Research Article

Evaluation of Pharmaceutical System Responsiveness to Non-Therapeutic Needs of Patients using WHO Framework: The Case of Tehran's Outpatient Pharmacies

Shiva Sheikhi, Saeed Taheri, Nazila Yousefi and Farzad Pairavian*

Department of Pharmacoeconomics and Pharma Management, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Tehran, Iran

*Corresponding Author: Farzad Pairavian, Associate Professor, Department of Pharmacoeconomics and Pharma Management, School of Pharmacy, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

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Abstract

Responsiveness to non-therapeutic aspect of health care is considered a key characteristic of the effectiveness of health systems. Based on the WHO framework, responsiveness is characterized by eight domains. Excluding social support, the other seven domains are aimed at outpatient services including pharmacies. Subsequent to doctor's offices, pharmacies have the most patients; therefore, pharmacies have an important station in the health system as well as responding to the non-therapeutic needs of patients.

This study aimed to examine the pharmaceutical system responsiveness to non-therapeutic needs of patients of outpatient pharmacies in the city of Tehran, the capital of Iran. The nature of study is explanatory descriptive cross-sectional, and it was conducted in 2016. Statistical population was the patients of community pharmacies in Tehran. Sampling was Random and data collection method was structured questionnaire. The sample size according to Cochran formula was 400 and the questioners were distributed according to the number of pharmacies in each district of Tehran. Then descriptive and inferential statistics were extracted using SPSS.

Our findings showed that 22.3% of respondents rated responsiveness low, 23.7% intermediate and 54% high. The responsiveness status of pharmaceutical system in Tehran to relate non-pharmaceutical demands was rated as average or high in 77.7% of cases. In this study respondents gave the highest priority to receiving medical consultation in a private space. The results indicated that there was a significant and positive relationship between age and responsiveness and there was a negative and significant relationship between level of education and responsiveness. Comparing responsiveness to the non-therapeutic needs among respondents based on gender showed that there was no significant difference between men and women. Evaluation of literacy in medicine using the "Single Item Literacy Screen" showed that 31.8% of respondents had sufficient literacy in medicine and there was a positive and meaningful relationship between literacy in medicine and responsiveness.

Keywords: Health System; Pharmaceutical System; Responsiveness; Community Pharmacy

Abbreviations

WHO: World Health Organization; MCSS: Multi-Country Survey Study.

Introduction

Health systems, as organizations and institutes devoted to maintaining and improve health actions, work to achieve their three goals: Health, fair financing and Responsiveness. Responsiveness is described as how well the health system meets the legitimate and reasonable expectations of people regarding non-medical enhancing aspects of the health care system, while patient satisfaction focuses on perceived needs, expectations and experience of care.

Health systems around the world are always looking for ways to improve their performance. Responsiveness is the only goal amongst the other goals that can have a significant impact on the overall performance of health system independently with less cost compared to improving the level of population health and fairness in financing [1-3].

In 2000, the WHO described the responsiveness as two dimensions: client orientation and respect for people.in this report, each dimension was consisted of a number of sub-dimensions with specific weights, which is presented in table 1 [4].

Dimensions	Sub-dimensions	The weight of sub-dimension
Client orientation	Prompt attention	20%
	Quality of amenities	15%
	Assess to social support	10%
	Choice of provider	5%
Respect for people	Dignity	16.7%
	Confidentiality	16.7%
	Autonomy	16.7%

Table 1: The dimensions of responsiveness.

Since 2000, a number of guidelines have been published by WHO and independent researchers to measure and analyze the responsiveness for both national and multi country studies such as MCSS [5].

It is worth noting that measuring people's experiences can become problematic if differences in expectations for those experiences are based on factors unrelated to the legitimate need a person has for responsiveness. For example, social class health condition and social background affect the expectations people have from the health system; some may evaluate the same experience different from others with different health and socioeconomic background [6]. Age, gender, education and job status, socio-economic inequality, level of education also influence people's expectations of responsiveness [2,7,8].

Even though, there has been a number of studies to evaluate the level of responsiveness of Iran's health system [1,9-11], there is no published study on the responsiveness level of pharmaceutical care. As an important part of health system, community pharmacies are the most accessible part of health care delivery in Iran. Therefore, their adequate level of responsiveness to the patients' non-medical needs could result in the improvement of patient compliance to pharmacotherapy, patient loyalty to the pharmacy and health care delivery. Numerous studies have reported that people from different cultures, political systems, languages, beliefs and levels of resources report and evaluate similar experiences of health system differently [8,11-14].

With this in mind, this study was aimed to evaluate the level of responsiveness in community pharmacies and to investigate if there is any correlation between demographic characteristics such as age, gender, level of education, and job status as well as level of health literacy, and how people evaluated the responsiveness.

