Original Article

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# Performance of Family Physicians (FPs) from Viewpoint of Managers and Experts of Northern Provinces of Iran

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## ABSTRACT

**BACKGROUND AND OBJECTIVE:** Family physicianis (FPs) responsible for the health team have five duty to health management, external cooperation, Health Promotion, Prevention and Health Services and treatment care and referral. This study evaluated viewpoint of managers, supervisors and experts of Northern Provinces of Iran from the level of performance of Family physicians (FPs) in five basic task.

**METHODS:** This cross-sectional study was performed in winter 2013. The study population includes managers, supervisors and experts at Health Network from the total of 47 cities in 3 provinces of Gilan, Mazandaran and Golestan which were censuses selected. A researcher-made questionnaire was used for data gathering. In this questionnaire, personal characteristics and performance level of FPs from five main task of the Likert scale. Validity and reliability of the questionnaire were approved.

**FINDINGS:** From the perspective of 557 managers, supervisors and experts of Staff in the study, the average performance level of FPs, in the field of health management (of 5 score) was 3±0.8, external cooperation 2.7±0.9, Health Promotion 2.8±0.9, Prevention and Health Services 3.2±0.9 and health care and referral 3±0.8. There was a significant relationship between job experience and performance level of FPs ($p<0.05$). However, there was not a significant difference between sex and provinces studied and performance level of FPs ($p>0.05$).

**CONCLUSION:** The results of this study showed that from the perspective of managers, supervisors and experts the performance level of FPs' was in two task lower moderate and in three task moderate.

**KEY WORDS:** Family Physicians, Rural Insurance, Performance, Health Network, Northern Provinces.

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## Introduction

In the graded system of health care in most countries, especially developed countries, family physicians are the primary health care providers. These physicians serve families within the realms of disease prevention, diagnosis, treatment, and quality of life. If any percentage of the covered population requires more specialized treatments, they are referred to the second level of health care services through the referral system and are followed-up till the final results are obtained (1). The importance of family physicians in health care systems was first noted by Francis Peabody, a professor of medicine at Harvard University in 1923. This idea was developed by Melis and Willard committees in the United States in 1966 (2, 3). Considering the positive outcomes obtained by applying and developing family physician programs and the recent needs of populations, World Health Organization (WHO) emphasized on the central role of family medicine in the achievement of quality, cost-effectiveness, and equity in health care systems (4).

Recently, several studies have confirmed that family physicians require fewer resources, compared to specialists; they can also provide more effective treatments for certain types of patients and diseases (5, 6). Currently, in many countries including North American and Western European countries, family physicians are at the center of health care services and are the forerunners of health care teams (7).

In Iran, implementation of the national program of family physicians and rural insurance began in January 2006 in rural and urban areas with a population of less than 20,000. This program was considered as the second major reform in the health care system of Iran, following the formation of municipal health networks. The reason behind the implementation of this program was to find a way of overcoming some shortcomings in the municipal health network including inadequate access to health care services and inefficiency of the referral system (8, 9).

Therefore, family physicians have been placed in the first level of health care system since 2006. Meanwhile, by leading the members of health teams, family physicians play an important role in providing health care services to the covered populations. Performance of health care providers, including family physicians, contributes to the success of healthcare programs and provision of desirable health care services. Studies have shown that high functionality of family physicians can increase the satisfaction of health care receivers and patients (10).

Few studies have been conducted regarding the performance of rural family physicians in Iran. In fact, the performed studies have each investigated one aspect of physicians' tasks. Yazdi Feyzabadi et al. by evaluating the performance of family physicians in cities under the coverage of Kerman University of Medical Sciences declared that the rate of patient referral to specialists was 9.1% in an average of 3 years and the share of active visits (visits in villages) in the total number of visits was 10% in the same period (11).

In a previous study, the major weaknesses of family physicians included the low percentage of primary care visits in the covered population, inadequate attention to periodical visits, poor management of health care teams, and inadequate performance or non-performance of non-invasive surgeries, gastrectomy, cardiopulmonary resuscitation (CPR), and preparation/interpretation of electrocardiograms (ECG) (12).

