

# Responsiveness in the Healthcare Settings: A Survey of Inpatients

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## Abstract

**Background and Objectives:** Responsiveness is one of the hallmarks of high performance health systems. Maintaining the responsiveness of health organizations at high level, require constant assessment of its situation as perceived by the patients. The accumulation of data on patients' perception of health organizations' responsiveness can help policy-makers in developing effective relevant strategies. Thus, the aim of this study was to survey the perceived responsiveness of the teaching hospitals of Zanjan City, Iran.

**Methods:** This cross-sectional study was carried out at the Zanjan University of Medical Sciences between 2013 and 2014. A total of 246 inpatients were selected systematically at the time of their discharge. The responsiveness questionnaire recommended by the World Health Organization's (WHO) was used for the study instrument, which evaluate the responsiveness in terms of dignity, communication, autonomy, confidentiality, prompt attention, quality of basic amenities, choice of provider, and social support. Data were summarized using descriptive statistical methods. T-test and ANOVA was used for comparing the mean values.

**Findings:** More than half of the inpatients rated overall responsiveness as good (58.4%). The confidentiality dimension gained the higher score (82.5%), followed by communication (72.3%), and prompt attention (70.3%). The choice dimension was evaluated as the weakest aspect (22.8%) of the responsiveness. While dignity was perceived to be the most important aspect of responsiveness, confidentiality gained the lowest perceived importance (62%). Old patients expressed a higher evaluation of overall responsiveness and some of its dimensions, including dignity, autonomy, and choice compared with the young patients. In addition, illiterate patients expressed a significantly higher assessment of responsiveness and some of its dimensions, including dignity, autonomy, and communication.

**Conclusions:** Our results ranks the status of different dimensions of responsiveness as perceived by the patients and reveals those areas needing further attention to improve such as social support, autonomy, and choice of provider. The fact the younger and more educated patients expressed lower assessment of responsiveness's dimensions in, highlights the importance of attention to the specific expectations of these groups and to maintain a high level of responsiveness in the health settings.

**Keywords:** Responsiveness, Inpatients, Hospital management, Hospital performance, Patient satisfaction, Health system

## Background and Objectives

The World Health Organization (WHO) defines responsiveness as 'the ability of the health system to fulfill the legitimate expectations of individuals in interactions with the health system' [1]. This is a main performance indicator and one of the goals of health systems [2].

Surveys of responsiveness are used to evaluate the individuals' experiences during their contact with the

health system. Data collection related to these experiences at population level can provide valuable information for planning and policy-making [3].

In the WHO World Health Report (2000) has expressed serious concern with respect to research on responsiveness. In this report, the Iranian health system was rated as 100 in terms of responsiveness compared with other countries [4, 5].

Responsiveness can be viewed from two different aspects: firstly, consumers of the health system services are considered to be customers. If the responsiveness level is high, the health system will attract more consumers. Secondly, better responsiveness secures patients' rights [6].

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Nowadays, responsiveness to patients' legitimate expectations is considered to be a key characteristic of an effective health system. Thus, worldwide, the health systems are trying to improve their responsiveness to both patients and people [7]. In addition, responsiveness of health systems is important for patients because they can understand it. Although patients due to a lack of medical knowledge are unable to understand prognosis, medical decisions and health outcomes, they can judge responsiveness during their treatment experience [8].

The responsiveness concept includes eight 'domains' that are categorized into two domains:

1- 'Respect-for persons' domain that covers dignity, autonomy, confidentiality, and (clear) communication.

2- 'Client-orientation' domain that contains choice of care provider, prompt attention, quality of basic amenities and access to social support networks during the inpatient care [9, 10].

Measurement of responsiveness using the performance of health systems as a key tool helps decision makers to compare and improve the outcomes of health systems [11]. However, there are gaps between a health system's potential and real performance. Moreover, among the countries with the same resources, differences have been observed in the outcomes of health systems [12].

The WHO has developed a questionnaire to measure responsiveness level as a criterion of health system performance (6). This instrument has been used in several previous studies [4, 13, 14].

