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Job Satisfaction of Emergency Medicine Residents and Specialists

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Abstract

Background: This study aimed to assess satisfaction of emergency medicine residents and specialists.
Methods: This was a cross-sectional survey conducted in Tehran, Iran. All emergency medicine specialists and residents in Iran at the time of study were eligible and included. A modified questionnaire, originally developed by Lloyd et al. was used. The final statistical analysis was done on the questionnaires.
Results: A total of, 210 questionnaires from 143 residents and 67 emergency medicine specialists were collected. The overall satisfaction in specialists and residents was 50% and 42%, respectively ($P < 0.05$). The status of specialists' recruitment, managerial aspects, available facilities, current lifestyle, and challenges related to the job, showed significant differences.
Conclusions: Based on the findings of this study, although both residents and specialist satisfaction rates were at a moderate level, however, specialists were more satisfied with their job in comparison to residents.

Keywords: Burnout, Professional, Emergency Medicine, Internship and Residency, Job Satisfaction

1. Background

The emergency Medicine (EM) specialty is full of complex problems and stressful conditions (1, 2). The existing evidence shows that motivation and job satisfaction are the main factors in promoting the effectiveness of the performance of faculty members, specialists, and residents of EM (3). Since the time emergency medicine was known as a specialty in the United States (US), several questions have been raised about job satisfaction in this field (4). Numerous investigations have examined influential factors involved in satisfaction or burnout in this field. Factors, such as job interestingness, appreciation and gratitude, sufficient salary, good working conditions and the job nature have been considered significant in enhancing job motivation in faculty members, specialists, and residents of EM (5-9). Similarly, the results of studies on physicians employed in educational environments have shown that prolonged working hours, low income, lack of job security, lack of job independence and insufficient resources have been expressed as factors associated with job dissatisfaction and stress experience (2, 4, 10, 11). The factors that are more influential on job satisfaction at the EM have always been under discussion and this is one of the most important concerns in promoting quality in higher educational systems, particularly within the medical educational system (4, 10, 11). However, some studies that investigated the role of each of the individual factors, working environment, and the society in job satisfaction of emergency physicians are still missing (1). The present research dealt with satisfaction of emergency medicine residents and specialists.

2. Methods

2.1. Study Design

This was a cross-sectional survey that was conducted from January, 2011 to August, 2012 in Tehran, Iran. The protocol of the study was approved by the emergency department research committee and ethical committee of Tehran University of Medical Sciences. All the authors adhered to Helsinki Principles throughout the study. The questionnaire was translated and used under permission of Lloyd et al. (12). All the questionnaires were anonymous, and the

participants were enrolled by informed consent, and after ensuring privacy.

2.2. Study Population

All emergency medicine specialists and residents in Iran at the time of the study were eligible and included. The available sampling method was used. Refusal to participate in the study was considered as the exclusion criterion. Imperfect completed questionnaires were not excluded.

2.3. Data Collection

A modified questionnaire, originally developed by Lloyd et al. (12), including 79 questions about the degree of job satisfaction among emergency physicians in the US and Canada was translated to Persian and back translated to English in an official translation office with no affiliation to the field of medicine. The latter translation was then presented to the authors to be approved before use as the final questionnaire. Regarding the differences of working conditions in Iran versus US and Canada, three questions for residents and two for specialists were omitted (the questionnaire for EM specialists and residents contained 77 and 76 questions, respectively). Some questions were also altered, all by permission of Lloyd et al. (12).

The overall rating in each section was calculated using a range between +3 points for the highest degree of satisfaction and -3 points for the lowest level of satisfaction in every question. Since percentages were used for evaluating the degree of satisfaction in other articles, this method was also used in the current research, providing a better understanding of the level of satisfaction (the -3 to +3 scale in the questionnaire was transformed to a 0% to 100% scale). Since some of the questions had a negative concept, with permission of the authors, they were multiplied by -1 to obtain a better statistical comparison and analysis.

