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Original article

Assessing the status of hospitals in Hamadan Iran with the Health Promoting Hospital Standards

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Abstract: *Background* — Changing public expectations for hospitals, as well as the increasing number of patients with chronic illnesses requiring ongoing support, along with high incidence of staff exposure to physical, mental and psychological risks, have led hospital councils to focus on health promotion as a vital component for both patients and the staff. The World Health Organization (WHO) introduces health promotion in healthcare to improve hospital efficacy. Due to the lack of sufficient information on the status of HPH standards in western Iran, the present study was designed to examine the status of HPH in Hamadan, a western province of Iran.
Material and Methods — This study examined 20 hospitals in Hamadan, Iran, using the HPH self-assessment questionnaire developed by WHO. The questionnaire consists of five standards, including management policy (Standard 1), patient assessment (Standard 2), patient information and intervention (Standard 3), promoting a healthy workplace (Standard 4), and continuity and collaboration (Standard 5).
Results — The overall hospital HPH score was 75.36±11.33 (out of 100). Among the five standards, patient information and intervention received the highest score (86.66±11.27), while promoting a healthy workplace received the lowest score (67.50±17.88). Public hospitals had a statistically significantly higher score on management policy (p=0.011). Similar trend was observed when comparing HPH with non-HPH network facilities (p=0.041). Other comparisons did not yield any significant differences (p>0.05).
Conclusion — We established that hospitals in Hamadan, Iran, were only partially compliant with the Promoting Health Hospitals (HPH) program. The study highlighted the need to create a healthier workplace for hospital staff and indicated that this is a top priority for the examined hospitals. This scientific breakthrough provides important insight into how Iranian hospitals can take steps to create a healthier workplace for their employees, which will ultimately lead to better outcomes for patients.

Keywords: Health Promoting Hospitals and Health Services, health promotion, hospital, Iran.

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Introduction

Hospitals, as a critical source of human resources and equipment in the healthcare sector, are rapidly changing their role worldwide from diagnostic and therapeutic to health promotion and disease prevention [1].

According to the World Health Organization (WHO), "A Health Promoting Hospital (HPH) does not only provide high quality and comprehensive medical and nursing services, but also develops a corporate identity that embraces the aims of Health Promoting (HP), develops a health-promoting organizational structure and culture including active and participatory roles for patients and all staff, develops itself into a health-promoting physical environment, and in brief, cooperates actively with the community" [2]. Accordingly, in 1988, the WHO started the HPH project in Europe to reduce expenditures and implement effective prevention programs. Improving the quality of health care, developing relationships between hospitals/health services, the community, the environment, and patient and staff satisfaction were among the first goals of HPHs [2-4]. In May 2001, a working group was created to develop health promotion standards. As a result, the following five ultimate standards were developed [5]. (1) "Management policy standard (S1): Demands that a hospital has a written policy for HP. This policy must be implemented as a part of an overall organization quality system and is aimed to improve health outcomes. It is stated that the policy is focused on patients, relatives and staff." (2) "Patient assessment standard (S2): Describes the organizations' obligations to ensure the assessment of the patients' needs for HP, disease prevention, and rehabilitation." (3) "Patient information and intervention standard (S3): States that the organization must provide the patient with information on significant factors regarding their disease or health condition and HP interventions must be established in all patients' pathways." (4) "Promoting a healthy workplace standard (S4): Gives management the responsibility to establish conditions for developing hospital as a healthy workplace." (5) "Continuity and

cooperation standard (S5): Deals with continuity and cooperation, demanding a planned approach to collaborate with other health service sectors and institutions."

HPH, as a WHO-supervised network, has developed rapidly since its inception, and more and more countries around the world are joining or have already joined the network. Currently, this network includes over 600 medical institutions around the world [6]. Although good achievements have been made in this field (such as patient satisfaction, intersectoral collaboration, increased job satisfaction and improved workplace conditions), it must be recognized that this concept is relatively new in developing countries [7, 8].

