International Journal of Hospital Research 2015, **4**(2):77-82
www.ijhr.iums.ac.ir
RESEARCH ARTICLE

Provincial Level Survey Provides Evidence for Remarkably Short Outpatient Visit Length in Iran

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Abstract

Background and Objectives: Visit length is a crucial aspect of patient-physician relationship that its inadequacy can negatively influence the treatment efficiency. Studies on visit length and the factors influencing it are limited in the developing countries. Thus, the objective of this study was to survey this variable at provincial level, and provide data on factors affecting it.

Methods: A sample of 428 patients who referred to the outpatient clinics of the general hospitals of Qazvin Province (Northern Iran) was randomly selected and surveyed. Data were collected by a researcher-made checklist, and summarized using descriptive statistical methods. Kruskal-Wallis and Mann-Withney's tests were used to examine the significance of the differences. The relationship between variables was explored by multivariate regression analysis.

Findings: The average visit time was found to be 4.67 min, which is significantly lower than the minimum average of 15 min approved by the Iranian Ministry of Health and Medical Educations (MOHME). Pediatric physicians took significantly longer time to visit the patients, followed by general surgery, obstetrics and gynecology, internal physicians. The visit time of male patients (5.09 min) was significantly longer than that of females (4.5 min). Multivariate linear regression identified negative relationship between visit length and patient visit frequency, experience of physician, and academic membership.

Conclusions: The average visit time was found to be significantly shorter in Iran than the standard (20 min) and that in the developed countries. Our study results, hence, point strongly towards the need for upstream planning for improving the length of visit time in Iran by taking appropriate measures, including motivation and training.

Keywords: Visit length, Patient, Physician, Patient satisfaction, Hospital, Treatment efficiency

Background and Objectives

Leading to progress and excellence in market and society, customer-focused is an important value for all organizations, especially in health system. Currently, appropriate, prompt and optimal treatment is one of the most important factors for patients regarding the care utilization [1, 2].

Prompt treatment in hospitals means to minimize the time to get services with emphasis on the appropriate treatment. Furthermore, quality of health care is a main component of services delivery in health care organizations, and among the fundamental rights of patients. Regarding this, each patient has the right to benefit from the best facilities, the best treatment and the best physician [3]. Additionally, the length of visit is one of the core indicators in the process of health care delivery for assessing quality of care [4].

Length of visit is one of the crucial factors in correct diagnosis and patient satisfaction [5]. Length of outpatient visits is defined as: "The time taken from entering to leaving the examination room" [6, 7]. In of the most developing countries due to lack of human resources and appropriate physicians monitoring system, visit time is low for patients. In some cases, multiple patients had visited together and this is a right

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violation. This leads to spending less time for each patient and the visit quality is suspected [6, 7].

Iran is a developing country and is faced with an expanding outpatient visits. On the other hand, length of outpatient visits is less than standards [6]. Iran's Ministry of Health and Ministry of Social Welfare have approved average of visit length for general practitioners (15 min), specialists (20 min), sub-specialists (25 min) and psychiatrists (30 min) [8].

Studies have shown that greater consultation length has more efficiency, and patients will refer less. Therefore, about 10 minutes has been recommended for each consultation of GPs [9]. Visit lengths of outpatients have been estimated at least 15 minutes for the specialists, although several studies have revealed that the real consultation time was between 1 and 30 minutes [10, 11]. Studies on visit length had showed different results in different countries. Chen *et al*. estimated visit length as about 30 minutes for every patient in the teaching hospitals of Guangzhou in China [10] while Mosadegh Rad estimated it 5 minutes for each patient in Iran [12].

Adherence to visit time standards is a fundamental part of the diagnosis and have determinant role in the treatment of the patient and reducing the need to revisit. Also direct and indirect costs of health care services are reduced considerably by adhering the standard of visit time [13, 14]. The aim of this study was to survey length of visit time in outpatient setting in the general hospitals of Qazvin- Iran.

