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Original Article

Health Promoting Hospitals Model in Iran

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Abstract

Background: Hospitals are the central entity of each health care system and Health Promoting Hospitals (HPH) was launched by WHO in 1988. However, there has not been any accurate and detailed model for establishing a HPH in Iran up to now. Therefore, this study aimed to determine factors affecting the establishment of a health promoting hospital in Iran using factor analysis method.

Methods: This applied, cross-sectional and descriptive-analytical study was conducted in Iran in four steps. Confirmatory Factor Analysis (CFA) was used for determining factors affecting the establishment of a HPH.

Results: Society (0.97) and Policy (0.74) had the highest regression weights (effects) and management had the lowest one.

Conclusion: Community assessment was the most important dimension of proposed conceptual model for establishing a HPH.

Keywords: Health promoting hospitals, Model, Iran

Introduction

The hospitals' duty is beyond providing clinical and specialized services, and making plans for delivering health care services and promoting health is one of their important duties (1). In each country, from 40% to 70% of health budget is absorbed by and spent in the hospitals and usually one to three percent of working population is employed in them (2). On the other hand, the employees in hospitals suffer from high levels of job stress (3). Therefore, the plan of "Health Promoting Hospitals" (HPH) was launched more than a decade ago (4-5). This plan refers to the fact that the hospital activities should be aimed not only at therapeutic and diagnostic activities (6) but also at disease prevention and health promotion, and the hospital services should be targeted to the needs of the people (7). Hence, developing a new strategy for hospital services and paying attention to the health promotion programs in the hospitals are essential in the present century, today, the hospitals are required which consider health promotion programs as a key service (8-9). The issue of HPH is paid more attention due to the increasing prevalence of lifestyle-related diseases and also chronic diseases, the changes in public expectations, the increasing number of chronic patients who need continuous support, and the number of hospital staff who daily exposure to psychological pressures and health risks (10).

On the other hand, health promotion is a concept that should be considered as a behavioral

challenge (11). In this context, and given the current problems in hospitals, 20 hospitals were selected officially by WHO from 11 European countries for a pilot project of EPHP (European Pilot Hospital Project of HPH) in Warsaw in April 1993 (12) and the International Network of Health Promotion Hospital was established (13). These hospitals not only provide comprehensive and high quality medical and nursing services but also develop an organizational structure and culture assuming an active role for patients and staff in health promotion programs and actively cooperate with the community in health activities (2). Hospitals with the health promotion plan should take several measures to implement health promotion programs such as using organizational development processes, forming a joint committee of health promotion projects, providing regular reports by subgroups of the health promotion project, providing feedback, using public relations techniques, reporting and documentation systems (14).

In the model of HPH, provided by the Research and Development center of HPH in Taiwan (11), at first, the preliminary measures, including formation of a project implementation team and a health promoting hospital committee were taken and, then, the project planning and implementation were made. In many health promotion programs implemented in hospitals, the community needs assessment is one of the preparatory measures (16). Other health promotion projects for implementing health promotion programs in the hospitals focus on managerial methods, sharing and using resources (17), and collaboration with society organizations (18). Finally, many hospitals in the world have implemented the WHO HPH program and have achieved cost-effectiveness and quality assurance of health services (19-20).

However, only the peripheral levels of the health network system in Iran play the role of prevention and hospitals are responsible for performing the traditional role of diagnosis and treatment and there is no clear plan to deliver health promotion services in the hospitals. Although some of these services such as nutritional counseling are provided sporadically in some hospitals in Iran, there has not been any defined structure for becoming a HPH and very few studies (18, 21) have been conducted in this field. Therefore, this study aimed to determine factors affecting the establishment of a health promoting hospital in Iran using factor analysis method.

Materials and Methods

This study was done in 2013, as an applied, cross-sectional and descriptive-analytical study in four steps, as follows:

Step1: Developing a conceptual model

To develop a conceptual model of HPH, the models of establishing and implementing health promotion programs, the executable models and the experiences of WHO-European Pilot Hospital Project were reviewed and finally, the main dimensions of the model as a conceptual model were extracted.

