

Strengths and Weaknesses of Family Physician MPH Course in Iran: The Viewpoints of Managers and Physicians

Abstract

Background: Since 2009, the MPH course has been implemented in Iran. After eight years, this study aimed to evaluate family physician MPH program in Iran. **Methods:** This cross-sectional study was conducted on 255 graduates of family physician MPH, selected through simple random sampling and 95 managers who were involved in the design and implementation of the course in 13 universities, selected by census method, in 2017. Data collection tools were two researcher-made questionnaires, delivered to the subjects through emails. Data analysis was performed in SPSS version 21 using central and dispersion indices, Chi-square, and independent *t*-test. **Results:** Approximately half of the participants considered the course length as appropriate, 14.5% of them considered the duration of the course short, and 28.9% of them considered it long and there was no significant difference between the views of managers and physicians in this regard. On the other hand, there was a significant difference between managers and physicians regarding the variables of cost-effectiveness, motivation to participate in the course, the necessity of presenting the thesis, applicability of the content, comprehensibility of the content of the course, and desirability of the course load. Thus, a higher percentage of managers acknowledged the necessity of theses and duties as well as the applicability of the content, and a higher percentage of physicians referred to cost-effectiveness and the motivation to participate in the course. **Conclusions:** According to the results of the study, the participants have proposed some strategies, such as revising the educational content, clarifying the future position of the trained physicians and granting privileges, specifying the program goals, being accurate in selecting motivated applicants with an interest in this field in order to improve the quality of educational courses.

Keywords: Education, family, physicians, program evaluation

Introduction

The presence of a comprehensive health system is one of the main factors for health promotion and social justice in the world.^[1] As a bridge between the three service providing levels, the referral system reduces costs and enables access to more specialized services.^[2] The institutionalization of this system in the country requires the training of trained/skilled human resources in the field of General practitioners and based on the requirements of the health system in Iran. Therefore, the Master of public health (MPH) course was designed in 2009, aimed at empowering family physicians working in Iran's health system.^[3] The educational content of this course mainly involves the topics of management, maintenance, and promotion of public health. It is notable that MPH is often held

as a nonattendance course through virtual education.

As an important subset of the educational development planning system, the evaluation of educational programs is one of the primary duties of university management and provides an image of the way each department functions.^[4] With regard to the onset of the health system development plan (Since 2005 in villages and since 2013 in urban areas), there is a need for revision of the family physician MPH after nearly 10 years of implementation and training of the physicians to complete the health care and referral chain. In other words, it seems necessary to assess the relevant educational programs to improve their quality.

The healthcare system in Iran faces numerous problems, such as inadequate and unfair access to second-level health services, high healthcare costs, inconsistency among various levels, emphasis on therapeutic

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care and neglect of preventive care, focus of interventions on the individual level and neglect of comprehensive interventions at the community level, limited status of service provision to the office and neglect of other service delivery positions (e.g., patient's home), the lack of balance between patient benefits and community benefits and the health system, and the lack of social accountability. Most scholars believe that the main solution to several health system problems is the family physician strategy, which should be aligned with ranking the services and the referral system, along with the per capita method as a payment method.

In 2007, efforts were dedicated to define a role and explain the features of family physicians in the society based on the need for a codified program to enhance the function of physicians in the primary care system of the country. Studies show that the family physicians' practice in Iran is largely "general" and is on average the first contact. At low level, it is "comprehensive," "continuous," and "family oriented" and at a very low level, it is "coordinated," "community oriented," and "system based."^[5]

In 2008, the committee for the empowerment of family physicians considered 25 knowledge areas necessary in compensation for the gap existing in this field and preparing general practitioners with the ability to play the role of family physicians, which became the basis for the MPH course. The family physician MPH was approved in May 2009, and its pilot was conducted in 11 universities with 186 volunteer physicians in February 2009. In selected universities, MPH was held in the form of attendance, nonattendance, semi-attendance courses. At the end of each topic, educational texts were provided to students in physical and electronic forms.

