatient Services		Model 3, Utilization of Outpatient Services		Model 4, Satisfaction With Outpatient Services		
	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	
Gender	Male	1		1		1		1	
	Female	0.001 <	1.51 (1.67-1.36)	0.11	1.14 (0.96-1.36)	0.82	0.92 (0.47-1.81)	0.50	0.93 (0.75-1.15)
Age (y)	60-64		1		1		1		1
	65-69	0.001 <	1.22 (1.10-1.36)	0.38	0.92 (0.76-1.10)	0.91	0.96 (0.47-1.95)	0.27	0.88 (0.69-1.10)
	70 <	0.007 <	1.18 (1.04-1.34)	0.86	0.98 (0.80-1.20)	0.18	0.51 (0.19-1.37)	0.01	0.73 (0.56-0.94)
Place of residence	Urban areas		1		1		1		1
	Rural areas	0.02	1.12(1.01-1.24)	0.63	1.04 (0.88-1.22)	0.17	0.56 (0.81-3.00)	0.03	0.78 (0.63-0.97)
Marital status	Married		1		1		1		1
	Unmarried	0.01	1.15 (1.02-1.29)	0.36	0.91 (0.76-1.10)	0.14	1.77 (0.81-3.84)	0.05	0.78 (0.62-1.00)
Literacy	literate		1		1		1		1
	Illiterate	0.04	1.11 (1.00-1.24)	0.005	0.76 (0.63-0.92)	0.15	0.56 (0.25-1.25)	0.01	1.32 (1.04-1.66)
Basic insurance	Yes		1		1		1		1
	No	0.05	0.73 (0.53-1.00)	0.007	0.59 (0.41-0.87)	0.53	1.90 (0.25-14.32)	0.67	1.12 (0.56-1.94)
Supplementary insurance	Yes		1		1		1		1
	No	0.79	0.01 (0.90-1.13)	0.03	0.81 (0.67-0.98)	0.10	0.47 (0.19-1.17)	0.80	0.97 (1.22-0.77)
Home ownership	Yes		1		1		1		1
	No	0.84	0.98 (0.83-1.15)	0.12	0.81 (0.63-1.05)	0.36	1.93 (0.45-8.19)	0.08	1.33 (0.96-1.86)
Car ownership	Yes		1		1		1		1
	No	>0.001	1.21 (1.09-1.34)	0.01	0.78 (0.65-0.94)	0.09	0.48 (0.20-1.13)	0.74	1.03 (0.83-1.29)

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Research Ethics Committee of Tehran University of Medical Sciences (Code: IR.TUMS.SPH.REC.1397.4982).

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Authors' contributions

All authors contributed equally in preparing this paper.

Conflicts of interest

The authors declared no conflict of interest.

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