The questionnaires were distributed among the target population by one of the following three methods: 1, referral of the researcher to the workplace; 2, e-mail; or 3, referral of the researcher to the meeting places of the target population. These questionnaires were then recollected after two weeks, in a second visit by the researcher, or through an e-mail. If the filled questionnaire was not received, one of the mentioned distribution methods was used for resubmission. If this questionnaire was not received for a second time, the receiver would have been omitted from the study.

2.4. Statistical Analysis

The SPSS-18 software was used for performing the statistical analysis. Pearson chi square and t-test were used to analyze the data. P values lower than 0.05 were considered statistically significant.

3. Results

In total, 300 questionnaires were distributed amongst 220 EM residents and 80 EM specialists, respectively. Finally, 210 questionnaires from 143 EM residents and 67 EM specialists were collected. Total response ratio among specialists and residents were 83.75% and 65%, respectively. Demographic and baseline characteristics of the specialists and residents, who participated are summarized in Tables 1 and 2. Since there were some unanswered questions in each questionnaire, the response rate was mentioned regarding each part. Based on the results, 45 out of 50 respondent specialists worked at university hospitals with residents and the rest worked at university hospitals without residents or in non-educational hospitals. Of the specialists, 65 were employed at only one university hospital and the response of 40 individuals to "work at other hospitals" or "other sources of income" was negative. Of the residents responding to the two latter questions, 109 were not working at other hospitals and 91 had no other sources of income. The average training background of EM in the resident-training hospitals was 6.0 ± 2.7 years. The majority of specialists had night working shifts of three to six or six to eight per month (12 and 25 individuals, respectively) and two, three, or four monthly week-end shifts (11, 22, and 14 individuals, respectively). The comparable data for residents were five to ten night shifts (92 individuals) and five to ten weekend shifts (95 individuals) per month for the majority.

The estimations by most of the specialists about the number of patients in each working shift were 20 to 40 and over 40 (32 and 13 specialists, respectively) and the comparable data for the residents were below 20 (41 residents), 20 to 40 (30 residents), and 40 to 60 (22 residents). The majority of specialists and residents estimated the number of nurses present in every work shift as lower than 20 (54 and 105 individuals, respectively).

In the current investigation, the overall satisfaction was estimated as 50% in specialists and 42% in residents, implying a statistically significant difference ($P < 0.05$).

Figure 1 demonstrates the comparison between mean of the point scores (in percentages) in each section of the job satisfaction questionnaire separated by the group investigated. P values were lower than 0.05 and in the range of 0.0001 and 0.03, except for available facilities. Comparing different parts of the questionnaire separated by gender (Figures 2 and 3), no significant difference was practically seen (comparing 4 groups of male residents, female residents, male specialists, and female specialists, the

Table 1. Demographic and Baseline Characteristics of 67 Specialists, Who Participated in the Study[a]

Variable	Quantity	Response Rate, No. (%)
Age, y	37.2 ± 4.0 (30 - 48)	48 (71.6)
Gender		58 (86.6)
Male	56	
Female	2	
Marital status		61 (91.0)
Married	53	
Single	8	
Work experience, y	3.8 ± 2.6 (1 - 16)	50 (74.6)
Employment status		48 (71.6)
Temporarily recruited as a faculty member	23	
Temporarily recruited as a non-faculty specialist	6	
Permanent faculty member	16	
Permanent non-faculty specialist	3	
Hospital teaching status		50 (74.6)
Teaching, with residents	45	
Teaching, without residents	3	
Non-teaching	2	
Working per week, h	42.6 ± 15.3 (20 - 100)	53 (79.1)
Teaching per week, h	19.6 ± 17.1 (4 - 72)	40 (59.7)
Monthly income, million toman		47 (70.1)
< 1	6	
1 - 3	10	
4 - 5	26	
> 5	5	

[a]The continuous values are shown as range ± SD (range).