Before this study, studies have been conducted to assess the ability of general practitioners to play the role of a family physician. In a systematic review held in Isfahan University of Medical Sciences in 2013, valid articles related to the extent of the ability of general practitioners, which had a proper geographical distribution (almost all provinces of the country were included), were searched and selected. According to the results of the mentioned research, among eight aspects of expected capability of general practitioners, the subjects had a weak-moderate ability in the first category entitled "improving health and playing a role in the health service delivery system" and sub-category of "prevention of diseases". In the second category (i.e., service provision), the participants had a weak-moderate ability. Moreover, they had a weak ability in the fifth category, which was related to data analysis.^[6]

In 2013, Amini conducted a research on the evaluation of the MPH virtual education program of family physician in Shiraz University of Medical Sciences, where improper quality of CDs, impetuous onset of the course, presence of several ambiguities in the direction and future of the

MPH course, and the method of conducting the tests were recognized by learners as the most important weaknesses in the program. On the other hand, the increased knowledge and level of learning of the participants were mentioned as the most important strengths of the program.^[7] Other similar studies also suggest different weaknesses in the MPH course.^[8-15] This study, in completing previous studies, examines the strengths and weaknesses of MPH from the viewpoints of learners and managers in identifying cases revising of the program.

Methods

This descriptive and cross-sectional study was conducted in 2017–2018 (second half of the Persian year 1396). The study population included graduates of the family physician MPH course from all across the country and managers at the health section at the level of national headquarters, professors, managers, and those involved in the design and implementation of family physicians throughout the country. Sample size was calculated at 384 based on 95% confidence interval, *P* value equal to 0.05, and estimated error of 0.05. Subjects were selected by preparing a list of all universities that implement the modular training course of MPH (*N* = 13) and selecting 289 graduates of family physician MPH course through simple random sampling (from 400 graduate) and 95 managers, professors, and individuals involved in the design and implementation of the course from the selected universities through census method.

Data collection tools included two researcher-made questionnaires for the two groups of physicians and managers. In general, the questionnaire had a similar structure in both groups and contained 21 multiple-choice and descriptive questions about the demographic characteristics of respondents (employment location, age, job position and experience, the name of the university they completed the course in, the type of education, and duration of the course). In addition, the questionnaire encompassed specific questions in terms of objectives, content, presentation method, applicability, comprehensibility, and volume of content in areas of course curriculum, projects, assignments, surveys on cost effectiveness of the course, learning activities and projects, justice in access to the course, and the strengths and weaknesses of the course.

Regarding validity and reliability of the questionnaire, the content and face validity of the questionnaire were verified by a survey on 50 graduated students from the family physician MPH in Isfahan University of Medical Sciences and national officials in deputy for education and deputy for health. In a preliminary study and through completing 50 questionnaires, the reliability of the questions was confirmed at the Cronbach's alpha of 0.89 and through the internal correlation of the subjects. To collect the data, the questionnaires were emailed to all graduates of family physician MPH and national authorities at the

ministry of education by the secretary of general medical education council, asking them to complete and return the questionnaires through emails.

Data analysis was performed in SPSS version 21 using tables of frequency distribution and numerical descriptive indicators (mean, standard deviation and ratio at 95%), Chi-square (to compare the responses of managers and physicians), and independent *t*-test (for comparison of means). In terms of specific questions, the items were scored based on three-point Likert scale (1 = weak/unfavorable, 2 = moderate/favorable, and 3 = good/excessively favorable) in order to determine the desirability of course load and the comprehensibility of content. Considering the use of the census method in this study, the results of this preliminary study were combined with the final results.

