Introduction

The concept of accountability is defined by the World Health Organization (WHO) as the ability of each health system to meet expectations for different dimensions of services to strengthen and optimize the health system. Therefore, health systems in all over the world are looking for ways to be more responsive to patients and the community. Responding to people's expectations in non-clinical issues is the third goal that reflects the importance of respecting the dignity, authority, and information confidentiality of people. Responsiveness can be viewed from two perspectives; the first is from the perspective of the consumer of the health care system, often known as a tool to attract customers, and the second is responsiveness as a basic concept in relation to the protection of patients' rights concerning adequate and timely care. The disease itself can jeopardize the dignity and integrity of individuals and destroy their ability to control what happens to them, more than other events they face. Responsiveness means reducing harm to the dignity and independence of individuals and the shame and fear that illness often brings to them. Thus, health systems around the world...
are looking for ways to make their services responsive to patients and the general public. Improving the non-medical performance of health systems is important because it is an integral part of increasing the welfare of the people, which is the public and ultimate mission of the health system. On the other hand, the growth of people's expectations and attention to safety, quality, and justice has increased the pressure to create a responsive health system. Responsiveness includes a set of eight dimensions. These dimensions are: Social support, autonomy, prompt attention, confidentiality, communication, dignity, right to choose parameters, and basic amenities. Assessing responsiveness makes it possible to examine the various characteristics of the health system apart from its effect on health status. Using accountability as a key criterion, we can conclude how citizens themselves can evaluate and respond to health system services. Assessing the health system performance can provide decision-makers with timely and relevant information about the performance of the health system. This information increases awareness of managers and policy makers of the plans and allows monitoring progress towards national goals and evaluating related policies. Fazaeli et al. in 2014 studied the response of the health system in the field of outpatient services in the privileged and less privileged areas of Mashhad. In this descriptive-applied study, the sample size included 889 households, and the three-part questionnaire of the WHO was the study tool. Their results showed that in general, more than 60% of people reported good outpatient response in various areas. The level of accountability in the field of confidentiality was higher and in the field of basic amenities facilities where the service was provided, it was lower than other areas. Also, the level of response was reported by the residents of the more affluent area than in the less affluent area.

Timely monitoring and evaluation and the evidence obtained regarding the evaluation of the health system is of great importance and is useful for guiding and measuring the position of the health system accountability. The purpose of this study was to evaluate the importance of each of the different dimensions of health system accountability in Iran by systematic review and meta-analysis. Assessing the current situation of these dimensions in the studies conducted on the accountability of the health system in Iran helps improve the quality of services.

Materials and Methods

Search Strategy

This review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. For this study, a systematic review was conducted to obtain scientific documents and evidence related to health system responsiveness in Iran from the articles published in Persian and English. The databases included PubMed, Magiran, Iranmedex, SID, Elsevier, and Emerald, as well as the Google Scholar search engine, which were searched from the early 2000s to the end of July 2020. In order to search for sources, English keywords or their Persian equivalents, including responsiveness, health evaluation, health performance, accountability, health goals, health monitoring, patient satisfaction, patient expectancies, inpatient services, patient experience, and patient rights, were searched to retrieve articles in the databases. Also, specialized journals in the fields of efficiency, effectiveness, and productivity, especially in the health sector, were reviewed to retrieve non-indexed articles. In addition, references of the articles obtained were also reviewed so that articles that were not obtained using the above methods would also be identified.

Exclusion Criteria

Exclusion criteria included studies published in languages other than Persian and English, studies published before 2000, studies related to the performance appraisal of hospitals in other countries or partial evaluation of a ward. Also, the studies that used invalid tools and irrelevant and duplicate items were omitted.

Study Selection

After collecting all relevant articles, the titles and abstracts of the articles were reviewed. In the next stage, all the remaining articles were evaluated qualitatively using a checklist and considering the exclusion criteria. This checklist evaluated the studies in terms of the validity of the method used, as well as the method of concluding and reporting the results. At this stage, all articles were evaluated in terms of study method, objectives, conceptual framework, validity and reliability, and key results. Overall, 571 articles were found in the initial search. In the first stage, by studying the titles of the articles, 206 articles were deleted due to duplication. In the second stage, by reading the abstract of the articles, 284 unrelated articles were excluded from the study. Of 81 remained studies that were checked for eligibility, 70 were removed. In the next stage, after careful studying of the remaining 11 articles, five articles were removed from the review due to the use of different tools and assessment of other areas of responsiveness, and six studies entered the meta-analysis (Figure 1).