Method

Instrument development and the measures of variables

Utilizing the WHO responsiveness tool [15], a self-administered questionnaire with 12 questions was developed in Persian in Likert five scale (very low, low, average, high, very high) and validated using a scientific approach; one question regarding the dignity, two questions covering the confidentiality of information, two questions about the prompt attention, one question each for the choice of provider and the autonomy, two questions regarding the quality of surroundings and three questions about quality of communication. For questionnaire face and content validity, 10 members of the academia were asked to give their opinion on the questions and propose changes if they see fit.

To evaluate the effect of gender, level of education and job status on the people's perception of responsiveness, the demographic characteristics of patients were asked in a separate section. In addition, one question regarding health literacy in Likert scale (never, rarely, sometimes, most of the time, always) was placed at the end of the second section.

Data collection and analysis

An exit survey of patients visiting Tehran community pharmacies were asked to answer the questions regarding the experience they have just had in getting their prescription filled from each pharmacy which has been selected randomly using a proportional to size method based on the number of pharmacies in north, south, west, east and center regions of Tehran (Table 2). The list of community pharmacies located in each region and their addresses were obtained from The Iran Food and Drug Organization. Only the questionnaires which have been completely answered were included in the analysis with an optimum number of three questionnaires per each pharmacy.

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Region	Center	North	South	East	West	Total number
Total number of pharmacies in each region	391	272	197	371	324	1555
Number of selected pharmacies in each region	33	23	17	32	28	133

Table 2. Number of questionnaires per region.

Questionnaires were collected during august and September of 2016. The analysis of data was performed utilizing SPSS version 21. The Cronbach's alpha test was used to confirm the reliability of the questionnaire. Mann-Whitney and Kruskal-Wallis tests were used to see if there is any significant difference between the perception of responsiveness level in different ages, genders, education levels and health literacy levels. The significance of the correlation was determined using Spearman test.

Results

The demographic characteristics of patients are presented in table 3. Regarding the descriptive analysis of demographic results, 30% were 20 - 30 years old and 66 % had an education of high school diploma or less. Also, 37.5% of participants were employed.

In order to determine the level of responsiveness, the Likert scale was recoded as following: very low and low were coded as low, very high and high as high and average as average. Then the overall score for each dimension was calculated using the weight of sub-dimensions as mentioned in table 1. The priority of each dimension of responsiveness from the respondents' point of view was calculated using the mean of answers. The level of responsiveness was calculated using the weight of each dimension, which was mentioned in table 1.

Characteristics	Categories	%
Gender	Male	44.8%
	Female	55.2%
Age	15 - 20	26%
	20 - 30	30.3%
	30 - 40	24.8%
	40 - 50	8.3%
	50 - 60	6.3%
	More than 60	4.5%
Education	High school diploma or less	66.3%
	Bachelor or master's degree	31.4%
	Doctorate	2.5%
Job	Employed	37.5%
	Unemployed	15%
	Retired	9.5%
	Housewife	22%
	Student	12.%
	Work at home	3.5%

Table 3. Descriptive statistics on demographic results.

Dimensions	The estimated score of dimensions considering the weight of sub dimensions			Sub-dimensions	Evaluated score of each sub-dimension		
	Low (%)	average (%)	high (%)		low (%)	average (%)	high (%)
Respect for people	19.9	24.6	55.5	Dignity and respect	21	28.5	50.5
				Confidentiality	15.8	25	59.2
				Autonomy	22.8	20.3	56.9
Client orientation	24.7	22.8	52.5	Prompt attention	22.5	19.1	58.4
				Quality of environment and amenities	33	24.4	42.6
				Communication	19.9	26	54.1
				Choice of provider	18.8	26	55.2
Overall score	22.3	23.7	54	77.7% ranked as average or high responsiveness			

Table 4: Overall level of responsiveness.

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The overall score of responsiveness was found to be 77.7 indicating that the level of responsiveness scored average or high in 77.7% of cases. Figure 1 shows the frequency of Responsiveness where ranked average or high.
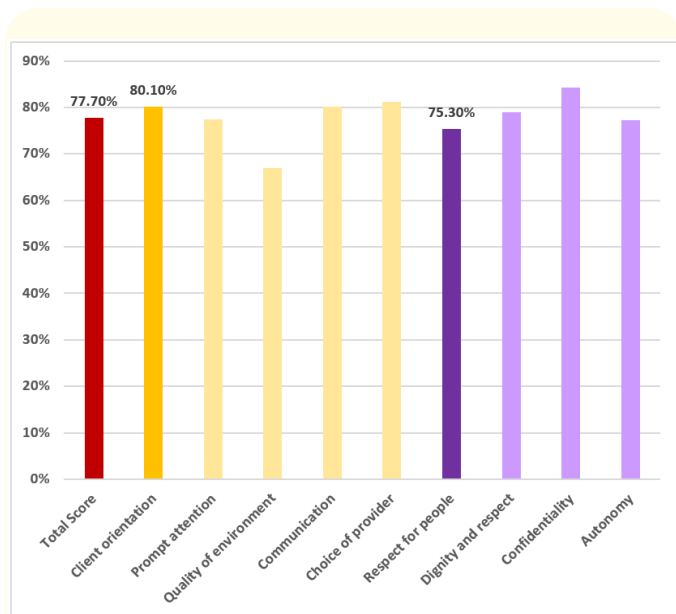

Figure 1: The frequency of average or high ranked responsiveness.