Methods

A cross-sectional study was conducted in Qazvin city, during autumn 2013. The study population included all patients referred to the outpatient clinics (internal, general surgery, obstetrics, gynecology, and pediatrics) of the general hospitals of Qazvin. Using the results of a pilot study, the minimum sample size was estimated to be 428 participants (99% CI).

Qazvin city has 8 general hospitals; three of them are private, one is social security, one is charity, and others are teaching. Outpatient clinics of Social Security, charity and teaching hospitals were selected as study setting. Private hospitals of the city were excluded because they do not delivere services in four basic specialties. A researcher-developed checklist was used to collect data. This checklist included two parts: a) characteristics of patients and length of their visit, and b) characteristics of physicians. Allocation of sample among the hospitals and specialties is shown in Table 1.

Kolmogorov–Smirnov's test was used to assess normality of the data. Descriptive statistics were used to present quantitative and qualitative variables respectively. Independent sample Kruskal Wallis and Mann Withney's tests were used to analyze differences in continuous variables between the categorical variables. $P < 0.05$ was considered as statistically significant. Data entry and analysis were done using SPSS-17.

Table 1 Distribution of the study sample (selected patients) on the hospital department and hospital type

Variables	N	%
Specialty		
Internal	135	31.5
General surgery	103	24.1
Obstetrics and gynecology	118	27.6
Pediatrics	72	16.8
Hospitals		
Teaching hospital	120	28
Charity hospital	71	16.6
Social Security	237	54.4
Total	428	100

Results and Discussion

A total number of 428 patients were studied; 227 (53.1%) of them were male. The patients' mean age was 35.36 years. Also, 371 (86.7%) patients were married and only 6 patients (1.4%) had no insurance (Table 2).

25 specialists were studied (15 men and 10 women), with the range of 30-62 years and the mean age of 46.43 (7.67) years. The mean of specialists' job experience was 14.71 (7.69) years. Frequencies of visits based on specialists' characteristics are shown in Table 3.

Table 2 Level of education and place of residence of the sample patients

Variables	N	%
Educational status *(n=428)*		
Under diploma	118	27.6
Diploma	132	30.8
Bachelor	132	30.8
Higher than bachelor	46	10.7
Residency of patients *(n=426)*		
Qazvin	263	61.4
Village	70	16.4
Other	93	22.2

Table 3 Characteristics of the physicians surveyed

Variables	N	%
Physician's sex		
Male	242	56.5
Female	186	43.5
Training of consultation		
Yes	296	69.2
No	132	30.8
Academic membership		
Yes	76	17.8
No	352	82.2

The results showed that the average length of outpatients' visits was 4.67 (2.43) minutes. There was a significant difference between the mean of visit time among the different specialties. Pediatrics had the longest visit time and internal physicians had the shortest. Also there was significant a difference between the mean of visit times based on hospital type. A significant difference was observed between the mean of visit times 4.67 (2.43) and standard of visit time (20 min) (Table 4).

There was a significant difference in the mean of visit times between males and females ($P < 0.002$). Visit time of patient with Bachelor degree was significantly longer than other groups of patients ($P < 0.001$). Specialists with academic membership had longer visit times than nonacademic specialists ($P < 0.003$) (Table 5).

The results of multivariate linear regression analysis illustrated that the mean of a patient's number of visits, age, experience of physicians, and working shift (afternoon) had a significant effect on visit length ($P < 0.05$). On the other hand, physicians' gender (male) and being an academic member led to significantly shorter visit times (*B*= -1.36, -0.169, respectively). Also variables of specialty and hospital type had a significant effect on visit time (Table 6).