Nasrollahpour Shirvan in a review study revealed that by running the family physician program, many health indicators, patient satisfaction, and access to health care services improved, while unnecessary costs were reduced. However, despite the mentioned success, there are some failures in the referral system including health record documentation, registration of diagnostic and therapeutic services, and culturalization at the community level, which need to be resolved (13).

In the program of family physicians and rural insurance, family physicians are in charge of health care teams and have five major tasks: 1) health management; 2) cross-sectoral collaboration and promotion of community participation; 3) health promotion and education; 4) health care services and preventive measures; and 5) patient follow-up, referral, and treatment (8).

All physicians are expected to provide the desired services in order to simultaneously and equally cover all the tasks. Also, in the quarterly monitoring of physicians' practice, all of these five tasks should be constantly at the center of experts' attention. For this reason, evaluation of the performance of family physicians can determine the difference between the current situation and ideal circumstances. Since successful implementation of any program requires comprehensive and continuous evaluations, this study was designed to evaluate the viewpoints of health directors, authorities, and experts regarding the

performance of family physicians in five major tasks in Northern states of Iran in January-March 2012.

## Methods

This cross-sectional study was conducted during January-March 2012. The study sample included research community authorities, directors, and experts working at staff units of municipal health networks in Gilan, Mazandaran, and Golestan provinces [Gilan (16 cities), Mazandaran (17 cities) and Golestan (14 cities)] (a total of 47 cities). Authorities, directors, and experts, who were actively involved (at least for one year) in the quarterly monitoring of family physicians, were enrolled in the study via census sampling.

After determining the sample size in each municipal health network, a meeting was held for at least 30 minutes. After providing the questionnaires, the subjects were informed about the purpose of the study and necessary explanations about the questionnaire items were given. Then, after obtaining the consent of directors and experts, the questionnaires were completed and handed to the researchers.

Data collection tools included a researcher-made questionnaire containing 6 sections:

1) Demographic characteristics (6 items);

2) Performance level of family physicians in the area of health management (fair division of labor between health team members and evaluation of their performance, optimal use of physical space, available facilities, implementation and follow-up evaluation of health programs, and evaluation of administrative issues) (3 items);

3) Cross-sectoral collaboration and promotion of community participation (formation and development of relationships with local institutions, holding regular meetings, involvement of people in identifying and analyzing the current situation, prioritizing the issues, implementing appropriate strategies, and ultimately providing the required resources for a particular action) (3 items);

4) Health education and promotion (educational assessment, identification of the audience and communication, learning suitable living strategies, attention to social factors affecting health (social determinants of health) (3 items);

5) Health care services and preventive measures (including vaccination, growth control, nutrition, oral health, mental health, health during puberty, family planning, health care during pregnancy and childbirth, control of common diseases such as hypertension and diabetes, control of family care records, and training on ten life skills) for different populations (e.g., children, teenagers, adolescents or students, adults, the elderly, and mothers) (3 items); and

6) Patient follow-up, referral, and treatment including primary care and emergency measures, diagnosis and treatment of common diseases, performing non-invasive surgeries, gastrectomy, preparation/ interpretation of ECG, and CPR, familiarization with therapy protocols such as DOTS, identification of cases requiring referral to the second level of health care, and proper completion of relevant forms (3 items).

The items were graded using a Likert scale. Authorities, directors, and experts evaluated the performance of family physicians in their own city, based on their own understanding and rated the physicians' performance level from very high to very low.

The validity of the questionnaire was formally confirmed based on a previous study (4) and the comments of four social medicine professors and five executive directors. The reliability of the questionnaire was confirmed by Cronbach's alpha (87%). The items in the first section included open and closed questions; closed items were graded by coding and open questions, which were a bit discrete, were numerically entered to the software.

For evaluating the performance of family physicians from the viewpoint of authorities, directors, and experts, an average score of 3.5 or higher (out of 5 points) was considered as the cut-off point. Data were evaluated using Spearman and Kendall's tests to determine the correlation between ordinal variables. Kruskal-Wallis and Mann-Whitney tests were performed to compare the means, and Chi-square test was applied for qualitative variables. SPSS version 18 was used for data analysis and P-value less than 0.05 was considered statistically significant.