Table 2. Demographic and Baseline Characteristics of 143 Residents, Who Participated in the Study[a]

Variable	Quantity	Response Rate, No. (%)
Age, y	32.7 ± 3.6 (25 - 45)	106 (74.1)
Gender		113 (79.0)
Male	84	
Female	29	
Marital status		114 (79.7)
Married	76	
Single	38	
Training background at the teaching hospital, y	6.0 ± 2.7	93 (65.0)
Level of residency		142 (99.3)
First	81	
Second	33	
Third	28	
Residents in the same level, No.	16.9 ± 5.4 (8 - 30)	104 (72.7)
Working per week, h	53.0 ± 15.9 (6 - 100)	93 (65.0)
Monthly income, million toman		117 (81.8)
< 0.5	73	
0.5 - 1	36	
> 1	8	

[a]The continuous values are shown as range ± SD (range).

only significant difference between residents and specialists was in "clinical aspects" with a P value of 0.03; in five other areas, in addition to the overall satisfaction, no significant difference was seen). A similar result was obtained for the residency year in terms of individual aspects of the questionnaire and the overall satisfaction with no significant differences. Figure 4 shows mean points (percentages) from different sections of the job satisfaction questionnaire separated by the specialists' recruitment status in the study. P values were in the range of 0.001 to 0.01 in the sections of managerial aspects, available facilities, current lifestyle, and challenges related to the job; there was no significant difference in clinical aspects, job relations, and overall satisfaction.

4. Discussion

In the current investigation, the overall satisfaction was estimated as 50% in specialists and 42% in residents, although both were at a moderate level, still implying a statistically significant difference. Furthermore, except for available resources section, the differences in the average scores of other sections of the questionnaire separated by the group investigated, were significant. Kuhn et al. observed that 32% of the respondents among the specialists of EM suffered from mental exhaustion, which was the most important reason for burnout in them. Despite all these, the majority of respondents expressed job satisfaction (1). The majority of emergency physicians in the study by Cydulka et al., also stated that EM had fulfilled their expectations (77.4% to 80.6% in various years), yet they men-

