**Original Article**

# Emotional Intelligence and Occupational Stress among Rehabilitation Staffs working in Tehran's Training Hospitals

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**Objectives:** The purpose of this study was to determine the relationship between emotional intelligence and occupational stress among rehabilitation staffs in Tehran's training hospitals .

**Methods:** A cross-sectional study was conducted on a sample of 169 staff members selected from a total of 300 rehabilitation staffs working in Tehran's training hospitals, recruited by random cluster sampling. Two questionnaires were used: The emotional intelligence questionnaire designed by Petrides and Furnham and HSE occupational stress questionnaire. Data obtained from this study were analyzed using Pearson's correlation and multiple regression tests.

**Results:** An inverse significant relationship existed between occupational stress and emotional intelligence ($P<0.001$, $r=-0.33$). There are, also, significant relationships between subscales of emotional intelligence including self-awareness ($P=0.031$, $r=-0.18$), social skills ($P<0.001$, $r=-0.302$), empathy ($P=0.006$, $r=-0.238$) and occupational stress. The results of multiple regressions indicated that the two subscales of 'understanding other's emotions' and 'social skills' can be used for predicting occupational stress.

**Conclusion:** This study confirmed the relationship between emotional intelligence and occupational stress. Promotion of emotional intelligence through implementing training courses may lower rehabilitation staffs occupational stress or prevent it.

**Keywords:** Emotional Intelligence, Occupational Stress, Rehabilitation Staff.

## Introduction

Occupational stress, recognized as the 20th century disease, has received great attention as the most important topic in employees' health management in different organizations (1). Occupational stress is defined as the experience of unpleasant feelings such as anxiety, depression, and tension resulting from workplace conditions and its different aspects (2). Work related stress has negative effects on the efficiency of an organization, since; persons working under stressful conditions are not able to appropriately fulfill their duties (3). Experiencing long term stress in the workplace leads to declining job satisfaction, inefficient job performance, reduced motivation and morale of employees, physical and mental health disorders, burnout and job fatigue, repeated absence, delay in attending work, low quality and quantity of work, strike, depression, anxiety, lack of trust and even job quitting (4). Thus,

early recognition and effective intervention of stress related to the workplace will increase job satisfaction among employees and improve organizational efficiency (5).
Many reasons have been recognized for perceived stress in the work environment including: lack of job security, high workload, personal and family problems, long working hours, relationships dominating over work environment, organizational culture, contradiction and challenges between coworkers, and low income (6). The 'International Labor Organization' estimated the occupational stress-related costs imposed upon countries as 1% to 3.5% of the gross domestic product (GDP). Even now, in spite of employees' increasing knowledge and amending legal laws the percentage of problems and costs related to occupational stress is increasing. Research shows that nearly 30% of the workforce in developed countries is suffering from occupational

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stress. Meanwhile, the share of developing countries is also high (7). Self-reported work-related stress, depression, and anxiety account for an estimated 12.8 million lost working days per year in Britain (4).

England's 'Institution of Occupational Safety and Health' anticipated occupational stress-related loss as 13.5 million working days and more than 4£ billion annually from 2007 to 2009. This institute declared that after musculoskeletal disorders, stress is by far the largest contributor to the overall number of days lost as a result of work related ill-health in the UK (8). Greenhaus & Parasuraman (1987) estimated that occupational stress leads to more than half of absence from job and about 40% transfer cases of employees. In the U.S.A, the financial loss resulting from occupational stress is reported as $300 billion annually (9). Research has shown that the harmful effects of stress are reduced by individual factors like increasing ability of persons for controlling challenges, stress management, and, also, organizational factors i.e. encouraging teamwork activities and supporting employees (10). One of the most important relevant personal characteristics is emotional intelligence (EI) (11). In fact, EI is a combination of emotions, impulses, social knowledge and abilities that direct and improve our general ability to give suitable responses to environmental pressures and obtain optimum performance within the following four aspects: self-awareness (understanding your abilities and expressing them), social awareness (awareness toward others, understanding their abilities and cooperation), self-management (ability of compatibility with change and solving personal and social problems) and relationship management (12).

By observing factors relevant to organizational effectiveness, it has been observed that emotional intelligence plays a key role in relieving stress. Emotional intelligence plays a significant role in increasing employees' innovation, organizational effectiveness, customer loyalty and quality of services (13). Persons with high level of EI use mechanisms which help them to adapt to environmental changes. Meanwhile, persons who lack EI cannot adapt properly to changing conditions. Since adaptation mechanisms play an important role in a person's reaction against environmental stress (14), therefore, it is expected that persons with high level of emotional intelligence may probably experience less stress. In his research work, Furnell (2008) showed that

managers with high level of emotional intelligence may suffer less from burnout (15). In addition, other studies revealed that emotional intelligence moderates the relationship between stress and mental health (16-18). Therefore, it is expected that persons with high level of EI may experience job fatigue and burnout to a less extent.

