

ORIGINAL RESEARCH

Quality of Life in Emergency Medicine Specialists of Teaching Hospitals

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Abstract

Introduction: Quality of life (QOL) of emergency medicine specialists can be effective in providing services to patients. The aim of the present study was evaluating the lifestyle of emergency medicine practitioners, understanding their problems, and addressing the solutions to enhance and improve their lifestyles, in teaching hospitals in Iran. **Method:** This descriptive cross-sectional study was conducted on emergency medicine physicians in 10 teaching hospitals of Iran in 2011. Emergency physicians with at least three years of experience, who interested in the study, were enrolled in the project. All participants filled out the consent form and QOL questionnaires, and then underwent physical examinations and some medical laboratory tests. Categorical variables were reported as percentages, while continuous variables expressed as means and standard deviations. $p < 0.05$ was considered statistically significant. **Results:** Totally, 100 subjects participated in the study, of whom 48 were male. The mean and standard deviation of the physicians' age were 38.7 ± 5.1 years. 43% of physicians had an average QOL, while 37% good. 96% of studied physicians had a good condition regarding habitual history, while 93% of them had a poor condition in performing screening tests. Exercise program and personal health in individuals with normal BMI were correlated with higher levels of QOL. BMI was higher in 40-50 years old subjects than youth. Hypertension was present in five cases (5%), hypercholesterolemia in six (6%), hypertriglyceridemia in six (6%), increased LDL in four (4%), low HDL in four (4%), and impaired FBS in 4 (4%). **Conclusion:** The findings showed that 63% of studied emergency physicians had an average level of QOL and other ones good. The majority of physicians had undesirable situation regarding the performance of screening tests.

Key words: Quality of life; emergency medicine; burnout, professional; physicians; job Satisfaction

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Introduction:

Academic Emergency Medicine the first time was created in nearly forty years ago, at University of Ohio, in response to the increased public expectations for round-the-clock access to high quality and specialized medical care. The potentials of emergency medicine in improving the quality of care and increasing patient satisfaction on one hand, and its diverse and dynamic nature on the other hand have led to its huge leap in a short time. Rapidly, it was one of the most popular majors in medicine, and was launched in more than forty other countries around the world. This major has propelled in Iran in 2001 and currently there are more than 350 emergency medicine specialists and 200 emergency medicine residents in teaching hospitals across the country. Evaluating the QOL has attracted

much attention as a scientific debate in recent years (1). Researchers believe that evaluating the QOL and improving it play an important role in healthy social and personal life (2, 3). Individual's QOL directly affects his/her physical and mental health. Because of the especial working pattern of emergency medicine specialists (significantly greater difficulty, relatively undesirable standby, poor sleep patterns, etc.), the quality of their life has a critical effect on improving the quality of treatment process (4, 5). Today, no study has yet been conducted in Iran for examining the QOL of emergency medicine specialists and just few studies were found in this field, globally. The aim of the present study was evaluating the lifestyle of emergency medicine practitioners, understanding their problems, and addressing the solutions to enhance and improve their lifestyles, in teaching hospitals in Iran.

Methods:**Study design and setting**

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Table 1: Quality of life in different aspects of questionnaire based on Likert scale [↑](#)

Aspects	Mean ± SD	Poor (%)	Average (%)	Good (%)
Uncontrollable risk factors	1.55±0.56	3 (3)	39 (39)	58 (58)
Screening tests	0.07±0.26	93 (93)	7 (7)	0
Habitual history	1.96±0.20	0	4 (4)	96 (96)
Exercise program	1.04±0.91	39 (39)	18 (18)	43 (43)
Dietary habits	1.42±0.50	0	58 (58)	42 (42)
Personal health	1.10±0.30	0	90 (90)	10 (10)

This descriptive cross-sectional study was conducted on emergency medicine physicians in 10 teaching hospitals of Iran in 2011. Emergency physicians with at least three years of experience, who interested in the study, were enrolled in the project. Questions regarding QOL, reported in the course of MEDLINE search in the previous study, were collected to develop a questionnaire using the research terms 'emergency medicine specialist', 'lifestyle quality', and 'teaching hospital'. To validate the current questionnaire, a pilot study was done among forty residents at Shahid Beheshti University of Medical Sciences. The reliability of the questionnaire using Cronbach's alpha coefficient was 0.85. Face and content validity were confirmed by a methodologist, emergency medicine professors, and a group of people similar to the target population. All participants filled out the consent form and QOL questionnaires, and then underwent physical examinations and some medical laboratory tests. The protocol of study was approved by the ethical committee of Shahid Beheshti University of Medical sciences.

