

# Assessing the Performance of Community Pharmacies in Iran by Measuring Responsiveness to Non-Medical Needs: An Application of WHO Responsiveness Framework

Saba Afifi<sup>1</sup>, Amir Hossein Alizadeh Bahmani<sup>1</sup>, Leila Zarei<sup>1</sup>, Motahareh Mahi-Birjand<sup>2</sup>, Mehdi Hoorang<sup>1</sup>, Marziyeh Zare<sup>1</sup>, Iman Karimzadeh<sup>3</sup>, Farzad Peiravian<sup>4</sup>, Mahtabsadat Mirjalili<sup>3</sup>, Payam Peymani<sup>1,5</sup>

<sup>1</sup>Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Shiraz, Iran

<sup>2</sup>Infectious Disease Research Center, Birjand University of Medical Sciences, Birjand, Iran

<sup>3</sup>Department of Clinical Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran

<sup>4</sup>Department of Pharmacoconomics and Pharma Management, Shahid Beheshti University of Medical Sciences, Tehran, Iran

<sup>5</sup>Department of Epidemiology, Erasmus University Medical Center, Rotterdam, The Netherlands

Received: 03-01-2021.  
Accepted: 06-03-2021.  
Published: 03-08-2021.

## INTRODUCTION

The responsibility of a health system comes with the ability to meet the community's expectations when dealing with the health system.<sup>[1,2]</sup> In this regard, the first evaluation that a person has for the performance

### ABSTRACT

**Objective:** Despite growing debates about the health systems' nonmedical performance, there has not been any empirical research on nonmedical performance and patients' rights consideration as a driver of human rights in the pharmaceutical sector. This study's main objective was to assess the nonmedical performance of community pharmacies of Shiraz, Iran. **Methods:** A cross-sectional study was conducted using two self-administrated Likert-based questionnaires based on the World Health Organization (WHO) responsiveness framework and the legal charter communicated by the Ministry of Health and Medical Education of Iran. The population was patients older than 18 years who took a prescription from community pharmacies located in Shiraz and willing to answer the questions voluntarily, from 2018 to 2019. Considering the weights of subdimensions of responsiveness provided by the WHO framework, the total score of responsiveness was calculated ranging from 0 to 100. **Findings:** The response rate was 80.5%. The mean (standard deviation) overall score of responsiveness was 57.18 (21.61), with a median of 56.71. The mean score of client orientation was lower in respondents with a high education level than those with a diploma and under diploma ( $P = 0.028$ ). **Conclusion:** Nonmedical pharmacy performance was considered either medium or high in more than half of the cases based on the participants' views. Regarding client, orientation was seen less often in patients with high education level compared to those with a lower education level.

**KEYWORDS:** Community pharmacies, Iran, nonmedical performance, World Health Organization responsiveness framework

### Address for correspondence:

Dr. Payam Peymani,  
E-mail: peymani.payam@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow\_reprints@wolterskluwer.com

**How to cite this article:** Afifi S, Alizadeh Bahmani AH, Zarei L, Mahi-Birjand M, Hoorang M, Zare M, et al. Assessing the performance of community pharmacies in Iran by measuring responsiveness to non-medical needs: An application of WHO responsiveness framework. *J Res Pharm Pract* 2021;10:59-64.

### Access this article online

#### Quick Response Code:



Website: [www.jrpp.net](http://www.jrpp.net)

DOI: 10.4103/jrpp.JRPP\_21\_23

of a health system depends on this system's nonmedical function in meeting the people's expectations.<sup>[3,4]</sup> Low benefit from some health services can result from a low level of responsibility for such services.<sup>[5,6]</sup> Similarly, injustice in commitment can lead to inequity in access to healthcare for particular groups in society.<sup>[7,8]</sup>