Results

The rate of response and participation of managers and physicians was 100% and 88.2%, respectively. The mean age of the managers and physicians was 45.9 (± 5.4) years and 43.7 (± 5.4), respectively. In terms of work experience, the mean service years of managers was 15.7 (± 7.8), and the mean duration of employment of physicians after passing the MPH course as a family physician was 3.09 (± 2.4) years. From 95 managers participating in this study, 53.7% had a managerial position at the national and academic levels, 27.04% were faculty members of the medical sciences universities, and 18.9% were experts responsible for the program at the national and academic levels.

On the other hand, of the 255 physicians, 66.3% ($N = 169$) were family physicians, whereas 19.6%, 4.7%, and 9.4% were family physician assistants ($N = 50$), managers, or deputies of health network of the city, and experts responsible for this issue working in the headquarters of the network ($N = 12$), and other individuals ($N = 24$) working in various healthcare departments. In this study, the mean training duration of physicians was 2.9 (± 1.2) years. Regarding the training method of MPH course, 22.7% of participants attended the study courses in-person while 25.9% of the subjects registered for the virtual classes of the course. In addition, 51.4% of the subjects possessed the course held as a combination of attendance and non-attendance sessions.

In terms of the appropriateness of the length of training, more than half of the subjects considered the length of the course as appropriate, 14.5% of them considered the duration of the course short, 28.9% of them considered long, and there was no significant difference between the two groups ($\chi^2 = 4.92$, $P = 0.086$). In evaluation of the dimensions designed to evaluate the training of family physicians, managers, and physicians agreed on “the appropriateness of the way the sessions were held, access to

the course by all physicians, the usefulness of projects and assignments of the course, and recommending the course to others” [Table 1]. However, the results were indicative of a significant difference between the two groups of managers and physicians regarding the cost-effectiveness of the course, motivation to participate in the course, the necessity of presenting a thesis at the end of the course, and applicability of the content. Moreover, the groups had different mean scores of comprehensibility of the course content and desirability of course load [Table 1]. In general, 71.6% of managers and 64.4% of physicians recommended the course to other physicians.

Regarding the headlines of the content presented in the MPH course, while the topics related to the concepts of management and organization were considered less applicable by the participants, they better comprehended the educational packages with a medical content, regarding them more applicable. No significant difference was observed between the viewpoints of participants and the variables of work experience ($P = 0.543$), age ($P = 0.297$), and position ($\chi^2 = 119.9$, $P = 0.108$). On the other hand, there was a significant difference between the views of managers and physicians regarding the comprehensibility of content and desirability of course load [Table 2]. Meanwhile, there was no significant difference between the managers’ position and their point of view regarding the applicability of the course ($\chi^2 = 8.96$, $P = 0.062$), course length ($\chi^2 = 5.60$, $P = 0.230$), and holding method of the course ($\chi^2 = 1.74$, $P = 0.417$). In the present study, solutions such as revising the educational content presented, clarifying the status of graduated physicians and granting privileges, providing books and pamphlets along with program CDs, specifying the course objectives, being accurate in selecting motivated students with an interest in the course, holding problem-solving attendance sessions, and reducing the work hours of physicians who are passing the MPH course were suggested by the participants to solve some of the issues of this educational course.

Discussion

In the present study, the overall response and participation rate was 91.1%. In a research by Khadivi *et al.*, the response rate was 90%.^[8] Meanwhile, the mentioned rate was 43% in a research on family physicians in the United States and 46% in another study in the United States on the attitude of family physicians toward the correction of the health system.^[10] In the current study, 71.6% of managers and 64.4% of physicians recommended the course to other physicians, which is in line with the results obtained in a study in the United States, where 66% of family physicians expressed that they would still choose the specialty of family doctor if they were able to go back in time.^[10] In addition, Sherman reported that the initial experiences of the virtual education program for physicians were completely successful.^[11]

Table 1: Frequency distribution of opinions of graduated physicians and managers of family physician program participating in the research regarding some features of the MPH course