Step 2: Designing a questionnaire

After determining the main dimensions of implementing health promotion project in hospitals, a questionnaire was designed. The validity and reliability of this questionnaire were approved using Expert Judgment and Cronbach's alpha (22).

Step 3: Sampling

First, four Medical Universities of Medical Sciences in four provinces of Iran (Tehran, Guilan, Isfahan, Shiraz) were randomly selected using cluster sampling method. Then, in the selected medical universities, a sample of 268 people was determined using the findings of pilot study and the following formula, assuming $\alpha=0.1$, $d= 0.1$ and $p=q= 0.5$, and was randomly selected among faculty members, managers and experts who had scientific and academic, administrative and managerial experiences in health promotion.

$$n = \frac{(z2)(pq)}{d2}$$

$$n = \frac{(1/64)^2(pq)}{0/01s^2} = 268$$

Step 4: Data Analysis and Model Evaluation

The measurement model was tested using Confirmatory Factor Analysis (CFA) via AMOS Graphics (18). CFA is a structural equation modeling technique which is used to determine the model's goodness of fit. In order to handle any missing data, an expectation- maximization algorithm was employed. The estimation of parameters was based on the maximum likelihood method.

Evaluation of each model in CFA is based on considering a variety of fit indices. There are three categories of fit indices for model evaluation, including: 1) Absolute Fit Indices, including GFA (Goodness of Fit), AGFI (Adjusted Goodness of Fit) and RMSEA (Root Mean Square Error of Approximation); 2) Comparative (Incremental) Fit Indices, including NFI (Normed Fit Index) and NNFI (Non-Normed Fit Index); and 3. Parsimonious Fit Indices. It has been suggested that researchers should report at least two indices from each category. If CFI, GFI, NFI, NNFI, IFI, RFI, and AGFI are higher than 0. 90 and RMSEA and RMSRI are less than 0. 050, the studied model will have desirable and appropriate fitness.

Results

Most of the studied sample were managers (0.42), male (62%), in the 41-50 yr age group (46%), in the 21-30 yr job experience group (48.2%), and had a master's degrees (70%) (Table 1).

Six dimensions were determined as the dimensions of HPH establishment which were as follows (Table 2):

1. Society and Community Assessment consisting of community needs assessment and epidemiological assessment (i.e. the assessment of population health issues and disease patterns) as its sub-dimensions.

2. Policy consisting of setting policies, implementing health promotion projects, attracting adequate funds and determining the related investors and sponsors for the implementation of health promotion projects, and mentioning the concept of health promotion in the hospital mission and goals as its sub-dimensions.

Table 1: Demographic variable

Variables		Frequency (%)
Sex	Male	164 (0.62)
	Female	101 (0.38)
Age (yr)	<30	49 (0.18)
	30-40	87 (0/34)
	41-50	122 (0.48)
	>50	31 (0.12)
Education	Bachelor's Degreed	25 (0.09)
	Master's Degrees	210 (0.70)
	Philosophy of doctor (PhD)	35 (0.13)
Job	Managers	111 (0.42)
	Medical and nurses	100 (0.40)
	Faculty member	51 (0.17)
Job Experience (yr)	<10	30 (11.9)
	11-20	69 (0.27)
	21-30	122 (0.80)
	>30	22 (0.80)

3. Management consisting of designing the projects and interventions required for a HPH, creating and providing strategic leadership (providing technical support for implementing projects), and developing strategies for implementing health promotion projects using data collected from Society and Policy dimensions.

4. Dissemination which means publishing health promotion programs and interventions and their results at international conferences and NEWS media and arranging business meetings on health promotion in the hospital.

5. Technique. In order to implement a HPH program, hospitals should have appropriate structures and techniques which the simplest one of them is the formation of a project team. Another appropriate structure for implementing health promotion programs is a combination of project committees, project management, and project coordinator.

6. Evaluation. Evaluation is a continuous and targeted process. The purpose of this step is monitoring and evaluation of progress of each activity related to the implementation of health promotion programs.

Among the dimensions of HPH model, Technique (2.8±0.92) and Evaluation (4.2±0.53) had the highest and lowest means, respectively (Table2).