The concept of responsiveness was developed as part of the World Health Organization's (WHO) broader conceptual framework on health systems developed in 2000; certain indicators were introduced for measuring the extent of responsibility of the health system to the nonmedical needs but related to the medical activities that can affect the patient's experience of their treatment.<sup>[9-11]</sup> The WHO's work on the health systems responsiveness aims to develop the technical tools to monitor and raise awareness on the issue of how people are treated and the environment in which they are treated.<sup>[12]</sup> Today, many countries have used this framework to assess the responsiveness and international comparisons of the health system performance.<sup>[11,13]</sup>

To interpret the findings on responsiveness provided by different studies, we need to consider several factors that determine how people evaluate their health system's responsiveness. Primarily, the health system is assessed based on the health system's nonmedical performance during a person's contact with it. Second, the health system's performance is seen through an individual "Goggle" that the consumer perceives. Finally, evaluation of the health system's performance is affected by weights that consumers give to responsiveness. The personal factors (i.e., perception and weighting) are influenced by the individual's sociodemographic status and previous experience with the health system.<sup>[14]</sup>

This category has occurred in both the medical and pharmaceutical sectors. The pharmaceutical system also, as one of the essential parts of the health system that deals with a large number of people daily, should be concerned about their ability to respond to the patient's nonmedical needs; further, by continually monitoring them, we can improve the performance of pharmaceutical services nationwide.<sup>[15-17]</sup>

The issue of responsiveness is highly context dependent, given that the platforms of health systems may be diverse in societies with different cultural, economic, or political backgrounds<sup>[9,14]</sup> so that every country or even section of the health system needs to evaluate this kind of performance and try to improve it.<sup>[13]</sup>

In the report of the WHO, the Islamic Republic of Iran, with a point of 5.1, is ranked 100 globally, as of the responsibility of its health system to the expectations of the society.<sup>[11,18]</sup> Therefore, there have been many

studies to evaluate the level of responsiveness of Iran's health system through international or/and national surveys.<sup>[19,20]</sup> For instance, based on the results from the WHO's general population surveys of "health system responsiveness" in 41 countries, which was reported in 2008, the most critical domain for Iranian participants was prompt attention (31%),<sup>[18]</sup> as highlighted in Rashidian *et al.*<sup>[4]</sup> and Karami-Tanha *et al.*<sup>[21]</sup> in Tehran, Fazaeli *et al.* and Vafae *et al.* in Mashhad,<sup>[22]</sup> and Najafi *et al.* in Kermanshah.<sup>[23]</sup> Further, one study was conducted on the pharmaceutical system.<sup>[17]</sup>

Human rights principles and the domains of health system responsiveness share a common goal.<sup>[14]</sup> In this regard, one of the appropriate measures by the Ministry of Health and Medical Education of Iran (MOHME) to meet patients' needs was the provision and necessitation of a charter to healthcare providers' indication on the patients' rights.<sup>[3,19]</sup>

Health systems do not perform effectively without simultaneously acknowledging medical and nonmedical expectations in terms of how the institution responds to patients' needs.<sup>[14]</sup>

Despite these issues and debates, there has not been, to the best of our knowledge, any empirical research on studying the WHO framework as the international instrument to measure responsiveness and patients' rights consideration as a factor of human rights in the pharmaceutical sector. The main objective of this study was to assess the nonmedical performance of community pharmacies of the city of Shiraz, Iran, based on the WHO responsiveness framework and the observance of the patients' rights, based on the legal charter communicated by the MOHME. We seek to determine if the patient's demographic characteristics, such as age, gender, level of education, marital, and job status, affected patients' perception and previous experience about the nonmedical performance of community pharmacies.

## METHODS

A cross-sectional study was conducted using two self-administrated Likert-based questionnaires; one for nonmedical performance based on the WHO responsiveness framework and another for observing the patients' rights based on the legal charter of the MOHME.

The first questionnaire has 13 questions in seven dimensions: dignity (1 question), confidentiality (2 questions), autonomy (1 question), prompt attention (2 questions), basic amenities (3 questions), communication (3 questions), and choice of the provider (1 question) in a binary scale (yes/no) as

well as demographic information gathering part. The second questionnaire has 16 questions; 3 in a binary scale (yes/no), 1 in a four-point Likert scale (very good, good, moderate, weak), and 12 in a five-point Likert scale (always, often, sometimes, rarely, never).