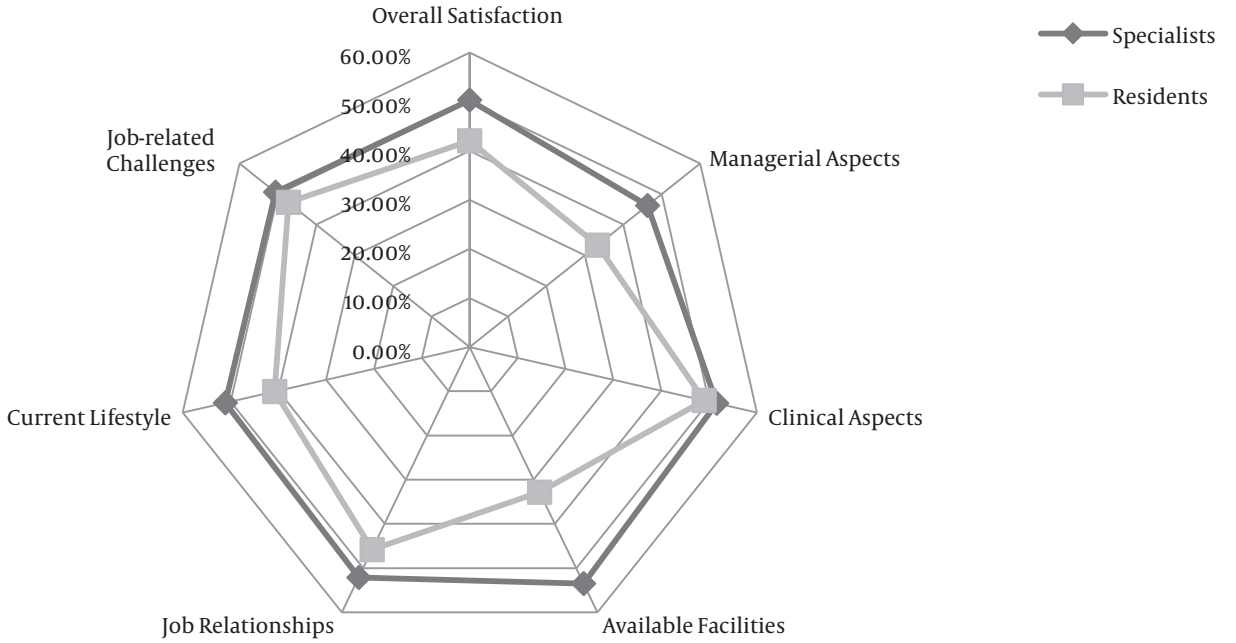

Figure 1. Comparison of emergency medicine residents and specialists in terms of mean points (percentages) from different sections of the job satisfaction questionnaire in the study

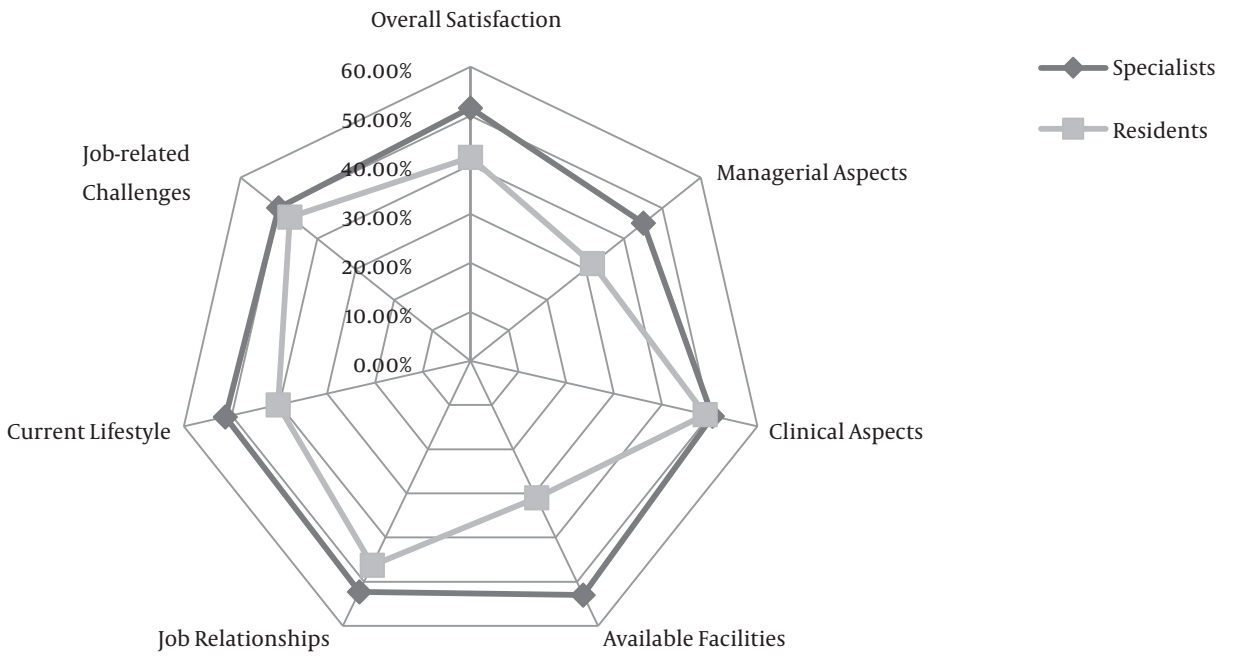

Figure 2. Comparison of male emergency medicine residents and specialists in terms of mean points (percentages) from different sections of the job satisfaction questionnaire in the study

tioned burnout as an important problem in the profession as well (11). Whitley et al. investigated the relationship between stress and depression with the year of residency, gender, and marital status by considering stress-provoking