In Iran, as in other developing countries, this concept has recently emerged, and the current situation of health promotion services in Iranian hospitals is not clear. In addition, the knowledge of health workers regarding the concept of HPH is low [9, 10]. In Iran, 8 hospitals officially joined the HPH hospital network [11]. While some hospitals are providing services, such as nutrition counseling, psychotherapy or patient education, much remains to be done. For example, most Iranian hospitals [12, 13] do not provide smoking cessation services to their staff and patients. To create the HPH network in a country, assessing hospitals in terms of implementation of health promotion standards can be a first step providing a better understanding of the overall situation in hospitals nationwide for further planning [1, 14, 15]. Due to the lack of sufficient information on the status of health promotion standards in western Iran, the present study was designed to inspect the situation with health promotion in hospitals of Hamadan, a western province of Iran. The results of this study may help understanding the status of health promotion at Iranian hospitals and may also encourage hospitals to join the HPH network.

Material and Methods

Study design and setting

This cross-sectional study was conducted in Hamadan, one of the western provinces of Iran, from October to December 2019. All hospitals in Hamadan province were surveyed (n=20, including 9 hospitals in the capital and 11 hospitals in other cities). The study received approval from the Ethics Committee of Hamadan Medical University (approval number: IR.UMSHA.REC.1398.179). Inclusion criteria for the study were hospitals affiliated with Hamadan Medical University. Regarding exclusion from the study, it was based on the reluctance of hospitals to participate, albeit all hospitals expressed willingness to contribute.

Baseline characteristics of hospitals, including type (public or private), size (more or less than 100 beds), location (capital city, provincial cities), and HPH network membership (yes, no), were submitted by the hospital chief administrators to Hamadan Medical University. Following this, a formal invitation letter was sent to the director of each hospital, including the objectives of the study, as well as an explanation of the WHO HPH standards and the WHO self-assessment tool (translated into Persian by Nikpajouh et al., 2018) [16]. The letter invited hospitals to collaborate in the study. The ultimate goal of the study was explained to hospital managers, and their questions about the study were answered. A team of education supervisors and accreditation managers asked them to fill out a questionnaire.

Data collection

Data collection was carried out using two questionnaires. The first survey included questions regarding relevant information about hospitals, such as number of beds, type of hospital (public or private), etc. The second questionnaire contained the WHO HPH program self-assessment tool with 40 measurable items [17] regarding various areas related to the HPH program, including management policy (nine items), patient assessment (seven items), patient information and intervention (six items), promoting a healthy workplace (ten items), and continuity and cooperation (eight items) (*Table* 1). Measurable items were scored as *yes* (2 points), *partially true* (1 point), or *no* (0 points). An overall score for each standard was calculated by summing the scores of each measurable item. Considering that each standard consists of a different number of items, the score range (between 0 to 100 points) was calculated using the following formula:

$$\frac{100 \times total\ score\ for\ each\ standard}{maximum\ achievable\ score}$$

The internal validity of the Persian version of the questionnaire was approved by the Ministry of Health and Medical Education of Iran [16].

Statistical data processing

Frequency distributions (counts and percentages) of general characteristics of participating hospitals, as well as the total HPH score and score of each standard, were calculated as the mean and standard deviation (mean±SD). To assess the normality of distribution, the Kolmogorov-Smirnov test was employed [18]. An independent sample t-test was conducted to compare the mean score of each standard between hospital types (public vs. private), location types (metropolitan vs. provincial), and size categories (<100 beds vs. ≥100 beds). SPSS software v.21 was used for all statistical analyses, and probability values below 0.05 were considered statistically significant for all comparisons.

Results

Most of the examined hospitals (n=18; 90%) were public and only 2 hospitals (10%) were private. Also, most hospitals (n=13; 65%) had more than 100 beds. As for the location of hospitals, 9 of 20 (45%) were in the capital city. Just one hospital of participating twenty (i.e., 5%) (Farshchian Heart Center in Hamadan) joined an international HPH network (*Table* 2).

