



Original Article

What is the relationship between family physicians' job satisfaction associated and their educational performance?

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Abstract

Introduction: Expansion of strong primary health care (PHC) network as a first revolution in Iran health system has led to significant improvements in coverage of the rural population and health indicators. Considering the development of rural health insurance and family physicians programs second revolution in 2004, in this study it was tried to determine the level of family physicians' job satisfaction and its relationship with educational performance.

Methods: All physicians who had worked as family physicians in public health care system of East Azerbaijan, Iran, between 2009 (December) and 2011 (May) were included in a cross-sectional study. The included population was composed of 367 primary care physicians. A self-administered, anonymous questionnaire was used to collect required information about job satisfaction. Educational performance scores of physicians were extracted from their educational profile in the medical faculty.

Results: In this study, 149 questionnaires were analyzed from 238 retained questionnaires (overall response rate of 62.5%). The average score of job satisfaction was 41.84 (19.11) and the average educational performance score was 78.63 (6.66) out of 100. There was only significant relationship between gender, number of undercover population and job satisfaction while the results showed significant relationships between age and educational performance among personal and variables ($P > 0.050$). However, there was no significant relationship between job satisfaction and educational performance.

Conclusion: The low level of job satisfaction and educational performance scores of family physicians indicating the urgent need for more extensive research in identifying the root and basic causes of this situation at first step. Second, finding the appropriate mechanisms to improve the job satisfaction level is great importance. We are proposing the revising of current policies, in payment methods and work condition, educational methods in existing health system.

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Introduction

Following Alma-Ata declaration, Iran revised its healthcare system through accepting primary health care (PHC) as a leading strategy for attaining the global aim of "Health for All" by 2000.^{1,2} Expansion of

strong PHC networks has led to significant improvements in coverage of the rural population, increasing life expectancy, decreasing mothers' mortality, infant and child mortality and control of infectious diseases.³⁻⁵

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However in response to concerns about raising quality and efficiency in health care, epidemiological and demographic transitions, the family physicians and expanding rural health insurance program have been started since 2006.⁶ This reform increased physicians per population ratio in rural areas with income rising from 1.5 million Iranian Rials (50 US\$) to 15 million (500 US\$) per month.⁷⁻⁹ Recently, the ministry of health are expanding the program to all population in two provinces (Mazandaran and Fars in Iran).⁶ Different studies showed a number of concerns such as improper motivation initiatives,¹⁰ lack of job security, delay in salary payment,¹¹ more burnout or turnover in family physicians program.¹²

According the literature physicians are the most influential sources of the health system and their performance plays a key role in the success of any health sector reform plans,¹³⁻¹⁶ so we should understand the physicians' behavior in order to make significant reform in health sector. Furthermore investigations on the impact of the family physician reforms in Iran have different results. Some of them report positive outcomes, while others show negative outcomes.¹⁷

It seems that one of the ways to evaluate the achievements of Iranian family physicians reform is to study job satisfaction of physicians in relation to their educational performance. Hence, a few studies had investigated outcomes of medical schools in educating physicians that capable to providing integrated health care services, managing health team and being able to make plans to improve the health status of the community.¹⁸

Furthermore numerous studies have indicated that job satisfaction is a major determinant of stated intentions for the workforce to leave.^{12,19,20} Previous studies mainly had focused on job satisfaction of physicians in different situations, while the relationship between physicians' educational performance and their job satisfaction was unknown, especially in Iranian health system.²¹

The objectives of this study were to determine the level of family physicians job satisfaction and its relationship with

educational performance in East Azerbaijan province, Iran. In other words, it was intended to indicate whether top students perform better in PHC.

Methods

A cross-sectional study was conducted among all graduated physicians from Tabriz University of Medical Sciences (TUMS) (worked as a family physician in public sector) in the East Azerbaijan province between 2009 (December) and 2011 (May). The sample size consisted total number of physicians and inclusion criteria were minimum 6 months of work history and working at the time of this study.

Validity and reliability of job satisfaction questionnaire were confirmed after translation to Farsi. These questionnaires were used collect information in a self-administered, anonymous form containing 35 questions about job satisfaction, 8 questions about personal and professional variables (age, sex, marriage status, service record, type of employment, graduating year, number of covered population, and geographical distance to center of province). Second section measured physicians' professional self-perception and career satisfaction. A 4-point Likert scale was used for section 2, with "very dissatisfied," "unsatisfied," "satisfied" and "very satisfied" options. The total scores of participants in job satisfaction were transformed into percent in order to compare with physician's educational performance in and score better.

Questionnaires were distributed through post to all of 238 doctors with a letter explaining the objectives of the study. In addition a code number was added to every questionnaire by the main researcher. Anonymity and confidentiality of respondents were ensured. The initial letter was followed by a telephonic contact.

The educational performance scores of primary care physicians (average of 3 public health course and two months clerkship and internship in community medicine departments) added to the respective questionnaire of each responding physician

according to the code number noted on every question sheet. All returned questionnaires were checked manually for completeness before they were forwarded to electronic data computer.