The two questionnaires were validated using a scientific approach. For the questionnaires' face and content validity, ten academia members were asked to give their opinion on the questions and propose changes if they see it necessary.

The population in this study was patients older than 18 years who took a prescription from community pharmacies located in Shiraz as the capital city of Fars province, the southwest of Iran, and willing to answer the questions voluntarily from 2018 to 2019. The list of community pharmacies located in each region and their addresses were obtained from the Department of Food and Drug Organization of Shiraz University of Medical Sciences. According to their report, about 500 community pharmacies were active in Shiraz. Finally, according to the map, 120 community pharmacies were chosen randomly, based on their locations and population density, so that in each community pharmacy, the five questionnaires were distributed. The Medical Ethics Committee of Shiraz University of Medical Sciences approved the study. Patients were assured about the confidentiality of their name and information inserted in the data collection form.

All statistical analyses were done through the SPSS (Statistical Package for the Social Sciences), version 25. Quantitative and qualitative variables were described by mean  $\pm$  standard deviation (SD) and percentages, respectively. The Chi-square test was used to examine the distribution of qualitative variables among the groups. The Mann-Whitney and Kruskal-Wallis tests were employed to compare nonnormally distributed quantitative variables between the groups. A  $P < 0.05$  was considered statistically significant.

Considering the weights of subdimensions of responsiveness provided by the WHO framework, the total score of responsiveness was calculated ranging from 0 to 100. Then, the calculated total score of responsiveness was categorized as low (score  $<50$ ), medium ( $50 \leq$  scores  $<75$ ), and high (score  $\geq 75$ ).

## RESULTS

During the study period, of 600 patients receiving the questionnaire, 483 participated in the study (the response rate was 80.5%). All participants had the mean  $\pm$  SD age of  $34.77 \pm 11.54$  years (ranging from 18 to 66 years). One-third (31%) of the study population was aged

from 20 to 30 years. About 51% were female, 60.3% were married, and 43.5% had an academic degree. Table 1 shows the demographic and socioeconomic characteristics of the participants.

The mean (SD) overall score of responsiveness was 57.18 (21.61), with a median of 56.71. Based on the participants' views, the general level of responsiveness was evaluated as low (40%), medium (33%), and high (24.5%). About 43% of the participants considered the dimension of client orientation in the pharmacies as low level. 16.8% of the respondents evaluated the dimension of respect for people as low level. The detailed information of responsiveness evaluation is demonstrated in Table 2.

Overall responsiveness and dimensions were not significantly different regarding gender, age groups, marital status, and occupation. However, the mean score of client orientation was lower in respondents with high education levels than those with a diploma and under diploma ( $P = 0.028$ ).

## DISCUSSION

This study was conducted to evaluate the level of nonmedical performance of community pharmacies of Shiraz and determine if the patient's demographic characteristics, such as age, gender, level of education, marital and job status, affected the perception and previous experience of patients about the nonmedical performance of community pharmacies.

Responsiveness is one of the health system's main goals, and its evaluation can greatly help health policymakers

**Table 1: Demographic and socioeconomic characteristics of the participants**

Characteristics	Categories	Frequency (%)
Gender	Male	220 (45.5)
	Female	243 (50.4)
	Missing	20 (4.1)
Age (years)	$\leq 20$	24 (5)
	20–30	150 (31)
	30–40	124 (25.6)
	40–50	50 (10.35)
	$>50$	52 (10.77)
	Missing	83 (17.2)
Education	$\leq$ Diploma	210 (43.5)
	$>$ Diploma	253 (52.4)
	Missing	20 (4.1)
Marital status	Single	172 (35.6)
	Married	291 (60.3)
	Missing	20 (4.1)
Occupation	Employed	282 (58.4)
	Unemployed	170 (35.2)
	Missing	31 (6.4)