The overall mean hospital score was 75.36±11.33 (out of 100). Among the five standards, Standard 3 (Patient information and intervention) received the highest score (86.66±11.27), while Standard 4 (Promoting a healthy workplace) received the lowest score (67.50±17.88). Between these two extremes were the following items (listed in order of decreasing scores): Standard 2 (Patient assessment) (77.14±23.12), Standard 1 (Management policy) (73.33±10.90), Standard 5 (Continuity and cooperation) (72.18±20.62) (*Table* 1).

A comparison of scores of health promotion standard by hospital characteristics is presented in *Table* 3. Provincial cities, public hospitals, hospitals with ≥100 beds, and HPH hospitals had higher scores on most of the five standards (HPH hospital had the highest score on each standard) vs. scores in the metropolitan area, private hospitals, smaller health care facilities (<100 beds)

and hospitals without HPH membership. However, only in case of public vs. private hospitals and facilities with vs. without HPH membership, we observed statistically significant differences (p=0.011 and p=0.041, respectively), while other comparisons did not yield any significant patterns (p>0.05) (*Table* 3).

Discussion

In the present study, all hospitals in Hamadan province were examined to assess health promotion standards. We established that the overall HPH score in Hamadan hospitals was 73.36±11.33, which was higher than in teaching hospitals in Isfahan (48.80±9.80) [19], hospitals of East Azerbaijan province of Iran (56.06±21.27) [20], and 38 hospitals from four provinces of Iran (54.1±15.1) [21]. The results of comparing this study with previously published studies implied that hospitals in Hamadan have better compliance with the HPH program vs. hospitals in other provinces of Iran. However, we should keep in mind that these facilities are still too far from achieving the goals of HPH standards. Other studies conducted in other developing and developed countries yielded better results in terms of compliance with HPH standards [22]. These differences may be due to the fact that hospitals in Iran are more treatment-oriented and play a minor role in education and promotion of healthy lifestyles. Consequently, the management policy of Iranian hospitals is more treatment-oriented as well, i.e., more attention is paid to treating patients and equipping various departments of the hospital. Thus, most of the budget is spent on treatment costs. Implementing health promotion policies without defining responsibilities is ineffective. To achieve health promotion goals in hospitals, several professionals with distinct influence and authority should be appointed to be responsible for implementing programs [23].

Table 1. The mean scores of health promotion standards in the hospitals of Hamadan province