Data analysis involved descriptive, stratification, and multivariate analysis using SPSS for Windows (version 16, SPSS Inc., Chicago, IL, USA). Data were presented by mean \pm SD (Standard deviation) or median (range) for quantitative variables and frequency (%) for qualitative variables. The normality of the variables was evaluated and confirmed by Kolmogorov-Smirnov test. Independent samples t-tests and analysis of variances were used to compare the educational performance score and job satisfaction score among the levels of demographic variables.

Ethical consideration for this study and the study protocol were approved by the Ethics Committee of TUMS, which was in

compliance with Helsinki Declaration.

Results

In this study, 149 questionnaires were analyzed using 238 retained questionnaires (overall response rate of 62.5%). Socio-demographic characteristic, overall satisfaction and educational performance scores of participations are shown in table 1; the average \pm SD score of job satisfaction was 41.84 ± 19.11 and the average educational performance score was 78.63 ± 6.66 out of 100.

Of all participants, 49.7% were males, 70.8% were married, the average \pm SD age was 32.80 ± 5.690 years and the average length of service were 5.09 ± 3.92 years. In terms of their employment status, (65.3%) of the respondents were temporary employees and the median distance of their work place to the capital of the province was 99.5 (min-max = 2-250 km). Every physician covered 4247.02 ± 1366.24 people.

Table 1. Socio-demographic characteristic, overall satisfaction and performance score

Characteristic	n (%)	Job satisfaction score*	P	Educational performance score*	P
Gender					
Male	73 (49.7)	41.40 ± 16.72	0.046	77.90 ± 6.59	0.744
Female	74 (50.3)	42.67 ± 21.45		79.35 ± 6.77	
Age (year)					
< 30	61 (40.9)	41.87 ± 21.80	0.991	79.81 ± 5.43	0.052
30-39	71 (47.7)	42.01 ± 18.38		77.14 ± 7.41	
40-49	16 (10.7)	40.69 ± 15.23		81.25 ± 5.94	
50-59	1 (0.7)	46.00 ± 0.00		-	
Work history (year)					
< 1	16 (11.3)	37.50 ± 16.60	0.617		
1-3	39 (27.7)	42.59 ± 22.02			
> 3	56 (61.0)	42.33 ± 17.63			
Marital status					
Single	42 (39.2)	41.67 ± 19.92	0.508		
Married	102 (70.8)	42.39 ± 19.10			
Occupational status					
Permanent (formal)	23 (18.5)	42.00 ± 19.07	0.627		
Committed to serving	20 (16.1)	41.42 ± 20.57			
Contract	81 (65.3)	43.10 ± 18.64			
Number of undercover population					
< 4000	70 (52.6)	40.47 ± 18.30	0.006		
4000-6000	54 (40.6)	41.87 ± 19.98			
> 6000	9 (6.8)	63.88 ± 2.95			
Distance to center of province (km)					
< 50	37 (19.6)	86.62 ± 5.35	0.533		
50-150	128 (67.7)	87.96 ± 6.06			
> 150	24 (12.7)	87.30 ± 4.23			

*Data score were out of 100

Table 2. Job satisfaction of family physicians in domains and totally

Items	Point of (Mean \pm SD)	Great satisfaction (%)	Some satisfaction (%)	Some dissatisfaction (%)	Great dissatisfaction (%)
Total job satisfaction	41.84 \pm 19.11	8.2	21.8	51.7	18.4
Domain 1: Survival/personal maintenance	28.22 \pm 20.61	1.4	30.14	46.5	20.7
Domain 2: Security	28.11 \pm 21.50	6.4	21.6	52.8	19.2
Domain 3: Companionship	45.55 \pm 10.50	13.9	44.5	37.2	4.4
Domain 4: Quality and style of supervision	44.41 \pm 15.40	13.7	50.0	29.8	6.5
Domain 5: Quality of work	44.31 \pm 20.51	14.1	41.7	41.8	2.2
Domain 6: Status	69.00 \pm 35.56	44.7	37.6	15.6	2.2
Domain 7: Recognition	37.21 \pm 22.00	8.3	41.8	45.2	4.3
Domain 8: Autonomy	41.44 \pm 24.30	12.2	43.9	39.4	4.5

SD: Standard deviation

Table 2 represents the mean scores computed for total job satisfaction and each subscale. Furthermore, we showed the percentage of job satisfaction in each domain and in total. The overall satisfaction was 30.0%. The respondents' were less satisfied in domains of survival/personal maintenance, security, and recognition but more satisfied in domains of status, companionship, and quality/style of supervision.

Initial analyses of physician job satisfaction between single items of questionnaire showed physicians were more satisfied with their "having colleagues' respect (2.210 \pm 0.841)" and "patients' recovery (2.150 \pm 0.764)" but were more unsatisfied with "career prospects (0.480 \pm 0.832)" and "job security (0.620 \pm 0.904)" respectively.

Evaluation of relationship between job satisfaction with background variables showed only significant relationship between gender, number of undercover population and satisfaction, but there were no significant relationship between other background variables and satisfaction ($P > 0.050$).