The results of a study conducted by Kowal et al. on the performance of the health system in China and Asia indicated that the overall responsiveness was better in inpatient care than in outpatient care. Differences observed in the responsiveness domains of outpatient care were greater than those of inpatient care. Furthermore, the patients rated dignity and quality of basic amenities as the most important domains [3].

In a study by Coulter et al. on the European patients' views on the responsiveness of health systems and healthcare providers, there were significant differences among the European countries in terms of responsiveness levels, with the highest and lowest responsiveness levels related to Germany and Sweden, respectively. In addition, the results indicated that part of the differences found in these countries can be justified by variations in their population's expectations. There were significant correlations between expectations and responsiveness performance in some domains [7].

Ugurluoglu, investigating the responsiveness of the Turkish healthcare system to its citizens, found statis-

tically significant differences between the present responsiveness level and the expected responsiveness in all domains. The respondents gave the highest score to the confidentiality domain. The Turkish community pays special attention to privacy concerns as compared to the Western and non-Muslim countries; for this reason, the healthcare providers are careful to ensure confidentiality [15].

A number of studies have previously been performed in the context of patient satisfaction and quality of care [16-17]; however, but studies on responsiveness are limited. Responsiveness differs from quality of care and patient satisfaction, because the former is related to the whole of the health system, and focuses on the non-clinical aspects of healthcare [18].

Only a few studies have been performed on responsiveness in the Iranian health system; however, their focus was not on hospital care [4, 19]. This study aimed to evaluate responsiveness from the inpatients' point of view.

## Methods

### Study design

This descriptive cross-sectional study was implemented in the teaching hospitals of Zanjan city in 2013.

The study population included 246 inpatients, who utilized the health services of teaching hospitals in Zanjan city, located in the north-west of Iran. They were selected by systematic sampling during their discharge. Inpatients at-discharge in all wards, except in the emergency and neurology wards, were asked to complete the questionnaire.

### Data collection

In order to measure responsiveness, a World Health Survey (WHS) questionnaire developed by the WHO was used to collect the data. This questionnaire is a valid, reliable and comparative instrument that contains questions about the 'importance of responsiveness domains from an inpatient's point of view', 'health services utilization', 'health service barriers' and 'people's view about the responsiveness domain of inpatient services' [4].

The questionnaire consisted of eight dimensions:

Dignity: Patients are treated with respect during the diagnosis, treatment and consultations.

Communication: Patients are given enough time for questions and provided with clear explanations about the problem/treatment.

Autonomy: Patients are involved in the decision making(s) related to their treatment and provision of

relevant information, and are consulted on their preferences.

**Confidentiality:** The confidentiality of any information provided by the patient to the hospital is maintained.

**Prompt attention:** Care is provided as soon as possible, and fast care is available in emergencies. Waiting times for admission are reasonable, and traveling distances are convenient.

**Quality of basic amenities:** Physical infrastructure of the hospital is suitable and pleasant. Hospitals have adequate furniture, sufficient ventilation, clean water, and toilets.

**Choice of provider:** The patient has the power or opportunity to select a care provider from more than one option. The patient has the ability to choose a healthcare provider within a healthcare unit.

**Social support:** During hospitalization, the hospital is accessible for visitors, and can provide special diets [11].

The responsiveness questionnaire contained four sections: a) demographic and personal information of the participants; b) health services utilization; c) questions related to the importance of responsiveness domains; and d) questions related to the participants' view about the level of responsiveness domains in the inpatient services delivered in teaching hospitals.

To measure the importance of responsiveness domains, the participants were asked to select one response for each item; the options included: very important, important, moderate, less important, and least important. To measure the performance level of the responsiveness domains, the participants were asked to select one response for each item; very good, good, average, poor, and very poor.

A five-point Likert scale was used, where [5] was very important/very good, and [1] represented least important/very poor.

In addition, in accordance with the WHO approach, barriers to healthcare in the hospitals were also assessed. The participants were asked whether they had experienced any poor treatment by the hospital during their care. Various possible reasons for being treated badly (money, gender, age, etc.) were given.

In each domain, the scores of the items were added together, and the results were divided by the number of items. Higher scores implied better responsiveness and vice-versa.

Validity and reliability of this questionnaire in Iran were determined by Rashidian et al. [3].