Standards and substandards (sensu WHO 2007)	*Mean (SD)*
Standard 1. Management policy (total score)	73.33±10.90
S1.1. The hospital's stated aims and mission include health promotion	1.95±0.22
S1.2. Minutes of the governing body reaffirms agreement within the past year to participate in the WHO HPH project	0.35±0.67
S1.3. The hospital's current quality and business plans include health promotion for patients, staff and the community	1.85±0.36
S1.4. The hospital identifies personnel and functions for the coordination of health promotion	1.65±0.74
S1.5. There is an identifiable budget for health promotion services and materials	1.45±0.68
S1.6. Operational procedures such as clinical practice guidelines or pathways incorporating health promotion actions are available in clinical departments	1.50±0.60
S1.7. Specific structures and facilities required for health promotion can be identified	1.60±0.50
S1.8. Data are routinely captured on health promotion interventions and available to staff for evaluation	1.55 ±0.60
S1.9. A program for quality assessment of the health-promoting activities is established	1.30±0.80
Standard 2. Patient assessment (total score)	77.14±23.12
S 2.1. Guidelines on how to identify smoking status, alcohol consumption, nutritional status, psychosocioeconomic status are present	1.55±0.77
S 2.2. Guidelines/procedures have been revised within the last year	1.40±0.82
S 2.3. Guidelines are present on how to identify needs for health promotion for groups of patients	1.40±0.82
S 2.4. The assessment is documented in the patient's record at admission	1.70±0.57
S 2.5. There are guidelines/procedures for reassessing needs at discharge or end of a given intervention	1.40±0.68
S 2.6. Information from referring physician or other relevant sources is available in the patient's record	170±0.73
S 2.7. The patient's recorded documents for social and cultural background as appropriate	1.65±0.67
Standard 3. Patient information and intervention (total score)	86.66±11.27
S 3.1. Information given to the patient is recorded in the patient's record	1.75±0.44
S 3.2. Health promotion activities and expected results are documented and evaluated in the records	1. 60±0.50
S 3.3. Patient satisfaction assessment of the provided information is performed and the results are integrated into the quality management system	1.80±0.52
S 3.4. General health information is available	2.00±0.00
S 3.5. Detailed information about high-risk diseases is available	1.80±0.52
S 3.6. Information is available on patient organizations	1.45±0.68
Standard 4. Promoting a healthy workplace (total score)	67.50±17.88
S 4.1. Working conditions comply with national/regional directives and indicators	1.45±0.68
S 4.2. Staff comply with health and safety requirements and all workplace risks are identified	1.55±0.51
S. 4.3. New staff receive an induction training that addresses the hospital's health promotion policy	1.65±0.58
S 4.4. Staff in all departments are aware of the content of the organization's health promotion policy	1.40±0.68
S.4.5 A performance appraisal system and continuing professional development including health promotion exists	1.40±0.75
S 4.6. Working practices (procedures and guidelines) are developed by multidisciplinary teams	1.15±0.74
S 4.7. Staff is involved in hospital policy-making, audit and review	1.05±0.60
S.4.8. Policies for awareness on health issues are available for staff	1.75±0.44
S.4.9. Smoking cessation programs are offered	0.95±0.698
S.4.10. Annual staff surveys are carried out including an assessment of individual behavior, knowledge on supportive services/policies, and use of supportive seminars	1.15±0.67
Standard 5. Continuity and cooperation (total score)	72.18±20.62
S.5.1. The management board is taking into account the regional health policy plan	1.55±0.60
S.5.2. The management board can provide a list of health and social care providers working in partnership with the hospital	1.20±0.69
S.5.3. The intra- and intersectoral collaboration with others is based on the execution of the regional health policy plan	1.20±0.76
S.5.4. There is a written plan for collaboration with partners to improve the patients' continuity of care	1.30±0.80
S.5.5. Patients are given understandable follow-up instructions at outpatient consultation, referral or discharge	1.90±0.30
S.5.6. There is an agreed-upon procedure form for information exchange practices between organizations for all relevant patient information	1.85±0.49
S.5.7. The receiving organization is given on time a written summary of the patient's condition and health needs, and interventions are provided by the referring organization	1.35±0.78
S.5.8. If appropriate, a plan for rehabilitation describing the role of the organization and the cooperating partners is documented in the patient's record	1.20±0.83
HPH total score	75.36±11.33

In the present study, Standard 3 (Patient information and intervention) had the highest score (86.66±11.27) among the five standards, which was consistent with previous studies conducted in Iran [19-21]. This means that patients receive from hospitals relevant information about their disease and other risk factors that may affect their health. The reason for the better status found for these standards may lie in the treatment orientation of hospitals as well as the policy adopted by the Ministry of Health to focus on the patient, disease and treatment [23]. On the other hand, the lowest score (67.50±17.88) was observed for Standard 4 (Promoting a healthy workplace). This finding is also consistent with the East Azerbaijan study results. Hamidi et al came to the same conclusion in another study based on two teaching hospitals in Hamadan [23]. The reason may lie in the inadequate policies regarding this issue carried out by the Ministry of Health, which pays most attention exclusively to patients in hospitals. Healthy staff can help patients recover better. Thus, to implement the tasks set by the Ministry of Health, it is also necessary to take into account the promotion of hospital staff health and develop programs for improving the health and awareness of personnel [24].

The nation's hospitals do not have a clear, organized program to provide a healthy workplace for their staff, yet hospital employees are considered high-risk workers whose health directly affects their work and the health of their patients. Programs should be developed to improve staff health and awareness. One of the ways to make a program or policy acceptable in society is to involve society per se or its representatives in the process of decision-making and implementation [25,26]. Further analysis of the subscales for Standard 4 revealed that the two lowest scores were related to '*smoking cessation programs*' and '*staff involvement in hospital policy development*'. It is evident that in Iran, hospital staff do not play an active role in management decisions [27,28], which could have a negative impact on their work spirit [29-32]. Some important health promotion activities, such as smoking cessation programs, are not offered to staff, and the worst part is that hospitals do not enforce smoke-free policies on their grounds. Therefore, to ensure greater compliance with HPH programs in hospitals, special attention should be paid to training and empowering staff [23].