Quality Assessment

To evaluate the quality of the articles reviewed, the Meton checklist was used. The minimum and maximum scores obtained in this checklist were one and 15 and the acceptable score was 10. Data were extracted into a form designed based on the purpose of the research. This form included sections such as the name of the first author,
year and place of the study, sample size, data collection tool, overall response rate, and the quality of the study. Three articles reported the results of the health system response dimensions on average from one to five; the results of these articles were converted into percentages for uniformity.

**Statistical Analysis**

Stata version 11 software was used to analyze the data and due to the difference in the rate of responsiveness, the degree of heterogeneity in the initial studies was estimated using the Cochran (Q) test. Due to the heterogeneity of the studies and the significance of the heterogeneity index, the random effects model was used in the meta-analysis. The weight of each study was designated, and the lines on either side indicated 95% confidence intervals.

**Results**

**Studies’ Characteristics**

Out of 571 studies, six entered the final meta-analysis, the characteristics of which have been shown in Table 1.

**Responsiveness in Various Dimensions**

Responsiveness was assessed in the dimensions of autonomy, social support, prompt attention, dignity, communication, right to choose parameters, confidentiality, and basic amenities (Table 2). The findings of the study showed that the dimension of confidentiality with 72.1% showed the highest and right to choose with 55.1% showed the lowest level of responsiveness of in the Iranian health system. The overall responsiveness rate was obtained 60.8% (Table 3).

The tools of all studies were based on the questionnaire of the WHO. Three studies reported the results based on an average of one to five. Based on the fact that each study received a score of one to five on average and was divided by 100 to convert the obtained score into 100.
Social Support
The meta-analysis showed that three studies had estimated this dimension, the frequency of the positive response varied from 52.4% in the study of Javadi et al.12 to 78% in the study of Arab et al.15. The overall estimate of the frequency of social support after combining the results of these three studies was 67.46 (95% CI: 54.5-81.2) (Figure 2).

Autonomy
The meta-analysis showed that six studies had estimated this dimension, the frequency of the positive response varied from 50% in the study of Javadi et al.12 to 70% in the study of Arab et al.15. The overall estimate of the frequency of autonomy after combining the results of these six studies was 59.1 (95% CI: 55.1-66.5) (Figure 3).

Prompt Attention
The meta-analysis showed that six studies had estimated this dimension, the frequency of the positive response varied from 32.1% in the study of Ebrahimipour et al.14 to 78% in the study of Arab et al.15. The overall estimate of the frequency of prompt attention after combining the results of these six studies was 59.1 (95% CI: 51.6-70.6) (Figure 4).

Confidentiality
The meta-analysis showed that six studies had estimated this dimension, the frequency of the positive response varied from 50% in the study of Javadi et al.12 to 83.2%
in the study of Fazaeli et al. The overall estimate of the frequency of Confidence after combining the results of these six studies was 67.5 (95% CI: 62.9-74.5) (Figure 5).

**Communication**
The meta-analysis showed that five studies had estimated this dimension, the frequency of the positive response varied from 48.2% in the study of Javadi et al to 72% in the study of Arab et al. The overall estimate of the frequency of communication after combining the results of these five studies was 64.8 (95% CI: 58.7-71.4) (Figure 6).

**Dignity**
The meta-analysis showed that six studies had estimated this dimension, the frequency of the positive response varied from 51.6% in the study of Javadi et al to 76% in the study of Sajjadi et al. The overall estimate of the frequency of dignity after combining the results of these six studies was 72.1% (95% CI: 64.6-81.3) (Figure 7).

**Right to Choose Parameters**
The meta-analysis showed that six studies had estimated this dimension, the frequency of the positive response...
varied from 30% in the study of Ebrahimpour et al\textsuperscript{14} to 78% in the study of Arab et al.\textsuperscript{15} The overall estimate of the frequency of right to choose as parameters after combining the results of these six studies was 55.1 (95% CI: 45.5-68.4) (Figure 8).