Table 2: The means and standard deviations (SDs) of HPH model dimensions

Society	Policy	Management	Dissemination	Technique	Evaluation
2.9±.89	3.3±.54	3.1±1.04	3.3±.58	2.8±.92	4.2±.53

Moreover, Society (0.97) and Policy (0.74) had the highest regression coefficient (effects) and Management had the lowest one (Fig. 1).

According to the results of model's goodness of fit indices, all indices were within the acceptable range showing that a significant amount of variance had been assigned by the model. Therefore, the conceptual model used in the present study was a valid and acceptable model (Table 3).

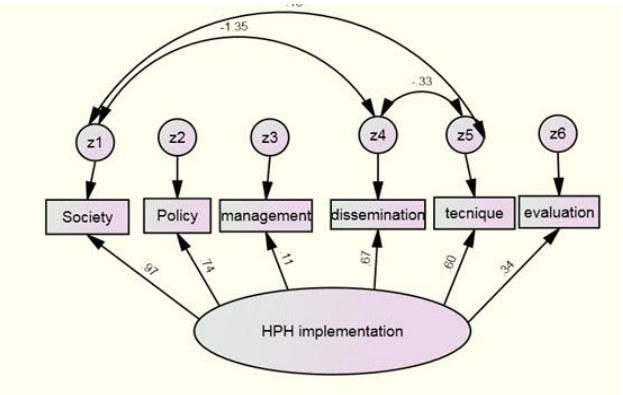

Fig. 1: HPH Model in Iran

Table 3: The HPH Model Fit Summary

Model Fit Summary								
Absolute fit indices			Comparative fit indices		Parsimonious fit indices			
CMIN [1]	DF [2]	P	IFI [3]	CFI [4]	CMIN/DF [5]	PNFI [6]	PCFI [7]	RMSEA [8]
15.06	6	0.0002	0.98	0.97	2.5	0.562	0.554	0.061

1. Chi-square / 2. Degree of freedom / 3. Incremental index of fit / 4. Comparative fit index / 5. Chi-square /degree of freedom / 6. Parsimony normed of fit index / 7. Parsimony comparative fit index / 8. Root Mean Square Error of Approximation

Discussion

The results of the present study showed that the HPH model had dimensions, including Society, Policy, Management, Dissemination, Technique, and Evaluation. In the current study, Society with the highest regression weight (0.97) had the greatest impact on the health promotion in hospitals indicating the importance of this dimension (23).

Community-based health care requires the society members' involvement in improving their health. The reason for recognizing and understanding the community is that by collecting data from the assessment of community covered by the hospital, administrators and policy-makers can determine the health problems and preferences in the society.

In an intervention program implemented in a hospital in South Africa to move it towards a health promoting hospital, the needs assessment of staff, patients and their relatives was carried out at first, which is similar to the health and epidemiological needs assessment of the society groups in the present study (16).

The PRECEDE-PROCEED model is used to assess the perceptions of society members and to recognize the society's health issues (24), which is similar to the results of present study.

The planned approach to community health focuses on the society's facilities and possibilities assessment. In the present study, also, the assessment of society's status has been one of the dimensions (24).

In some diseases such as cancer (a specific disease), according to patients' survival rate and the importance of increasing their longevity, it is necessary to determine the information needs of the patients' health promotion (25). In the current study, Policy was another dimension affecting health promotion in the hospitals. Its loading factor was 0.63 indicating a high impact on health promotion. The Toronto health promotion model (26) has studied the legal and political environment, stakeholders, population health needs, previous assessments, and the overall outlook for each project. In the present study, also, the political environment and its assessment has been paid attention.

Bangkok Declaration (27) considers the existence of policy-making and participation as a central principle of national development in order to improve health and health equity. This can also be seen in the current study as the dimension of Policy. For implementing HPH programs, access to adequate budget (28-31)and the health promotion policy (28, 31) are important.

Using data obtained from the society and making the required policies, hospitals can develop and implement programs and interventions for health promotion (the dimension of Management).