In the present study, the lowest scores were obtained in private hospitals and were related to Standard 1 (Management policy: 55.55) and Standard 2 (Patient assessment:50.00). This implied that private hospitals in Hamadan do not have any definite strategy to implement HPH programs in their policies and to assess their patients.

Limitations of the study

A limitation of this study was the possibly biased self-reporting procedure carried out due to time constraints and the study being conducted over a wide geographic area.

Conclusion

The main finding of our study is that hospitals in Hamadan, Iran, are only partially compliant with the Health Promoting Hospitals (HPH) program. The study highlighted the importance of developing plans to create a healthy work environment for hospital staff and designates this as a top priority for the examined hospitals. Our research demonstrated that health promotion interventions supported by policymakers can be effective in improving the situation. This scientific breakthrough provides important insight into how Iranian hospitals can take steps to create a healthier workplace for their employees, which will ultimately lead to better outcomes for patients.

Table 2. The characteristics of examined hospitals (n=20) in terms of their type, size, location and HPH membership

Characteristics	*N*	*%*
Hospital type		
Public	18	90
Private	2	10
Hospital size		
Small (< 100 beds)	7	35
Medium & large (≥ 100 beds)	13	65
Hospital location		
Capital city	9	45
Provincial city	11	55
Member of HPH network		
Yes	1	5
No	19	95

Table 3. Health promotion standards scores by the hospital characteristics

Characteristics	*Standard 1. Management policy*	*Standard 2. Patient assessment*	*Standard 3. Patient information and intervention*	*Standard 4. Promoting a healthy workplace*	*Standard 5. Continuity and cooperation*
Hospital location					
Capital city (n=9)	74.71±13.32	76.98±25.44	83.33±11.78	70.55±15.50	69.44±25.28
Provincial city (n=11)	72.72±9.11	77.27±22.31	89.39±10.60	65.00±20.00	74.43±16.88
p-value [1]	0.792	0.979	0. 242	0.504	0.604
Hospital type					
Public (n=18)	75.30±9.38	80.16±18.75	86.57±11.12	68.33±18.63	72.92±21.65
Private (n=2)	55.55±7.85	50.00±50.50	87.50±17.68	60.00±7.07	65.62±4.42
p-value [1]	0.011	0.079	0.916	0.546	0.648
Hospital size					
≥100 (n=13)	75.21±10.54	79.12±19.22	86.53±11.04	66.53±19.40	69.71±23.08
<100 (n=7)	69.84±11.50	73.46±30.50	86.90±12.59	69.28±15.92	76.78±15.61
p-value [1]	0.306	0.616	0.947	0.753	0.479
Member of HPH network					
Yes (n=1)	94.44	100	91.66	100	93.75
No (n=19)	72.22±9.97	75.93±23.11	86.4±11.52	65.78±16.60	71.05±20.54
p-value [1]	0.041	0.323	0.660	0.064	0.287

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Conflict of interest

All contributing authors declare no conflicts of interest in this study.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