**Table 2: Level of responsiveness in pharmacies**

Dimensions	Low (%)	Medium (%)	High (%)	Missing (%)	Sub-dimensions	Low (%)	Medium (%)	High (%)	Missing (%)
Client orientation	208 (43)	144 (29.8)	119 (24.7)	12 (2.5)	Prompt attention	193 (40)	142 (29.4)	135 (28.1)	12 (2.5)
					Quality of environment and amenities	36 (7.5)	384 (79.5)	51 (10.5)	12 (2.5)
					Communication	68 (14.1)	171 (35.4)	232 (48)	12 (2.5)
Respect for the people	81 (16.8)	222 (46)	163 (33.7)	17 (3.5)	Choice of provider	147 (30.4)	0	315 (65.2)	21 (4.4)
					Dignity and respect	89 (18.4)	0	375 (77.7)	19 (3.9)
					Confidentiality	48 (9.9)	282 (58.4)	134 (27.8)	19 (3.9)
Overall	193 (40)	160 (33)	118 (24.5)	12 (2.5)	Autonomy	241 (50)	0	208 (43)	34 (7)

determine the quality of patient care and subsequently try to improve it.<sup>[23]</sup> Community pharmacies are considered the most frequently visited parts of the healthcare system due to their wide distribution and easy access, and their valuable role in achieving health goals is well recognized.<sup>[15,24]</sup> Several studies have been conducted regarding Iran's health system responsiveness, but few studies have assessed the pharmacies in this context. Thus, Shiraz community pharmacies were chosen to carry out this study.

Our results showed that the level of responsiveness in Shiraz community pharmacies was considered average or high in 58% of cases. It seems that the implementation of the health transformation plan has increased overall responsiveness in outpatient and inpatient settings.<sup>[3]</sup> A similar study was conducted in 400 community pharmacies in Tehran, and the overall score of responsiveness was reported to be 77.7%, which was higher compared to our research.<sup>[17]</sup> The possible reason could be that Tehran is the capital city of Iran, and the quality of services provided in the pharmacies is higher than in the other towns. The results of another study evaluating the responsiveness in obstetrics and gynecology departments of teaching hospitals in Mashhad were similar to our research, and the mean total score was approximately 53.99.<sup>[25]</sup>

The lowest responsive scores were related to autonomy and prompt attention, with a "responsiveness as low" assessment of 50% and 40%, respectively. On the other hand, only 7.5% of the responders considered the environment's quality and amenities as low. In an inpatient survey conducted in Kermanshah, the autonomy domain had the lowest performance score among the other subdomains.<sup>[23]</sup> At the same time, Sajjadi *et al.* reported a similar result regarding the autonomy domain, with a "responsiveness as poor" assessment of 51%. This can be justified because delegating most of the critical decisions to healthcare providers is a common cultural aspect of Iranian behavior.<sup>[26]</sup> In contrast to our study, Sheikhi *et al.* found that the lowest score of responsiveness was

related to the quality of the environment and amenities. Our results demonstrated that patients were satisfied with the waiting area, air conditioning, and community pharmacies' cleanness in Shiraz.<sup>[27]</sup> Our study's poor rating of prompt attention domain shows that lack of access to immediate care and long waiting periods for filling prescriptions have made the patients unsatisfied. Based on the MCSS study, the most crucial domain of responsiveness in the Iranian health system is prompt attention. Thus, improvement in this domain should be considered in policymakers' policies. Based on our analysis, age, gender, marital, and job status did not affect the patients' expectations from the pharmaceutical system. However, patients with higher education levels expected more from healthcare systems and services, and their expectations regarding client orientation were met less often compared to the patients with lower education levels. Furthermore, previous studies in Iran, as well as other countries, have shown that more educated people had higher expectations from nonmedical services.<sup>[17,19]</sup> Based on Kowal *et al.*, differences in perception and experiment of patients in responsiveness were seen by sociodemographic characteristics, with women and younger respondents rating inpatient systems, whereas men and higher educated respondents rated outpatient systems, more responsive.<sup>[13]</sup> However, in Malhotra and Do's study, it was recommended that improving responsiveness in domains such as dignity, autonomy, and confidentiality may need greater emphasis on provider-patient communication. Emphasizing the importance of these aspects to healthcare providers during their basic and continuing medical education training, including engagement with patients with lower education and those who are reluctant to ask questions, can be a possible first step.<sup>[7]</sup>