QOL questionnaire

QOL questionnaire was evaluated the participants regarding six aspects as follows:

I: Uncontrollable risk factors (the incidence of heart disease, hypertension, diabetes and stroke among immediate family members, and the incidence of chronic diseases and cancer among the physicians), II: Screening tests (colorectal screening, pap smears, mammography and prostate screening), III: Habitual history (smoking, caffeine and alcohol drinking), IV: Exercise program (exercise, stretching, warm up and cool down moves), V: Dietary habits (intake of food and water), VI: Personal health (regular dental visits, eye care, environmental pollution and driving). Using 30th and 70th percentiles as cut points, QOL was categorized in poor (0 score), average (1 score) and good (2 score) based on Likert scale.

Physical examination

For blood pressure measurement, the subjects were asked to rest for 15 minutes and then it was measured in the right arm using a standard mercury sphygmomanometer. Hypertension was defined as systolic blood pressure ≥ 140 mmHg, diastolic blood pressure ≥ 90 .

The weight and height were measured and body mass index (BMI) was calculated using the ratio of weight (kg) to height (m^2). BMI index of 25-29.9 kg/ m^2 was considered as overweight and > 30 as obesity.

Laboratory tests

Fasting blood sugar level (FBS) was measured after eight hours fasting, while triglycerides (TG), cholesterol, low-density lipoprotein (LDL), and high-density lipoprotein (HDL) after 14 hours. Hypercholesterolemia was defined as total cholesterol ≥ 200 mg/dl, hypertriglyceridemia as TG ≥ 150 , high LDL as LDL ≥ 130 mg/dl and low HDL as HDL < 40 mg / dl.

Statistical analysis

Categorical variables were reported as percentages, while continuous variables expressed as means and standard deviations. $p < 0.05$ was considered statistically significant. The data were analyzed using SPSS ver. 20.

Results:

Of 100 participants, 48 were male and 52 female. The mean and standard deviation of physicians' age was 38.7 ± 5.1 years (range: 29-53). The mean of physician salaries was 1166.7 ± 133.3 US Dollars/month. QOL in 63% of cases was average and in 37% good. None of the physicians had poor living conditions. [Table 1](#) shows the QOL in different aspects of questionnaire based on Likert scale. 96% of studied physicians had a good condition regarding habitual history, while 93% of them had a poor condition in performing screening tests. 53% of physicians had no regular exercise program and 23% exercised less than three days a week. Exercise program and personal health in individuals with normal BMI were correlated with higher levels of QOL ($p=0.001$). [Table 2](#) shows the result of laboratory and physical examination in the studied population. BMI was higher in 40-50 years old subjects than youth. [Table 3](#) shows the prevalence of cardiovascular risk factors in different age groups. As it can be seen, hypertension was present in five cases (5%), hypercholesterolemia in six (6%), hypertriglyceridemia in six (6%), increased LDL in four (4%), low HDL in four (4%), and impaired FBS in 4 (4%).

Discussion:

The ED is the most active department in a hospital



Table 2: The result of laboratory and physical examination of the subjects [↑](#)

Factors	Values
Fasting blood sugar (mg/dl)	93.8±22
Total cholesterol (mg/dl)	158±39.7
Triglyceride (mg/dl)	136±17
High density lipoprotein (mg/dl)	53.2±13
Low density lipoprotein (mg/dl)	103±23
Body mass index (BMI)	
Weight loss	0
Normal weight	88 (88%)
Over weight	12 (12%)
Height (m)	163±9.6
Weight(kg)	68±13
Systolic Blood Pressure (mmHg)	118.6±14.3
Diastolic Blood Pressure (mmHg)	77.4±9.5