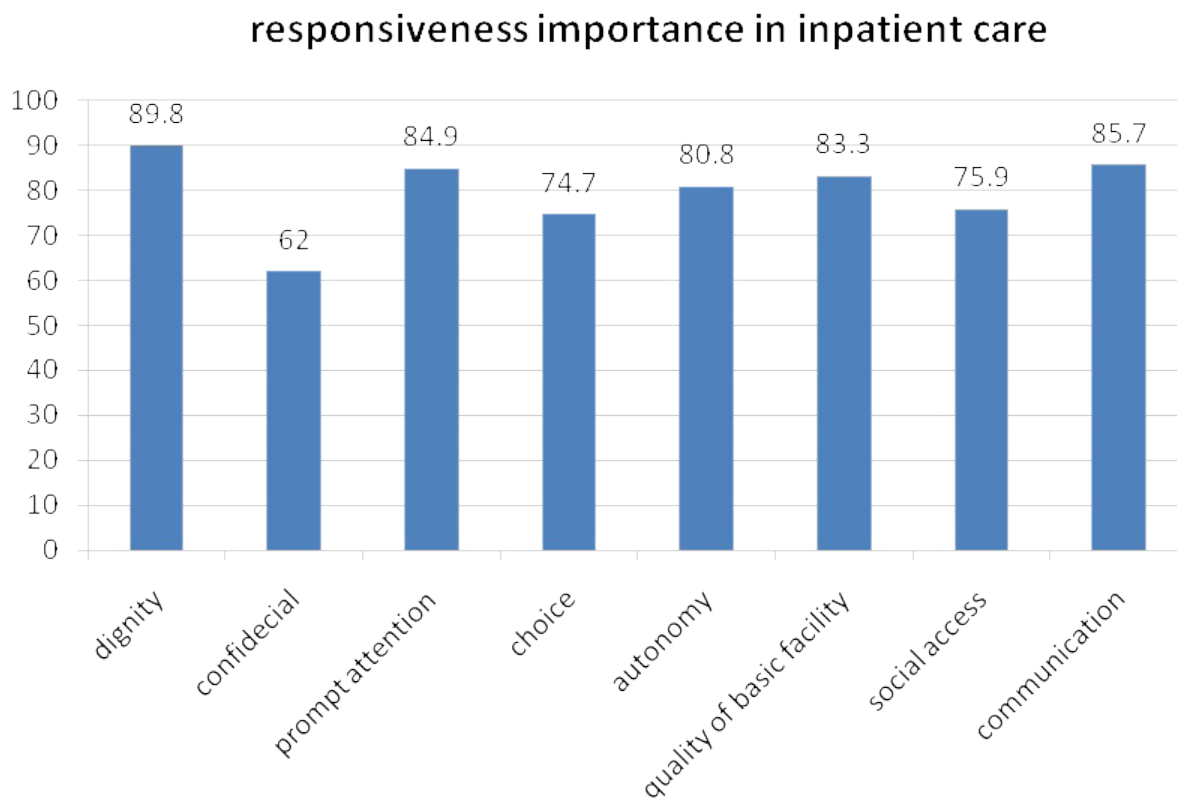
Cronbach's alpha was used to calculate the reliability

**Table 1 Demographic characteristics of the respondents**

Variable	N	%
<b>Sex</b>		
Female	122	49.6
Male	124	50.4
<b>Age</b>		
=< 24	50	20.3
25 -64	124	50.4
>=65	72	29.3
<b>Education</b>		
Illiterate	117	47.6
basic level	48	19.5
intermediate level	61	24.8
higher education	20	8.1
<b>Working status</b>		
Employee	18	7.3
Free job	74	30.1
Housewife	100	40.7
Unemployed	54	22
<b>Insurance cover</b>		
Have	226	91.9
Not have	20	8.1

ity of the measurement scale. Alpha coefficient of the overall responsiveness was 0.84. Alpha coefficients of prompt attention, dignity, communication, autonomy, confidentiality, choice, quality of basic amenities, and social support domains was 0.72, 0.80, 0.90, 0.83, 0.71, 0.81, 0.73 and 0.76, respectively. All coefficients were higher than the minimum acceptable level, which was 0.7.