The overall level of responsiveness of pharmacies in Shiraz was considered as either medium or high in more than half of (58%) cases based on the participants' views. Overall responsiveness and dimensions were not significantly different regarding the patients' gender, age group, marital status, and occupation. Expectations

regarding client orientation were met less often in patients with high education level compared to those with a lower education level. Further studies with larger sample sizes are required to evaluate the Iranian community pharmacies' responsiveness and to determine which domains need more attention and investment.

### AUTHORS' CONTRIBUTION

Saba Afifi was involved in the concept, design, definition of intellectual content, experimental studies, data analysis, manuscript preparation, editing and review. Amir Hossein Alizadeh Bahmani was involved in concept, design, literature search, experimental studies, manuscript preparation, editing and review. Leila Zamani, Motahareh Mahi-Birjand, Mehdi Hoorang were involved in design, definition of intellectual content, data analysis and statistical analysis. Marziyeh Zare, Iman Karimzadeh, Farzad Peiravian, Mahtabalsadat Mirjalili, and Ali Mohammad Sabzghabae were involved in definition of intellectual content, Experimental studies, and Manuscript preparation. Also, Payam Peymani was involved in concept, design, definition of intellectual content, literature search, experimental studies, data analysis, manuscript preparation, editing and review, and grantor.

### Financial support and sponsorship

This work was supported by grants from the Shiraz University of Medical Sciences Vice-chancellor of Research and Health Policy Research Center (Grant Number: 1396-01-62-14088). This study is a part of a MPH [(Master of Public Health) of Health Policy] thesis for Dr. Saba Afifi (Thesis Number: HP 99-14088).

### Conflicts of interest

There are no conflicts of interest.