Miseviciene and colleagues (32) have focused on the development of a strategic plan for implementing health promotion programs, which is similar to the dimension of Management in the present study. In order to implement this dimension, providing strategic leadership (providing technical support for implementing projects) has been emphasized in the present study, which is similar to the results of Lee and colleagues' study (33). In addition, Johnson and Baum (29) in their study concluded that top management support was important and necessary for implementing HPH programs.

To establish a HPH, a range of organizational capacities are required (34). In fact, an efficient and effective HPH is dependent on organizational and managerial prerequisites such as project management, etc. (35), which is similar to the findings of the present study. In Preston Green Hospital, the project management principles and appropriate organizational structure and processes have been used in order to achieve the objectives of health promotion (14).

In the present study, the effect of project implementation techniques on health promotion in the hospital with 0.53 loading factor was significant. The administrators of Rudolf Stiftung hospital have taken several measures to implement health promotion programs in their hospital such as employing the techniques of project implementation (23), consistent with the results of present study. The results of other studies have supported the organizational structures as a prerequisite for establishing a comprehensive HPH (36), which confirm the results of current study.

In the 2-year evaluation of the implementation and effects of a HPH program in Scotland, the existence of a framework and structure for implementing the health promotion in hospitals has been emphasized (37).

The HPH coordinator is the minimum structure required for the membership of hospitals in the HPH network (4-5). The existence of a structure and framework for implementing health promotion programs in the present study has been referred to as Technique. The health promotion program in hospitals in Taiwan (15) has had four phases, including the formation of a project implementation team, formation of a health promotion committee, project planning and implementation, and evaluation of the effects of

health promotion programs. Similarly, these phases have also been referred to in the present study. The administrators of BE Jing hospital (28) have considered the dimensions of Policy, Reorientation of health care services, Society, and Health Skills as the health promotion activities (28) which are similar to the dimensions of the current study conceptual model, as well as the design and implementation phases of health promotion in the proposed model of Kouranie hospital (14).

In the present study, Dissemination (publishing health promotion programs and activities and their results at international conferences and NEWS media and arranging business meetings on HPH programs) with a good loading factor (0.64) had a high impact on the implementation of health promotion programs in the hospital. The results of a study in Taiwan have shown the similar results and have indicated that dissemination in the HPH local and international conferences plays an important role in the establishment of a HPH (38).

Therefore, it can be said that if a hospital implement the health promotion programs well but is weak in the dissemination, it has not been able to introduce itself as a health promoting hospital. In a seven-dimension model developed by Burke et al. (39), which shows the needs for changing the organizational capacities to become a health promoting hospital, the development of mission and strategies, leadership and managerial activities have also been mentioned, which are similar to the results of the present study in which mentioning the concept of health promotion in the hospital mission and goals and developing strategies have been stated in the dimension of Policy, and leadership and managerial activities in the dimension of Management.

Like other studies, in the current study, the existence of planning and a specific technique and framework such as project management technique have been concluded as a dimension. Some of obstacles to the implementation of health promotion programs include inefficient project management, the lack of communication, coordination and integration, and the lack of planning, guidelines, standards and frameworks for implementing health promotion programs (18, 29, 37, 40).

All factors mentioned above have been stated in the present study as the dimensions of implementing health promotion programs in hospitals. The final dimension in the present study, the evaluation of health promotion programs and interventions, has been confirmed by the model of evaluating health promotion projects presented in the Preston hospital (14).

Conclusion

Although remarkable advances have been made in medical technologies, because of the increasing number of chronic patients who need permanent support and employees who are daily subjected to the psychological pressures, hospital managers and administrators should make plans to develop and implement health promotion programs and ensure healthy workplace in hospitals. The results of the present study showed that paying attention to six dimensions for establishing a HPH is essential among which the most and least important ones were Society and Community Assessment and Management, respectively. It should be noted that considering all of these dimensions without making systematic planning (40) and organizational changes, providing health education for patients and determining factors affecting the establishment of a HPH will not be effective

Ethical considerations

After the researchers explained the purpose and procedures of the study to the participants, they consented to participate in the study. Ethical issues (Including plagiarism, Informed Consent, double, etc.) have been completely observed by the authors.

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