An important part of patient satisfaction derives from a dynamic interactional process with the medical personnel. Physician–patient communication is acknowledged as a key determinant of a successful medical consultation [2, 15]. In this study we found the average visit time (4.67 min) for a sample of patients from Iran, is shorter than that in several other developed and developing countries [9, 16-18]. Khori

Table 4 Relationship between variables and mean of visit time

Variables	Visit time (min)		Standard
	Mean	SD	
Specialty			
Internal	3.93	1.82	
General surgery	4.73	1.97	20 min
Obstetrics and gynecology	4	2.39	
Pediatrics	7.08	2.55	
Hospitals			
Teaching hospital	4.65	1.49	
Voluntary hospital	4.70	3.63	20 min
Social Security	4.08	2.01	
Total	4.67	2.43	

Table 5 Visit time for other demographic variables

Variables	Visit time (min)		Significance
	Mean	SD	
Patient's sex			
Male	5.09	2.48	< 0.002
Female	4.50	2.29	
Married status			
Bachelor	4.49	2.53	
Married	4.70	2.41	0.172
Educational status			
Under diploma	4.2	2.12	
Diploma	4.60	2.42	
Bachelor	5.33	2.78	< 0.001**
Higher than bachelor	4.2	1.61	
Habitant of patient			
Qazvin	4.78	2.60	0.168
Village	4.81	2.14	
Other	4.28	2.09	
Insurance status			
Yes	4.68	2.44	0.163
No	4.33	0.81	
Physician's sex			
Male	4.92	2.36	0.223
Female	4.48	2.46	
Academic member			
Yes	4.24	0.98	0.360
No	4.77	2.63	
Training of counseling			
Yes	4.82	2.37	< 0.003*
No	4.33	3.35	

* Mann-Whitney's U test
** Kruskal Wallis test

Table 6 visit time of outpatients in different countries

Country	Visit time (min)	Specialty	Source	Year
USA	20	GP	Davidoff *et al.*	1993
USA	10	GP	Davidoff *et al.*	1999
USA	14.5	Specialists	Migongo *et al.*	2012
Japan	17	Specialists	Aomatsu *et al.*	2013
Japan	33	Specialists	Chen *et al.*	2010
England	15	GP	Irving & Holden	2005
Finland	15	Specialists	Musila *et al.*	2004
Malaysia	12.5	Orthopedic	Raja Lexshimi *et al.*	2009
Estonia	9	GP	Tähepõld *et al.*	2003
Qatar	14	Pediatric	Bener *et al.*	2005
Qatar	12	General Surgery	Bener *et al.*	2005
Iraq	6.2	Specialists	Omer *et al.*	2013
Iran	3.15	Specialists	Mosadegh Rad *et al.*	2004
Iran	6.9	GP	Khori *et al.*	2008

et al. estimated a visit length of 6.9 min for GPs [11]. In another study in Iran, the mean of visit length was 3.15 min for specialists. The results of this study determined the mean consultation time of 2.3 min for internal specialties, 4 min for general surgery, 3.1 min for obstetrics and gynecology, and 3.2 min for pediatrics [12]. The difference between the mean visit times in Iran and other countries was statistically significant. The visit length of patients in Iraq was 6.2 min [19] during 2013, 14.5 min [20] in USA during 2012, 33 min [10] in China during 2010, 7-17/4 min [21] in Qatar during 2005, 9 min [22] in Estonia during 2003 and 9.9 min [23] in Singapore during 1999. Summary of the mean visit times in different countries is presented in Table 6 [3, 10, 12, 19-22, 24-27].

Conclusions

The study shows the remarkably shorter patient visit time in a number of Iranian hospitals. The large difference in the current visit time length and the domestically-approved standard visit length calls for urgent conduction of large-scale studies to gain insight into the nation-wide magnitude of the problem. Identification of factors contributing to short visit length in this study sets a starting point to explore the issue on a broader scale and aid policy-maker to devise solutions.

Competing Interests

The authors declare no competing interests.

Authors' Contributions

The authors contributed equally to this work.

Acknowledgements

The authors are deeply grateful to all the physicians and patients who took part in this study and to Qazvin University of Medical Sciences, Social Security and charity hospitals for organizational support.

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Please cite this article as:
Edris Hasanpoor, Mohammad Asghari JafarAbadi, Mohammad Saadati, Mobin Sokhanvar, Elehe Haghghoshaei, Ali Janati. Provincial Level Survey Provides Evidence for Overwhelmingly Short Outpatient Visit Length in Iran. *International Journal of Hospital Research* 2015, **4**(2):77-82.