### REFERENCES

- Mohammadpoor A, Mehdipoor Y, Karimi A, Abdollahi Z. Patients' and family rights standards of the Ministry of Health vs. Joint Commission International Accreditation Standards. *Iran J Med Ethics Hist Med* 2010;3:42-50.
- Parsapoor A, Malekafzali H, Alaeddini F, Larijani B. The necessity of observing patients' right: Surveying patients', physicians' and nurses' attitudes around it. *Iran J Med Ethics Hist Med* 2009;2:79-90.
- Dadgar E, Rashidian A, Majdzadeh R, Arab M, Kazemi-Galougahi MH. Assessing trend of health system responsiveness in Iran using household survey (before and after the implementation of health transformation plan). *Health Scope* 2018;7:e63866. doi: 10.5812/jhealthscope.63866.
- Rashidian A, Kavosi Z, Majdzadeh R, Pourreza A, Pourmalek F, Arab M, *et al.* Assessing health system responsiveness: A household survey in 17<sup>th</sup> district of tehran. *Iran Red Crescent Med J* 2011;13:302-8.
- Dadashi M, Jeylani M. Patients' satisfaction of observing patients' right charter in private clinics. *Iran J Med Ethics Hist Med* 2010;3:61-8.
- Mousaei M, Abhari M, Nikbin Sedaghati F. Factors and strategies of patient's rights observance. *Soc Welf Quar* 2011;10:55-84.
- Malhotra C, Do YK. Socio-economic disparities in health system responsiveness in India. *Health Policy Plan* 2013;28:197-205.
- Peltzer K, Phaswana-Mafuya N. Patient experiences and health system responsiveness among older adults in South Africa. *Glob Health Action* 2012;5:1-1.
- Darby C, Valentine N, De Silva A, Murray CJ; World Health Organization. Global Programme on Evidence for Health P. World Health Organization (WHO): Strategy on Measuring Responsiveness/Charles Darby ... [*et al.*]. Geneva: World Health Organization; 2003.
- De Silva A, Valentine N. A Framework for Measuring Responsiveness. Geneva: World Health Organization; 2000.
- Tandon A, Murray CJ, Lauer JA, Evans DB. Measuring Overall Health System Performance for 191 Countries. Geneva: World Health Organization; 2000.
- World Health Organization. Summary Report on KIS 2001 Survey Implementation; 2005. Available from: <https://www.who.int/responsiveness/summaryreports/Summary%20Report%20on%20KIS%202001%20Survey%20Implementation.pdf>. [Last accessed on 2020 May 11].
- Kowal P, Naidoo N, Williams SR, Chatterji S. Performance of the health system in China and Asia as measured by responsiveness. *Health* 2011;3:638.
- Deckovic-Dukres V, Hrkal J, Németh R, Vitrai J, Zach H. Inequalities in health system responsiveness. In: Joint World Health Survey Report Based on Data from Selected Central European Countries. 2007.
- Hindi AM, Schafheutle EI, Jacobs S. Patient and public perspectives of community pharmacies in the United Kingdom: A systematic review. *Health Expect* 2018;21:409-28.
- Peymani P, Tabrizi R, Afifi S, Namazi S, Heydari ST, Shirazi MK, *et al.* Knowledge, attitude and practice of General Practitioners towards adverse drug reaction reporting in South of Iran, Shiraz (Pharmacoepidemiology report). *Int J Risk Saf Med* 2016;28:25-31.
- Sheikhi S, Taheri S, Yousefi N, Peiravian F. Evaluation of pharmaceutical system responsiveness to non-therapeutic needs of patients using WHO framework: The case of Tehran's outpatient pharmacies. *Acta Scientific Pharmaceutical Sciences (ISSN: 2581-5423)* 2018;2:44-9.
- Valentine N, Darby C, Bonsel GJ. Which aspects of non-clinical quality of care are most important? Results from WHO's general population surveys of "health systems responsiveness" in 41 countries. *Soc Sci Med* 2008;66:1939-50.
- Bazzaz MM, Taghvaei MR, Salehi M, Bakhtiari M, Shaye ZA. Health System's Responsiveness of Inpatients: Hospitals of Iran. *Glob J Health Sci* 2015;7:106-13.
- Fazaeli S, Ahmadi M, Rashidian A, Sadoughi F. A framework of a health system responsiveness assessment information system for iran. *Iran Red Crescent Med J* 2014;16:e17820.
- Karami-Tanha F, Moradi-Lakeh M, Fallah-Abadi H, Nojomi M. Health system responsiveness for care of patients with heart failure: Evidence form a university hospital. *Arch Iran Med* 2014;17:736-40.
- Fazaeli S, Yousefi M, Banikazemi SH, Ghazizadeh Hashemi SA, Vakilzadeh AK, Hoseinzadeh Aval N. Importance of client orientation domains in non-clinical quality of care: A household survey in high and low income districts of mashhad. *Glob J*

- Health Sci 2015;8:228-34.
23. Najafi F, Karami-Matin B, Rezaei S, Rajabi-Gilan N, Soofi M. Health system responsiveness after health sector evolution plan (HSEP): An inpatient survey in Kermanshah in 2015. *Med J Islam Repub Iran* 2016;30:387.
  24. Erku DA, Belachew SA, Mekuria AB, Haile KT, Gebresillassie BM, Tegegn HG, *et al.* The role of community pharmacists in patient counseling and health education: A survey of their knowledge and level of involvement in relation to type 2 diabetes mellitus. *Integr Pharm Res Pract* 2017;6:137-43.
  25. Vafae A, Askari F, ShariatiNezhad K. Health system responsiveness in obstetrics and gynecology departments of teaching hospitals in Mashhad, Iran. *J Midwifery Reprod Health* 2019;7:1896-903.
  26. Sajjadi F, Moradi-Lakeh M, Nojomi M, Baradaran HR, Azizi F. Health system responsiveness for outpatient care in people with diabetes Mellitus in Tehran. *Med J Islam Repub Iran* 2015;29:293.
  27. Reinhardt U, Cheng TM. The World Health Report 2000: Health Systems. *Bulletin of the World Health Organization, Improving Performance* 2000;78:1064.