round-the-clock and fills with patients suffering from stress and illness. Working in the ED requires enough interest, patience, wisdom, experience, and management. People may be exposed to many threatened risk factors because of their lifestyle, which some of them can be controlled, such as hypertension, high cholesterol and smoking while, others such as gender and family history cannot be managed. Regarding the uncontrollable risk factors, it was found that fortunately none of the emergency physicians had cancer. Age is one of the uncontrollable risk factors so that after the age of 55 the risk of cardiovascular diseases and stroke would double every 10-years. Historical existence for any of such diseases in parents or family members is associated with the increased risk of them. However, the majority of physicians indicated that one or more of their family members in their 60s or even at earlier ages had diabetes, cardiovascular disease or stroke. Controllable risk factors include hypertension, diabetes, smoking, alcohol drinking, obesity, and poor diet, which are preventable by proper diet, exercises, weight control, quitting smoking, and alcohol drinking (6-8). Despite the importance of screening tests, 93% of physicians had poor conditions regarding performing of these tests. It cannot be due to their lack of knowledge, because physicians more than any other groups are aware from the importance of risk factors and the need for screening. The scores achieved by physicians in habitual habit aspect were the highest ones, as 96% had good scores. The reason for no drinking of alcohol by a majority of physicians included religious teachings on one hand and prohibition of the purchase and sale of alcoholic beverages in Iran on the other hand. However, the consumption of products containing caffeine was common among physicians and only 5% did not use them. 87%

of the physicians were nonsmokers and only 2% heavy smokers, which indicate an ideal situation in terms of tobacco abuse. Based on the findings of previous studies conducted in Canada, 82% of physicians committed tobacco abuse, 67% drank alcohol, and 32% were drug addicted (9). The findings of the present study suggested that Iranian practitioners are healthier in this regard. In the fourth aspect, the findings indicated that 43% of physicians had good exercise programs and 39% poor. Dietary habits of 58% of physicians was rated as average and for 43% of them, it was good. One of the issues related to the dietary habits of the physicians was the fact that only 39% of physicians drunk at least eight glasses of water daily while, other physicians were taking inadequate water. The last aspect assessed the personal health of the practitioners, 90% of physicians were rated as average, while 10% of them had good conditions. It seems that among emergency physicians in Iran, long shifts, demanding and intense working have overshadowed all aspects of their lives, especially for female physicians; they abandon screening programs for follow-up of their health status, regular exercises, and even recreation or conduct these activities irregularly. Many physicians have no good recreational activities and heavy workload with fatigue spoiled their QOL. The average income of emergency physicians is reported to be 1166.7±133.3 US Dollars monthly, which is a good income for living in Iran. However, such a financial situation has not improved their QOL. The study found no significant relationship between QOL and gender, while in the previous studies, women had more job satisfaction than men but it decreased significantly in women who had children (10). The study also found no significant relationship between QOL scores and age, while the previous studies showed that the older physicians had better QOL than younger ones; QOL were found to be decreased in another study for older specialists (10, 11). Obviously, poor QOL will result in occupational burnout. Previous studies have shown that occupational burnout is a multifactorial issue influenced by individual characteristics, work and family stress (12, 13). Night shifts, sleep disorders, work pressures, and personal health are the factors associated with occupational burnout. Some issues in ED such as long working shifts, night shifts, and large number of patients are the factors that cause stress and depression in physicians. Since their lower QOL likely affects the quality of their services and commitment, this could also affect the public health, too (14, 15). In addition, as mentioned a large percentage of physicians' QOL was rated as moderate; therefore, the relevant authorities should pay more attention to the QOL of physicians and make some useful plans in order to improve the quality of their life.

Limitations



Table 3: Prevalence of Cardiovascular Disease Risk Factors [↑](#)

Clinical situation	Age groups (n)			
	<30	30-40	40-50	50-60
Hypertension	0	0	4	1
Hypercholesterolemia	0	1	4	1
Hypertriglyceridemia	0	1	4	1
High LDL	0	1	4	1
LOW HDL	0	0	3	1
High blood sugar	0	0	3	1

This study had some limitations. Many physicians were working in other cities than Tehran, while the location of residence was not considered as an influencing factor for QOL in the present study. The experiences and position were also not taken into account. It is suggested that a more comprehensive study should be conducted to include all of these questions for obtaining acceptable results in this regard

Conclusion:

The findings showed that 63% of studied emergency physicians had an average level of QOL and other ones good. The majority of physicians had undesirable situation regarding the performance of screening tests.

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Conflict of interest:

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