## Result

Out of 557 authorities, experts, and directors in this study, 309 (55.5%) were female. In terms of education, most subjects (370 or 66.5%) had a bachelor's degree. In terms of employment status, 44 subjects (8%) were health network deputies or directors, 88 (16%) were experts or directors of health network promotion, 87 (16%) were environmental and health professionals, 85 (15%) were active in the field of family health, 79 (14%)

were involved in disease prevention and combat, and 174 (32%) were the staff working at other units. The average age and work experience of subjects were 39.9±7.2 and 15.7±9.6 years, respectively.

Based on the subjects' viewpoints, the level of performance in about 20% of family physicians in Northern provinces of the country was above average. Performance level was average in about 55% of physicians and lower than average in about 25% (table 1). Based on the opinions of study subjects, although the performance of family physicians was slightly different in different Northern provinces, a significant difference was observed in only the area of health management (table 2).

In different cities, the mean performance score of family physicians from the viewpoint of subjects in all five tasks was three; given the exact similarity, this score was not mentioned in the table. Based on the subjects' opinions, there was a significant association between work experience and level of performance in Northern provinces in each task (table 3).

Regarding the relationship between gender and performance level of family physicians, 50% of participants stated that there was no tangible association between gender and performance level of family physicians. On the other hand, 40% of physicians believed that male physicians have better performance, while 10% stated that female physicians have better performance. Moreover, based on the opinions of directors, authorities, and experts, there was no significant correlation between gender and performance level of family physicians in any of five main tasks.

**Table 1. Performance of family physicians from the viewpoint of directors, authorities, and experts in the health networks of Northern provinces**

| Level of performance<br>Performance areas | Very high and high<br>N(%) | Average<br>N(%) | Low and very low<br>N(%) | Total |
|---|---|---|---|---|
| Health management | 103(18.6) | 345(63.3) | 107(19.3) | 555 |
| Cross-sectoral collaboration and promotion of community participation | 86(15.5) | 284(51.2) | 186(33.3) | 556 |
| Health education and promotion | 102(18.3) | 272(48.8) | 182(32.7) | 556 |
| Provision of health care services and preventive measures | 207(32.7) | 256(46.0) | 93(16.7) | 556 |
| Patient referral, follow-up, and treatment | 173(31.3) | 253(45.8) | 127(23) | 553 |

**Table 2. Performance level of family physicians from the perspective of directors, authorities, and experts in the health networks of Northern provinces**

| Level of performance<br>Performance areas | Mazandaran<br>(Mean±SD) | Gilan<br>(Mean±SD) | Golestan<br>(Mean±SD) | Total<br>(Mean±SD) | P-value |
|---|---|---|---|---|---|
| Health management | 3±0.8 | 3±0.8 | 2/8±0.9 | 3±0.8 | 0.017 |
| Cross-sectoral collaboration and community participation | 2.8±0.9 | 2.7±0/8 | 2.7±1 | 2.7±0/9 | 0.295 |
| Health education and promotion | 2.9±0.8 | 2.7±0.9 | 2.7±1 | 2.8±0/9 | 0.216 |
| Provision of health care services and preventive measures | 3.2±0.9 | 3.2±0.9 | 3.2±0.9 | 3.2±0.9 | 0.548 |
| Provision of health care services and patient referral or follow-up | 3.1±0.9 | 3.1±1 | 3±1 | 3.1±1 | 0.455 |

**Table 3. The relationship between work experience and performance of family physicians in five main tasks from the perspective of directors, officials, and experts in the health networks of Northern provinces**

| Work experience Performance areas | Physicians with less than 2 years of work experience have better performance. N(%) | Physicians with an average experience of 2-5 years have better performance. N(%) | Physicians with more than 5 years of work experience have better performance. N(%) | There is no tangible difference between performance level and years of experience. N(%) | Total (100%) | P-value |
|---|---|---|---|---|---|---|
| Health Management | 61 (11.3) | 167 (31.5) | 203 (38.1) | 101 (19.1) | 532 | 0.000 |
| Cross-sectoral collaboration and promotion of community participation | 45 (8.3) | 152 (28.2) | 239 (44.3) | 103 (19.1) | 539 | 0.004 |
| Health education and promotion | 84 (16.0) | 134 (25.3) | 148 (28.0) | 162 (30.7) | 528 | 0.011 |
| Provision of health care services and preventive measures | 73 (14.0) | 137 (26.2) | 178 (34.0) | 135 (25.8) | 523 | 0.000 |
| Provision of health care services and patient referral or follow-up | 60 (11.3) | 137 (25.8) | 205 (38.5) | 130 (24.4) | 532 | 0.000 |