References

1. Hamidi Y, Hazavehei SMM, Karimi-Shahanjarini A, Seif Rabiei MA, Farhadian M, Alimohamadi S, et al. Health promoting hospitals in Iran: A review of the current status, challenges, and future prospects. *Med J Islam Repub Iran* 2019; 33: 47. https://doi.org/10.34171/mjiri.33.47.
2. WHO. The International Network of Health Promoting Hospitals and Health Services: Integrating Health Promotion into Hospitals and Health Services: Concept, Framework and Organization. Copenhagen. 2007; 23 p. https://apps.who.int/iris/handle/10665/107859.
3. Groene O. Implementing Health Promotion in Hospitals: Manual and Self-Assessment Forms. Copenhagen. 2006; 91 p. https://apps.who.int/iris/handle/10665/107737.
4. Pelikan JM, Krajic K, Dietscher C. The health promoting hospital (HPH): Concept and development. *Patient Educ Couns* 2001; 45(4): 239-243. https://doi.org/10.1016/S0738-3991(01)00187-2.
5. Groene O, Jorgensen S, Fugleholm A, Møller L, Garcia-Barbero M. Standards for health promotion in hospitals: Development and pilot test in nine European countries. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 2005; 18(4-5): 300-307. https://doi.org/10.1108/09526860510602569.
6. The International Network of Health Promoting Hospitals & Health Services 2021. http://www.hphnet.org/membership/#content-membership.
7. Khowaja AR, Mistry R, Agha A, Karmaliani R. Potential benefits and perceived need for health promoting hospitals in Pakistan: A healthcare stakeholder's perspective. *J Pak Med Assoc* 2010; 60(4): 274-279. https://pubmed.ncbi.nlm.nih.gov/20419969.
8. Carlfjord S, Kristenson M, Lindberg M. Experiences of working with the tobacco issue in the context of health promoting hospitals and health services: A qualitative study. *Int J Environ Res Public Health* 2011; 8(2): 498-513. https://doi.org/10.3390/ijerph8020498.
9. Mahmoodi H, Shaghaghi A, Sarbakhsh P, Janati A. A cross-sectional study on adaptability and pertinence of the "Health Promoting Hospitals" (HPH) initiative in Iran: health professionals' perspectives. *Ann Ig* 2018; 30(6): 445-457. https://doi.org/10.7416/ai.2018.2245.
10. Mahmoodi H, Sarbakhsh P, Shaghaghi A. Barriers to adopt the Health Promoting Hospitals (HPH) initiative in Iran: The Q method derived perspectives of front line practitioners. *Patient Educ Couns* 2019; 102(4): 760-767. https://doi.org/10.1016/j.pec.2018.10.030.
11. HPH Membership Certificate. Rajaei Cardiovascular, Medical and Research Center. 2022. Persian. http://hph.old.rhc.ac.ir.
12. Taghdisi MH, Poortaghi S, Suri-J V, Dehdari T, Gojazadeh M, Kheiri M. Self-assessment of Health Promoting Hospital's activities in the largest heart hospital of Northwest Iran. *BMC Health Serv Res* 2018; 18(1): 572. https://doi.org/10.1186/s12913-018-3378-1.
13. Amiri M, Khosravi A, Riyahi L, Naderi S. The impact of setting the standards of health promoting hospitals on hospital indicators in Iran. *PloS One* 2016; 11(12): e0167459. https://doi.org/10.1371/journal.pone.0167459.
14. Delobelle P, Onya H, Langa C, Mashamba J, Depoorter AM. Pilot health promoting hospital in rural South Africa: Evidence-based approach to systematic hospital transformation. *Glob Health Promot* 2011; 18(1): 47-50. https://doi.org/10.1177/1757975910393171.
15. Hazavehei SMM, Hamidi Y, Kharghani Moghadam SM, Karimi-Shahanjarini A. Exploring the views of medical staff in transforming a hospital into a health promoting hospital in Iran: A qualitative research. *Hosp Pract (1995)* 2019; 47(5): 241-248. https://doi.org/10.1080/21548331.2019.1688501.
16. Nikpajouh A, Shahrbaf MA, Doayie M, Mohseny M, Ebadi A, Alizadeh M, et al. Health promoting hospitals in Iran: Persian translation, cultural adaptation, content and face validation of selfassessment form of the standards of health promoting hospitals affiliated to the World Health Organization. *Med J Islam Repub Iran* 2018; 32: 120. https://doi.org/10.14196/mjiri.32.120.