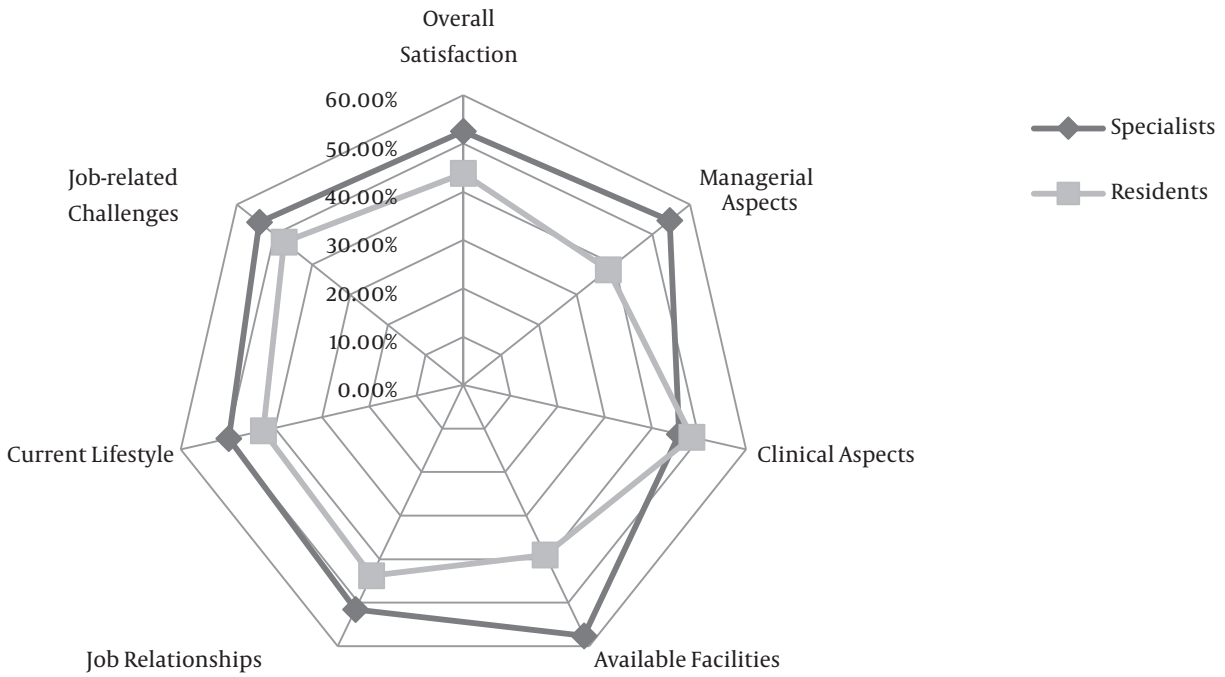

Figure 3. Comparison of female emergency medicine residents and specialists in terms of mean points (percentages) from different sections of the job satisfaction questionnaire in the study