Illiterate inpatients were interviewed face-to-face by a trained interviewer. Two interviewers were university graduates in health field, and had received necessary training on interviewing techniques. Furthermore, they were local residents and could speak the local dialect.



**Figure 1** Proportion of participants rated responsiveness domains as "important" or "very important"

### Statistical analysis

The SPSS software (version 11.5) for Windows was used to analyze the data. Descriptive statistics (mean, percentages and frequency) were included. Independent samples t-test and ANOVA were utilized. P values less than 0.05 were assumed as statistically significant. Figures were produced using Microsoft Excel.

In accordance with the WHO's approach, the responsiveness performances were dichotomized into; good responsiveness (combining responses; very good and good, or always and usually), and poor responsiveness (combining responses; moderate, poor and very poor or never and sometimes). The importance questions were grouped into the most important; combining responses 5 (very important) and 4 (important), and less important; combining responses 3 (moderate importance) 2 (less important), and 1 (least important).

For analysis of discrimination, the experiences of discrimination during the healthcare were added, and dichotomized into the following codes: "1" feeling or experiencing any kind of discrimination, and "0" without any experience of discrimination [14].

## Results

### Characteristics of the participants

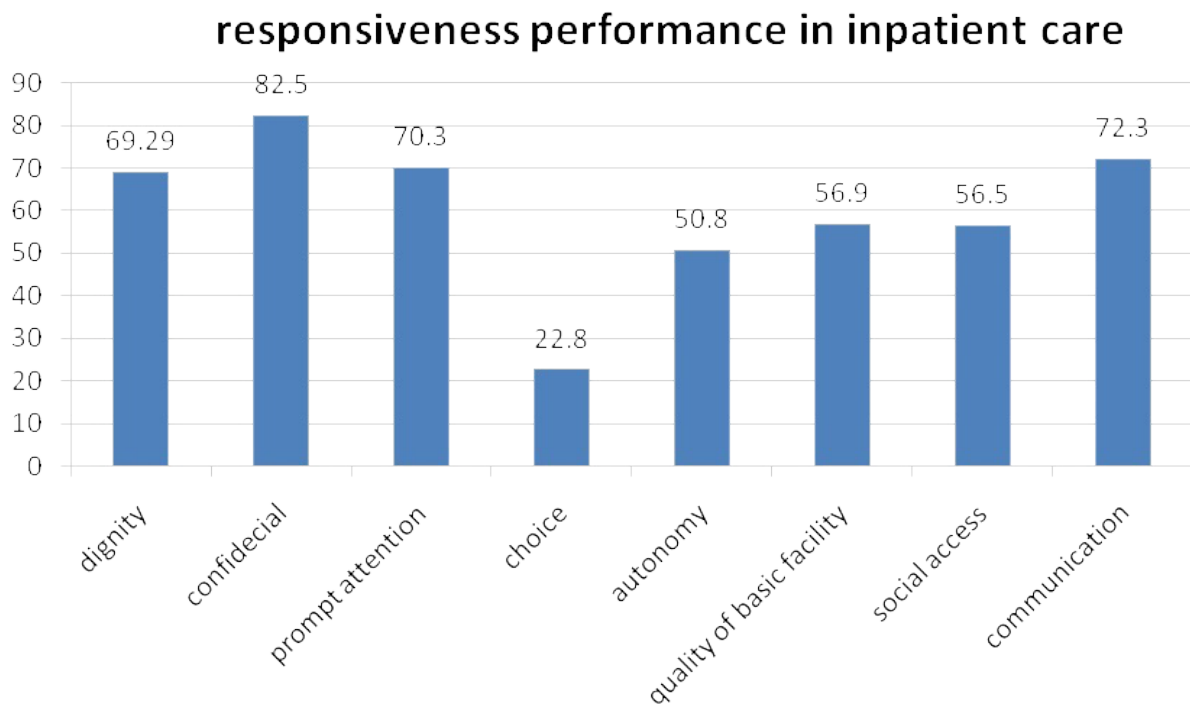
The age mean of the participants was 47.9 years. The majority of them participants were in the age group 25-64 years. In total, 50.4% of the participants were male, 47.6% were illiterate, and the majority of them had insurance coverage (Table 1).