17. Nikpajouh A. Standards of health promoting hospitals: 68 or 40 measurable elements? *Health Promot Perspect* 2017; 7(3): 109-110. https://doi.org/10.15171/hpp.2017.20.
18. Frey BB. Timss. In: Frey BB, ed. The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation. Sage Publications 2018; 4: 1704-1705. https://doi.org/10.4135/9781506326139.
19. Afshari A, Mostafavi F, Keshvari M, Ahmadi-Ghahnaviye L, Piruzi M, Moazam E, et al. Health promoting hospitals: A study on educational hospitals of Isfahan, Iran. *Health Promot Perspect* 2016; 6(1): 23-30. https://doi.org/10.15171/hpp.2016.04.
20. Pezeshki MZ, Alizadeh M, Nikpajouh A, Ebadi A, Nohi S, Soleimanpour M. Evaluation of the health promotion standards in governmental and non-governmental hospitals in East-Azerbaijan. *Med J Islam Repub Iran* 2019; 33: 113. https://doi.org/10.34171/mjiri.33.113.
21. Yaghoubi M, Javadi M. Health promoting Hospitals in Iran: How it is. *J Educ Health Promot* 2013; 2: 41. https://doi.org/10.4103/2277-9531.115840.
22. Lin YW, Huang HL, Tung SC. The organisational diagnosis of a Health Promoting Hospital in Taiwan. *Patient Educ Couns* 2009; 76(2): 248-253. https://doi.org/10.1016/j.pec.2008.12.025.
23. Hamidi Y, Hazavehei SMM, Karimi-Shahanjarini A, Seif Rabiei MA, Farhadian M, Alimohamadi S, et al. Investigation of health promotion status in specialized hospitals associated with Hamadan University of Medical Sciences: Health-promoting hospitals. *Hosp Pract (1995)* 2017; 45(5): 215-221. https://doi.org/10.1080/21548331.2017.1400368.
24. Yaghoubi M, Javadi M, Bahadori M, Ravangard R. Health promoting hospitals model in Iran. *Iran J Public Health* 2016; 45(3): 362-369. https://pubmed.ncbi.nlm.nih.gov/27141499.
25. Marques M, Alves E, Queirós C, Norton P, Henriques A. The effect of profession on burnout in hospital staff. *Occup Med (Lond)* 2018; 68(3): 207-210. https://doi.org/10.1093/occmed/kqy039.
26. Badgett R, Jonker L, Xirasagar S. Hospital workforce engagement and inpatient mortality rate: Findings from the English National Health Service staff surveys. *J Gen Intern Med* 2020; 35(12): 3465-3470. https://doi.org/10.1007/s11606-020-06045-0.
27. Raeissi P, Rajabi MR, Ahmadizadeh E, Rajabkhah K, Kakemam E. Quality of work life and factors associated with it among nurses in public hospitals, Iran. *J Egypt Public Health Assoc* 2019; 94(1): 25. https://doi.org/10.1186/s42506-019-0029-2.
28. Jahangiri R, Derakhshani N, Raeissi P, Alipour S, Ghasemyani S. Evaluation of the status of organizational culture among hospital staff in Iran: a systematic review and meta-analysis. *Hosp Top* 2021; 99(3): 107-118. https://doi.org/10.1080/00185868.2020.1870907.
29. Wagner JI, Brooks D, Urban AM. Health care providers' spirit at work within a restructured workplace. *West J Nurs Res* 2018; 40(1): 20-36. https://doi.org/10.1177/0193945916678418.
30. MacPhee M, Wardrop A, Campbell C. Transforming work place relationships through shared decision making. *J Nurs Manag* 2010; 18(8): 1016-1026. https://doi.org/10.1111/j.1365-2834.2010.01122.x.
31. Hamidi Y, Moghadam SMK, Hazavehei SMM, Karimi-Shahanjarini A, Seif Rabiei MA, Farhadian M, et al. Effect of TQM educational interventions on the management policy standard of health promoting

hospitals. *Health Promot Int* 2021; 36(2): 397-405. https://doi.org/10.1093/heapro/daaa065.

32. Hazavehei M, Mohamad S, Karimi-SHahanjarini A, Hamidi Y, KHarghani Moghadam SM, Seif Rabiei MA, et al. The status of organisational culture and job satisfaction in Hamadan specialty hospitals. *J Clin of Diagn Res* 2019; 13(4): IC01-IC04. https://doi.org/10.7860/JCDR/2019/38436.12784.

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