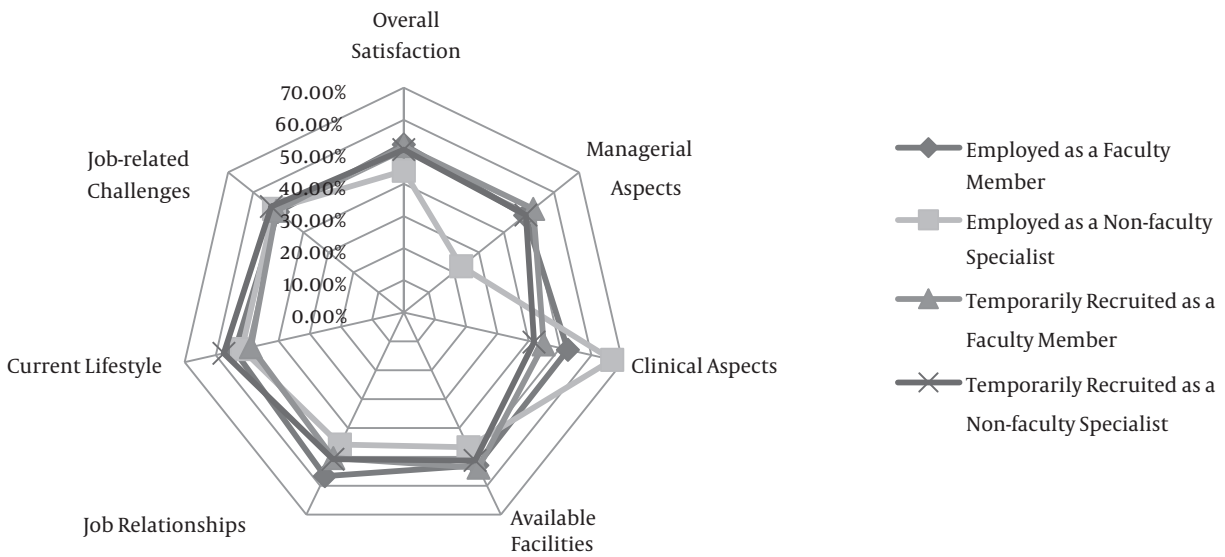

Figure 4. Mean points (percentages) from different sections of the job satisfaction questionnaire separated by the specialists' recruitment status in the study

factors in EM residents (13). Their results manifested that stress and depression were more frequent in female residents, and single residents showed more depressive symptoms. Therefore, it may be suggested that a lower percentage of job satisfaction in the current study could attribute to lower mean age and higher percentage of single participants. Whitley reported no difference between residents in different years of education. Similarly, in the current study, it became evident that the mean points of different parts of EM job satisfaction questionnaire showed no sig-

nificant difference between residents in various levels of their training course.

Another study revealed that depression was more prevalent in residents than in professors and females were more prone to depression than males, although the difference was not significant for the latter (7). In a review of stress in medical residents by Butterfield, sleep deprivation and fatigue were the most important factors inducing stress (14). Leigh et al. also observed that job satisfaction was strongly associated with income and employment at the university. On the other hand, a negative relationship was seen between job satisfaction and working more than 50 hours a week, as well as uncontrolled adverse effects of job on quality of life. In this study, no difference was seen between males and females, or black and white individuals (15). In the study by Lloyd et al., where 75.5% of the sample was satisfied with their job, the factors promoting satisfaction were increased age, being a department head, and increased weeks of holiday per year. Involvement in medical education was an important factor in the development of depressive symptoms, and time away from clinical practice had a positive impact on job satisfaction and emotional well-being (16). Separate investigation of various sections of the current questionnaire revealed a significant difference between specialists with different recruitment status, except for job relationships and overall satisfaction.

Robinson et al., reported complex results, investigating the job satisfaction of female physicians. Although most of them were satisfied with their job, a set of factors that only influenced female physicians, triggered tension and lack of job satisfaction in them (such as pregnancy, motherhood, etc.). In this study, as many as 84% of the respondents were satisfied with their job, yet younger physicians with less control over their working plans, and those, who endured more tension in their job, showed a higher degree of job dissatisfaction (17). The current study revealed that satisfaction of male and female residents and specialists was not significantly different, yet males either in the position of specialist or resident showed a greater level of satisfaction in terms of clinical aspects compared with females. Robinson showed that the level of job satisfaction was similar in males and females, yet factors influencing satisfaction were different in these two groups, such as the type of specialty, the type of relationship with patients, and working environment, which had a greater impact on job satisfaction for females rather than factors like job autonomy, relations with the society, and income (17). Regardless of the lower overall satisfaction rate that could be related to lower mean age and the ratio of marital status of the respondents, findings of this study are comparable with the investigations done in countries with a longer history of emergency medicine specialty training. Similarly, regarding the results of this study, it can be suggested that the investigation of the level of satisfaction in EM physicians should be done prospectively to reach a better evaluation. The results of this study can help authorities make informed decisions for changing the working conditions of emergency specialists.

4.1. Conclusion

Based on the findings of this study, although both residents and specialist satisfaction rate, were at a moderate level, it seems that specialists were more satisfied with their job in comparison to residents.

Acknowledgments

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