### Importance of responsiveness

The participants rated the dignity domain (89.1%) as being the most important, and confidentiality (62%) as the least important domain. Prompt attention, communication, quality of basic amenities, autonomy, access to social support, and choice domains were rated second to sixth in terms of importance, respectively (Figure 1).

### Responsiveness performance

On average, 58.4% of the inpatients rated overall responsiveness as good, but 41.6% reported negative experiences during their inpatient care. Best and worst perfor-



**Figure 2** v Proportion of participants rated responsiveness domains as "good" or "very good"

mances in inpatient care were related to the confidentiality and choice domains, respectively. Most of the inpatients (82.5%) rated the confidentiality domain as good, indicating a positive view of the inpatients with regard to current confidentiality during their care. The worst performing domain in hospitals was having a choice of healthcare provider. Only, 22.8% of the inpatients rated this domain as good or very good. Most of the inpatients reported that they had not been given power of choice about their healthcare provider (e.g., physician, nurse, etc.).

The second best performance in inpatient care was communication (72.3% of the inpatients rated this domain as good), followed by prompt attention (70.3%), dignity (69.9%), quality of basic amenities (56.9%), access to social support (56.5%), and autonomy (50.5%) (Figure 2).

The best performance of responsiveness was related to the item 'having your medical history kept confidential' in confidentiality domain, and the worst was 'quality of food for hospital patients' in the quality of basic amenities domain (Table 2).

One-way ANOVA test showed that there were sta-

tistically significant differences in the mean scores of dignity, autonomy, choice and overall responsiveness on the basis of age (Table 3).

The test also revealed statistically significant differences in the mean scores of dignity, autonomy, communication and overall responsiveness on the basis of literacy level (Table 4).

Barriers and discrimination with regard to health services

Overall, 21.1% of the inpatients reported an experience of discrimination during their healthcare for at least one reason. The most common reasons for discrimination were 'money' (16.7%), and 'social class' (13.6%), while 'illness type' (5.3%), respectively.

## Discussion

This study aimed to evaluate responsiveness in the teaching hospitals of Zanjan city (Iran) from the inpatients' point of view. Most of the inpatients rated the overall responsiveness as good. The research findings are in accordance with the findings of Rashidian et al., and Valentine et al. [4, 20]. In a

**Table 2 Proportions reporting performance of the responsiveness sub-factors**

domains	items	Good performance		Bad performance	
		n	%	n	%
Dignity	Treated with respect	198	80.5	48	19.5
	Patients privacy during physical examinations and treatments	210	85.5	36	14.5
	Patients privacy during counseling	212	86.2	34	13.8
Communication	Clarity of providers explanations	182	74	64	26
	Patients encouraged to ask question about the disease	193	78.5	53	21.5
Autonomy	Getting information about other types of treatments/tests	148	60.2	98	39.8
	Being involved in making decisions about care	134	54.9	112	45.1
	Patients consent sought before testing	199	80.9	47	19.1
Confidentiality	Talk privately to health care providers	209	85	37	15
	Confidentiality of personal information	237	96.7	9	3.3
	Confidentiality of medical records	217	88.2	29	11.8
Choice	Choice between specialist physicians	75	30.6	171	69.4
	Freedom to choose health care provider	141	57.5	105	42.5
	Choice between health care unit	125	50.8	121	49.2
Quality of basic amenities	Skills of health care provider	227	92.3	19	7.7
	Furniture availability	231	93.9	15	6.1
	Cleanliness of the rooms inside	169	68.7	77	31.3
	Adequate space in the rooms	199	80.9	47	19.1
	Cleanliness of toilets	151	61.4	95	38.6
	Cleanliness of linen including bed sheets	196	79.7	50	20.3
	Nutrition and edibility	41	16.7	205	83.3
Prompt attention	Times to reach to health care unit	185	75.2	61	24.8
	Geographic access	194	78.9	52	21.1
	Reasonable waiting time	224	91.1	22	8.9
	Fast access to emergency care	178	72.4	68	27.6
Social support	The ease of having family & friends visiting	233	94.7	13	5.3
	Staying in contact with the outside	237	96.3	9	3.7
	Practice religious acts	116	47.6	130	52.4

study carried out on the health system responsiveness in Tehran by Rashidian et al., 49% of the respondents reported a positive experience of health system responsiveness [4]. In addition, the results of Valentine et al.'s study concerning the health system responsiveness in 41 different countries, which included Iran, indicated that 54% of the respondents

rated responsiveness performance as good in the Iranian health system [20].