As for the level of responsiveness frequency of answers show that the respondents considered the level of responsiveness of community pharmacies intermediate. These results are shown in table 5.

Level of responsiveness	%
Low	10
Intermediate	55.3
High	34.7

Table 5: The level of responsiveness to non-medical needs.

Table 5 shows that 10% of respondents considered the responsiveness of community pharmacies low and 90.1% considered it Intermediate or high.

The results of spearman test showed that, there was a positive significant correlation between age and responsiveness (P < 0.05) and there was a significantly negative correlation between the level of education and responsiveness (P < 0.05). The Mann-Whitney and Kruskal-Wallis test were used to determine whether respondents with different gender and job situation scored the level of responsiveness differently. Our results showed no significant difference between gender and job situation with the level of responsiveness (P > 0.05). The result of Kolomogrov-Smirnov test showed that the distribution of data for all 12 items of questionnaire was normal (sig = 0.0001).

Discussion

This study was aimed to evaluate the responsiveness to the non-therapeutic needs of patients referred to outpatient pharmacies in Tehran using the WHO model.

In Iran, a pharmacy is an Institute of Medicine which has a permit from the respective commission and has a responsible and technically qualified pharmacist to provide pharmaceutical services. Pharmacies also supply of health products, including medications, baby formula and nutritional supplements, complementary infants' foods, Cosmetics and medical supplies. Community pharmacies have an important role in maintaining and improving the health of their community. They achieve this role by providing medicine, giving (community pharmacists provides) people with pharmaceutical consultation, educating patients about adverse drug reactions and supporting patients with chronic illnesses. Community pharmacies are the most accessible unit of the healthcare system and patients do not need to make appointments to visit a pharmacist. There are more than 10,000 pharmacies across the country to provide services. After doctors' offices and dentists, pharmacies are the third largest unit of the health care system that provide outpatient services. In 2016, 10373 pharmacies across the country provided services which according to population of Iran, means that one pharmacy provided for every 7712 persons.

The results of this study showed that the level of responsiveness of community pharmacies in Tehran is considered average or high in 77.7% of cases which shows improvement in level of responsiveness comparing to the results of previous studies [9,11,13]. Of the 191 countries studied in 2003 by Tandon, Iran ranked 100, which showed an immediate need to address this issue in Iran's health care system [1]. This could mean that the pharmaceutical sector of the health system has improved in terms of responsiveness.

Among the sub dimensions of responsiveness, autonomy and dignity had the highest score among all dimensions of responsiveness. As has been previously reported by Rashidian in 2011 dignity has the highest score in outpatient services. Also in the study by Luna in Brazil in 2005 respect for patients had the highest score,

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which mean that health care providers, pharmacists in case of this study, perform better in this dimension (performance satisfy the expectations of the patients) [9,14].

As Rashidian found in his study in 2011, quality of basic amenities had the lowest scores in meeting the expectations of patients. These amenities include cleanliness, adequate waiting area and air conditioning; community pharmacies in Tehran had not paid enough attention to provide these amenities according to patients' expectations. in other words, the quality of basic amenities compared with other dimensions has been neglected and does not mean that people's expectations in both studies were the same [9,16].

In line with previous studies both in Iran and other countries [1,10,11,17], the level of education has a significant influence on expectations that people have from the pharmaceutical care system; people with higher level of education expected more from non-medical services. This could be a result of these people expecting more prompt attention from service provider so that they can utilize the remaining time to ask questions from pharmacists. People with masters or higher degrees also gave the lowest scores to prompt attention and communication meaning that their expectations in these two dimensions were not met or the expected more regarding these dimensions [13]. In the present study no relationship between gender and responsiveness was found however in a study by Karami-tanha in 2014, Kowal in 2011 there was a relationship between gender an responsiveness in which men gave higher scores than women [10,18].

Conclusion

The results indicated that pharmaceutical system is performing well regarding responsiveness. However, there is still room to improve in some dimensions of responsiveness to ensure that provided services meet the expectations of patients. The Results study showed that most patients have a positive perception of the responsiveness of community pharmacies. Even though, the majority of community pharmacies in Tehran lack in regard to quality of basic amenities and waiting area, they perform better in other sub-dimensions such as dignity and respect. Overall, the score of community pharmacies was higher than other sectors of health care system such as inpatient and outpatient care. It is needless to say that, community pharmacies in Tehran have to reconsider the space they designated as waiting area to provide a better experience for patients.

Conflict of Interest

There is conflict of interest to declare.

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