## Discussion

The current findings showed that from the perspective of directors, officials, and experts, the mean performance level of family physicians in different aspects was average or lower than average. This finding was partly consistent with the results obtained by Motlagh and Alidoosti et al. (14, 15); however, the performance level was slightly lower than that reported in the study by Amiri et al. (16).

Lower performance level of family physicians in this study, compared to Amiri's research may be related to differences in the evaluation by the samples. In the present study, subjects were selected among the staff of municipal health networks, whereas in Amiri's study, subjects were members of health teams in administrative sectors. In other words, variations in evaluation by these groups may have caused discrepancies in the results. Another important reason might be related to the evaluation of only one city in Amiri's research; therefore, researchers had more opportunities for monitoring and evaluating the performance of physicians and its promotion. One of the findings of this study was the high performance level of family physicians in the field of health care and disease prevention, which was consistent with the results of previous studies (17). This can indicate the mutual cooperation of family physicians and other health team members, proper follow-up of patients by officials and experts for the implementation of preventive programs, and appropriate use of potentials. Higher performance level of family physicians in the field of health care and disease prevention can be a step toward the health orientation of family physician programs (18).

The current study showed that the lowest level of performance in family physicians was in the area of cross-sectoral cooperation. This finding was in accordance with the results obtained by NasrollahPour Shirvani et al. and Hafezi (19, 20). Inadequate functioning of family physicians in the area of cross-sectoral cooperation may be related to the mentality of physicians and the quality of university education,

which mainly concentrates on clinical activities. Moreover, low acceptance of local people and institutions for involvement in health promotion (21) and lack of legal mechanisms can have negative effects on low functionality in this area.

Low performance level was also reported in the area of health promotion. The study findings suggest that physicians' function in the realm of health education and promotion is less affected by work experience. Therefore, improper functioning in the area of health promotion might be related to insufficient interventional programs for enhancing and developing relevant and suitable activities, which facilitate the utilization of potentials by health care centers and municipal health networks.

It may be also related to the weakness and inefficiency of health network monitoring; in fact, less attention has been paid to performance monitoring and periodic visits of patients. The present study showed that the performance of family physicians was significantly different in the studied cities only in the realm of health management. Moreover, in the study by Motlagh and colleagues, health team members were less satisfied with health management by family physicians, compared to other aspects (14). The low level of administrative functioning of family physicians in Golestan province, compared to other cities, might be related to the young age, lack of experience, non-locality, and frequent displacement of physicians (22); the physicians had a performance level lower than average due to insufficient experience.

On the other hand, it is possible that directors and authorities of Golestan province had fewer opportunities for strengthening and developing the management skills of family physicians due to their low experience and higher frequency of displacement. One of the main findings of this study was the relationship between work experience and performance of family physicians in all five main tasks. This finding indicates the need to increase the working years of family physicians, since experience can raise the physicians' knowledge about the characteristics of the covered population and their performance can be more effective, leading to patient satisfaction. Moreover, there was no significant relationship between gender and performance of family physicians in any of the five main tasks. This finding was in consistence with the results obtained by Moghreb et al., Hazavehei et al., and Raeissi et al. (23-25).

According to the results, it can be concluded that the performance of only a small percentage of family physicians was above average in all five tasks. Therefore, the majority of family physicians need to be upgraded in all areas, especially in health promotion, cross-sectoral collaboration, and promotion of community participation. It is recommended that provincial health departments and municipal health networks design and utilize interventional programs in order to increase the competence (knowledge and skills) and motivation of family physicians with the purpose of upgrading their functionality in their major tasks.

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