The present study's findings in the context of overall responsiveness were lower than those of Jenkinson et al. [1], Bramesfeld et al. [14] and Vitrai et al. [21]. A study by Jenkinson et al. on the European patients' views about the health system responsive-



**Table 3 Performance of responsiveness domains based on participants' age**

Age group	Prompt attention	Dignity	Autonomy	Confidentiality	Choice	Quality of basic amenities	Social support	communication	Overall Responsiveness
≤ 24	4	3.88	3.29	4.18	2.45	3.88	3.82	3.8	3.46
25 -64	4.08	3.97	3.62	4.12	3.12	3.89	3.92	3.85	3.82
≥65	4.27	4.2	4.05	4.19	3.32	3.81	4.03	4.10	4.01
F-value*	2.9	3.08	11.72	0.61	12.48	0.51	2.17	2.008	8.21
P - value	.056	.048	< 0.001	N.S	< 0.001	N.S	N.S	N.S	< 0.001

\* One – way ANOVA test N.S = non- significant

ness revealed significant differences in the responsiveness levels in different European countries. The highest and lowest responsiveness levels belonged to Switzerland (87% of the respondents rated the health system as good) and Italy (69% of the respondents rated the health system as good), respectively. In other countries, the range of overall responsiveness was between 72% and 83% [1].

In a study by Bramesfeld et al. that evaluated inpatient and outpatient care in Germany's health system, it was found that 78% of the inpatients rated the responsiveness of health system as positive [14].

Furthermore, a study by Vitrai et al. about inequalities in the health system indicated that the overall responsiveness in the European countries was 68% [21].

In the present study, the best performance domain was confidentiality, indicating that the inpatients held a positive view of their privacy during the consulta-

tion sessions, and confidentiality of information during their hospital stay. On the other hand, the worst performance domain was in the choice of healthcare provider (e.g., physicians, nurse, etc.), which was negative, as they felt that their right to choose was limited. The choice domain included issues such as the freedom to choose a healthcare provider, or care unit, as well as information about alternative treatments.

Responsiveness performance of the communication, prompt attention, dignity, quality of basic amenities, social support, and autonomy domains was rated second to seventh, respectively. This finding is similar to the those of Rashidian et al. [4], Njera et al. who investigated responsiveness in Kenya [6], De Silva et al. who developed a framework for measuring responsiveness [11], Bramesfeld et al. [14], Ugurlue Ogle et al. who studied health system responsiveness in Turkey [15], and Peltzer et al. who described health

**Table 4 Performance of responsiveness domains based on literacy**

education	Prompt attention	Dignity	Autonomy	Confidentiality	Choice	Quality of basic amenities	Social support	Communication	Overall Responsive-ness
illiterate	4.23	4.16	3.86	4.2	3.21	3.9	4.02	4.08	3.94
basic level	4.04	4.05	3.75	4.16	3	3.81	3.88	3.93	3.87
intermediate level	3.97	3.89	3.41	4.09	2.91	3.9	3.84	3.74	3.71
higher education	4.19	3.58	3.21	4.03	2.68	3.72	3.8	3.36	3.59
F-value*	2.45	4.26	5.7	0.61	2.35	0.92	2.05	4.18	4.43
p-value	N.S	.006	<0.001	N.S	N.S	N.S	N.S	.007	<0.001

\* One – way ANOVA test N.S = non- significant

system responsiveness in South Africa [22].

Rashidian et al., assessing the health system responsiveness in the 17th District of Tehran, found that the best performance domain of health system was related to dignity (78% of the respondents rated this domain as good) [4].

In the study of Njera et al. on responsiveness in Kenya, the majority of the health service users reported that they were not given a choice of health providers [6].