**Basic Amenities**

The meta-analysis showed that six studies had estimated this dimension, the frequency of the positive response varied from 47.1% in the study of Ebrahimpour et al\textsuperscript{14} to 74% in the study of Arab et al.\textsuperscript{15} The overall estimate of the frequency of basic amenities after combining the results of these six studies was 60.7% (95% CI: 53.6-70.1) (Figure 9).

**Discussion**

Health systems around the world are looking for ways to make their services responsive to patients and the general public.\textsuperscript{17} Improving the performance of health systems is important because it is an integral part of increasing the welfare of people, which is the public and ultimate mission of the health system. On the other hand, the growth of people’s expectations and attention to safety, quality, and justice has increased the pressure to create a responsive health system.\textsuperscript{18} Therefore, this systematic review and meta-analysis study was conducted to evaluate the efficiency and responsiveness of the Iranian health system. The findings of the present study showed that the overall responsiveness the Iranian health system was 60.8%, and the dignity (with a responsiveness of 72.1 %) had the highest performance. The right to choose a physician (parameter) (55.1%) had the lowest performance. Rashidian et al reported that qualified equipment was the most important factor that its improvement was necessary to improve health system responsiveness.\textsuperscript{19} In another study in 2020 in Tanzania, Promat attention showed the highest performance.\textsuperscript{20} A study by Santana in European countries also showed that family and social support performed the best performance. Also, in the outpatient sector, the confidentiality of personal information had the highest performance, and independence, quality of the environment, and clarity of communication had the lowest performance.\textsuperscript{21} International comparison of health system responsiveness using similar measures and analyzes shows that overall responsiveness in Iran (outpatient and inpatient services) is lower than in Brazil (80% for outpatient services and 76% for inpatient services) and in 14 European countries (81% and above) while it was higher than South Africa (67% for outpatient services and 68% for inpatient services).\textsuperscript{22} These differences may be related to the level of information about health care systems and outpatient services, even among people with academic education. However, studies have shown that in the areas of attention and communication, academically educated people have had a lower level of satisfaction with responsiveness than others.\textsuperscript{23} Some of these differences in the field of attention may be due to an understanding of the value of time among educated people, so this group has higher expectations for faster treatment so that they have more opportunities for engagement in more activities and gain more benefits. In the included studies, there was a weak relationship between gender and the level of responsiveness expressed for outpatient services in the areas of respectfulness and qualified equipment.\textsuperscript{24} Kowal studied the relationship between social and demographic characteristics and the level of responsiveness and showed that women and younger respondents gave higher ranks to responsiveness in the inpatient area, this was while men and higher-educated individuals gave higher ranks to responsiveness in the inpatient area. In the reviewed studies, men scored higher than women for qualified equipment in the outpatient area. In another study, it was shown that gender played a role in determining patient satisfaction, and that the level of satisfaction of men was higher than women in both inpatient and outpatient areas.\textsuperscript{7} The most use of health services in terms of the ownership of health centers is related to the government. The quality of welfare facilities and qualified equipment is an issue that needs further study and definition of transparent standards to evaluate it in outpatient service institutions. The areas of right to choose, independency, and communication are among other priorities that we need special and transparent programs to promote them.

\textbf{Figure 8.} Distribution of Responsiveness in the Field of Right to Choose Parameters in the Iranian Health System.

\textbf{Figure 9.} Distribution of Responsiveness in the Field of Basic Amenities in the Iranian Health System.
in the institutions active in the field of outpatient health services.²⁵

Conclusion
The health system responsiveness is a goal that can be achieved if there is a good authority in the health system. Since most outpatient institutions are outside the authority of the Ministry of Health as the custodian of the health system, it seems necessary to establish appropriate mechanisms to monitor the achievement of this goal. In this study, health centers had the lowest performance in terms of the right to choose a doctor and social support while these dimensions of accountability are very important for society. The right to choose a doctor and supporting patient in health care can be useful to make the health system more accountable; however, these have been neglected in the reforms of the health system in Iran. Therefore, it is suggested that in order to make the health system responsive, reforms be made in these areas (qualified equipment, independency, and communication simultaneously with the implementation of the health system communication plan.

Authors’ Contribution
SS: designing and collecting articles and analysis of articles, and drafting the manuscript, AK: editing the article, IR: editing and writing.

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Competing Interests
The authors declare that they have no competing financial, professional, or personal interests that might have influenced the performance or presentation of the study described in this manuscript.

Ethical Approval
Not required.

References