Parameter	Yes		No		No comment/to some extent		Total		Significance Level
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Appropriateness of method of holding the MPH course									
Physicians	109	44.9	134	55.1			243	100	Chi=0.31, P=0.577
Manager	39	41.5	55	58.5			94	100	
Cost-effectiveness of the MPH course									
Physicians	154	63.6	88	36.4	0	0	242	100	Chi=168.2, P=0.000
Manager	15	17.2	22	25.3	50	57.4	87	100	
Access to the course by all physicians across the country									
Physicians	40	16.5	107	44.0	96	39.5	243	100	Chi=0.770, P=0.681
Manager	17	17.7	46	47.9	33	34.4	92	100	
Being particularly motivated to participate the MPH course									
Physicians	138	56.8	67	27.6	38	15.6	243	100	Chi=9.86, P=0.007
Manager	37	38.5	34	35.4	24	26.1	95	100	
Necessity of presenting a thesis at the end of the course									
Physicians	33	13.6	209	86.4			242	100	Chi=53.3, P=0.000
Manager	49	51.6	46	48.4			95	100	
Usefulness of projects and assignments requested by professors during the course									
Physicians	83	34.7	56	23.4	100	41.8	239	100	Chi=0.18, P=0.912
Manager	31	32.6	24	25.3	40	42.1	95	100	
Recommending the course to others									
Physicians	166	68.9	75	31.1			241	100	Chi=0.23, P=0.628
Manager	68	71.6	27	28.4			95	100	
Applicability of content									
Physicians	73	30	170	70	0	0	243	100	Chi=33.2, P=0.000
Manager	53	56.4	37	39.4	4	4.3	94	100	

Table 2: Frequency distribution of opinions of graduated physicians and managers of family physician program participating in the research about some features of the MPH course

Parameter	Managers		Physicians		Level of significance
	Frequency	%	Frequency	%	
Comprehensiveness of headlines selected for the content					
Good	31	33.0	32	13.1	Chi=14.8, P=0.000
Moderate	56	59.6	185	75.8	
Weak	7	7.4	27	11.1	
Mean±standard deviation	2.25±0.59		2.02±0.49		
Desirability of course load					
Excessively favorable	29	38.7	6	2.5	Chi=75.8, P=0.000
Favorable	34	45.3	153	64.3	
Unfavorable	12	16	79	33.2	
Mean±standard deviation	2.2±0.7		1.69±0.51		

In the present research, more than half of the managers and physicians considered the length of the course as appropriate, which is consistent with the results obtained by Nojumi^[12] and Bazargan.^[13] Regarding the applicability of the content, 30% of the physicians considered the modular training course as applicable, which is inconsistent with the results obtained by Nojumi,^[12] who reported that only

12.1% of the physicians considered the applicability of the course as favorable. Despite the reporting of a better content compatibility in the present research, it should be noted that 70% of the participants had a different opinion. In fact, attention must be paid to the course applicability in increasing the skills and professional abilities of physicians. On the other hand, there was a significant difference

between the views of managers and physicians regarding the comprehensibility and desirability of course load. In other words, there is a clear gap between the viewpoints of the designers of the course and the needs of the participants. The explanations provided in the field of applicability indicate this issue. The proposed strategies in the field of educational content, teaching methods, and awarding educational privileges in this study confirmed the recommendations of the other similar studies,^[13-15] especially the study in Shiraz.^[7]

Conclusions

Similar recommendations have been made in other studies,^[13-15] especially a research in Shiraz.^[7] Access to executive directors and meetings with their collective presence were the main constraints of the study, which was implemented with the assistance of the Education Department of the Ministry of Health. Considering that the implementation of the family physician plan is a valuable opportunity to promote health indicators, it is necessary to implement ongoing monitoring and evaluation programs in order to continuously improve processes and empower physicians in providing first- and second-level primary prevention and health care services. It seems necessary to review and revise the essential elements of the course in various areas. It is recommended that researchers focus on methods of empowering general practitioners, where courses are shorter and skills can be more improved, and development of the applicability of training.

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Conflicts of interest

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