The average score of educational performance was 78.79 \pm 5.81 out of 100. Furthermore, evaluation of the relationship between educational performance with background variables of sex and age showed only significant relationship between age and educational performance.

According to two-variant analysis, average job satisfaction was higher among women, also satisfaction decreased as covered population increased. Using regression model,

it was concluded that gender had no statistically significant relationship with satisfaction ($\beta = 0.46$, $t = 0.534$, $P = 0.594$); in contrast, covered population had statistically significant relationship with satisfaction ($\beta = 0.209$, $t = 2.41$, $P = 0.017$). Searching relationship between satisfaction and educational performance did not significant.

The responses of physicians to the three open questions which analyzed using content analysis method in qualitative research approach about key value features of the job were: relationship (companionship), provision of services, and health promotion. Moreover, physicians declared the job security and insufficient income as main dislike aspects. Result of final open question about main reasons to work in health service showed financial obligation and interest for the provision of health services.

Discussion

According to our finding, family physicians have had low levels of job satisfaction in new situation, where their Educational performance scores were relatively higher than job satisfaction, there was no statistically significant relationship between job satisfaction and educational performance scores.

In current study the participation rate was higher than a similar study in Singapore (30.4%)¹³ and Norway (43.0%) and lower than study in Lithuania (78.6%) and Russia (87.0%).^{10,11} Generally, the average score of job satisfaction in comparison with the GP satisfactions in Turkey (61.4%),¹⁹ Norwegian

(54.0%),²² China (83.3%),²³ and in Kuwait (61.8%)²⁴ were low and inconsistent with our finding and closer to recently conducted researches in different province of Iran.²⁵⁻²⁷

It seems that in countries where general practitioners are gatekeepers they are somewhat less satisfied on this respect than general practitioners in other countries.²⁸ The most important factors related to physician dissatisfaction in our study were job security and personal maintenance where Singapore doctors¹³ were dissatisfied from amount of leisure time, promotion and career development prospects. Furthermore Turkish physicians were dissatisfied from the number of vacations, ownership of healthcare facilities, and number of shifts per month.²⁹

We did find three similar study about physician job satisfaction in Iran which are similar to our finding,^{14,26,27} furthermore a study in nurses' job satisfaction showed that professional duties, social prestige and communication with nurses' managers were important factors in creation of dissatisfaction.^{30,31} The large scale studies in European countries³² showed the strongest correlation of job security with job satisfaction, which was similar to our findings. We did not find a clear relation among job satisfaction and sex, age, marital status and employment in our study, but in European countries relationship between the level of job satisfaction and sex, working years were significant. In our opinion, these results are consistent with Famous Herzberg's two-factor theory.³³

Most of our findings, in indicating the job security, income as main dissatisfied aspects and financial obligation, and interest for delivering health care main reasons to work as a family physician, were consistent with other studies in relation to physician rewards in PHC setting especially in countries with active private sector and high income.^{13,34} The low income of young family physicians in Iran as compared to specialists lead them to take part in specialty entrance exam for additional revenues so they can diminish low levels of job satisfaction score. Furthermore uncertainty in employment situation (family

physicians work as contract or mandatory (legal obligation employees) should decreasing job satisfaction.^{3,7} The lack of job security,^{11,27} control procedures, insurance support has raised family physicians' dissatisfaction.^{11,25-27} These findings are consistent with other studies, such as the British physicians' job satisfaction study that showed doctors were unsatisfied from job control and paperwork.³⁵ A study in America showed that job control and rewards were effective in job satisfaction.³⁴

On the other hand, the average score of educational performance in our study, 78.79 ± 5.81 out of 100 were undesirable. Hence developing the new educational methods such as problem based learning in order to improve the quality of health care as a central mission of medical education are necessary.³⁶ Furthermore, the results of two studies in TUMS showed that the educational programs of community medicine department was effective but revising health management courses in community medicine program were necessary.³⁷

Studies about the relationship between educational and occupational performance in 1990-1999 is controversial, also there is not many studies investigating the relationship between job satisfaction and educational performance.³⁸ Posthuma and Willan in study of academic performance and job satisfaction indicated job satisfaction was related to three individual academic courses significantly but relation among job performance and average grade of college were insignificant.³⁹ Although it has been shown that some medical students are interested in some specialty majors which they might perform better at. Longitudinal data suggest that physicians' approaches to work were predicted learning and personality style at medical school and in the final year.⁴⁰

Limitations

An important limitation of our study was regarding generalizability that our data were only from all doctors (worked as a family physician in public sector) in the East Azerbaijan province in December 2009 to May 2011.

Conclusion

Although there was no evidence for relationship between job satisfaction and educational performance of primary care physicians, the low scores of family physicians in this study in job satisfaction indicate an obvious need for more researches to identify root causes of low levels of scores as a first step.

Second, findings and the best mechanisms in order to promote this situation are inevitable. We are proposing the revising of current policies in this health system

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especially in payment methods and work condition.

Conflict of Interests

Authors have no conflict of interest.

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