De Silva et al. studied on the development of a framework for measuring responsiveness, and found that the best performances of responsiveness were related to 'privacy during treatment' and 'confidentiality of information provided by patients' in the confidentiality domain. The worst performances of responsiveness were related to the items 'inpatients' friends and families are allowed to help inpatients in their personal needs' in the social support domain, and 'choice of healthcare providers in care unit' in the choice domain [11].

In the study of Bramesfeld et al. who evaluated inpatient and outpatient care in the German health system, the respondents rated confidentiality and dignity as the best and the second highest performance domains, respectively. Furthermore, the inpatients scored as performance domain of the health system. The worst performance domains in this study were related to "choice of healthcare provider" and "autonomy" [14].

A study by Ugurlue Ogle et al. on health system responsiveness in Turkey indicated that the respondents scored "responsiveness" in the confidentiality domain the highest. Also the highest and lowest mean scores of responsiveness were given to 'privacy during care' in the dignity domain, and 'choice between healthcare providers in a healthcare unit' in the choice domain, respectively [15].

In a study by Peltzer et al. on health system responsiveness in South Africa, the lowest responsiveness level belonged to the "choice of healthcare provider" from the inpatients' point of view [22].

In the present study, dignity was rated as the most important domain by the majority of inpatients. The least important domain was confidentiality though the hospitals had the highest responsiveness level in this domain. Communication, prompt attention, quality of basic amenities, autonomy, social support, and choice domains were rated second to seventh, respectively, in terms of responsiveness importance.

This finding indicates that dignity, communication and prompt attention are more important than other domains of responsiveness according to the inpa-

tients' viewpoint. The dignity domain is related to being treated with respect and having privacy during the physical examinations. Communication domain is related to having the opportunity of the inpatients to ask questions about their treatment during the care. Prompt attention included reasonable waiting time before admission, time length to reach to the hospital, and fast access to emergency care.

This finding is closely related to the results of studies by; Kowal et al. on the responsiveness performance of the health system in China and Asia (3), Njera et al. (6), Valentine et al. on the important aspects of non-clinical quality of care [9], Vitrai et al. [21] and Liabsuetrakul et al., who investigated the health system responsiveness in the delivery of care in Southern Thailand [22].

In the study by Kowal et al. focusing on the responsiveness performance of the health systems in China and Asia, the respondents rated dignity and quality of basic amenities as the most important domains. Also autonomy and social supports were rated as the least important domains [3].

Njera et al. investigated the responsiveness of the health system in Kenya and indicated that dignity was rated as the most important domain by the majority of services users and providers. Furthermore, respectful treatments, encouragement to ask questions, and discussion about the patients' concerns were important for the respondents [6].

In a study by Valentine et al. on the importance of aspects of non-clinical quality of care, prompt attention and dignity were the most important domains, respectively. Similarly, in the present study, prompt attention and dignity were rated as the most important domains, respectively [9].

The study of Vitrai et al. about inequalities in the health system responsiveness in the European countries, 86% of the respondents rated responsiveness of the health system as important, but there were significant differences among the studied countries in terms of the importance of responsiveness domains. Dignity, prompt attention, quality of basic amenities and social support were important for Hungarian respondents, respectively, while Slovakian respondents rated dignity, quality of basic amenities, and social support domains as being the most important, respectively [21].

Liabsuetrakul et al.'s study on the health system responsiveness in the delivery of care in Southern Thailand indicated that the most important factors for selection of a hospital were prompt attention, dignity, clear communication, autonomy, quality of basic amenities, confidentiality, choice of healthcare



providers, and social support, respectively [23].

## Conclusions

The findings of this study showed that there are gaps between responsiveness performance and the importance of all domains of responsiveness. Thus, taking action to improve this situation would help to achieve favorable responses in all of the related domains.

With regard to resource shortages and limitations that hospital managers are facing with, more attention should be given to the most important domains from the inpatients' point of view. Thus, based on their importance and performance gaps, the responsiveness domains can be classified into four priority groups to enhance responsiveness: choice domain is the first priority; dignity, autonomy and social support domains are the second priority; communication, prompt attention and quality of basic amenities domains are the third priority; and finally, confidentiality domain is placed in the fourth priority.

## Competing Interests

The authors declare no competing interests.

## Authors' Contributions

The authors contributed equally to this work.

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