Research showed that, one will be able to improve his emotional intelligence through training and feedback (19). On this basis, EI skills are regarded as the most important factor in job and family success and improving them seems necessary for a healthier life (20). Emotional intelligence is a fundamental factor in obtaining success in personal and professional life, which plays a key role in showing appropriate reaction toward work-related stress (21).

Homaei (2009) stated that, under the best of circumstances, Intelligence Quotient determines only up to 20% of one's success. The remaining 80% is dependent on other factors such as emotional intelligence. In fact, EI can justify a person's failure with high level IQ and unexpected success of persons with medium IQs (22).

Occupational stress and its influence on performance, interpersonal relationships and mental reactions of persons working at treatment centers are among topics receiving great attention by managers (23). It has been reported that occupational stress is higher among health care providers who have close relationships with their patients (24). Research studies have confirmed that occupational stress, and physical and mental disturbances among rehabilitation staff have led to job quitting, struggling with others, displacement of staff, health disorders, inability to fulfill duties, vulnerability of professional relationships, reduced quality of medical services and job dissatisfaction (25). Interviews with rehabilitation staffs offering diverse rehabilitation services to patients and their families revealed that they experience high levels of stress in their professional life (26). Kathryn Wilkins (2003) reported 47% occupational stress among occupational therapists and 29% among physiotherapists in Canada (27).

The importance of occupational stress on organizational efficiency on one hand, and evidence of the possibility of improving EI on the other hand, make the study of the relationship between occupational stress and emotional intelligence a useful and interesting subject matter. This probability must be bore in mind that a person may

be able to improve his knowledge and awareness about his/her emotions and promote his/her related skills (18). Rehabilitation staffs play a key role in providing services to very needy patients suffering from long-term conditions with high care burden. Hence, assessing their occupational stress and its relations with emotional intelligence is a crucial factor in better understanding the multiple aspects of their occupational stress and improving organizational efficiency through designing proper strategies. Keeping in view the above, it is highly required to recognize effective factors on reducing occupational stress among rehabilitation staff in order to take duly action for reducing their job dissatisfaction and preventing them from leaving their jobs (19). The objective of this study was to recognize the abilities related to emotional intelligence that have a close relationship with occupational stress among rehabilitation staff and to propose proper planning for reducing their occupational stress, accordingly.

**Methods**
In a cross-sectional study, 169 individuals selected from a total number of 300 rehabilitation staffs (including occupational therapists, physiotherapists, speech therapists, audiologists, orthotic and prosthetic specialists and optometrists) working in 53 training hospitals (affiliated to Tehran University of Medical Sciences & Shahid Beheshti University of Medical Sciences) in Tehran in the year 2012. The purpose of the study was to determine the relationship between emotional intelligence and occupational stress among these individuals. Sample size was determined using Morgan table; 169 staff was selected by random cluster sampling. Inclusion criteria included: having at least a Bachelor's Degree in one of the rehabilitation disciplines (including occupational therapy, physiotherapy, speech therapy, audiology, orthotic and prosthetic specialty and optometry), and a minimum one year professional experience in a training hospital.

During the process of sampling, first the sample region 'Tehran' was divided into five geographical areas including: North, South, East, West and Center and the training hospitals in each area were identified. Then, one hospital was randomly selected from each area. When the number of participants in one hospital was not enough, another hospital from the same area would be randomly selected. In the next stage, after explaining the research objectives to the participants, assuring them of confidentiality and taking written letters of consent, questionnaires were simultaneously distributed among the participants. The questionnaires with incomplete information were excluded from the study and finally 132 questionnaires were kept for further analysis. Two questionnaires were used in this study: the 'Emotional Intelligence Questionnaire' designed by Petrides and Furnham and the 'HSE occupational Stress Questionnaire'.

*Petrides and Furnham Emotional Intelligence Questionnaire* - Emotional Intelligence (EI) was measured with the Emotional Intelligence Questionnaire; a Likert-type, self-report instrument devised and developed by Petrides and Furnham (35). As a self-report instrument, this questionnaire measures people's perceptions of their own abilities. The original form has 153 items and 15 subscales including: Adaptability, Assertiveness, Emotion perception, Emotion expression, Emotion management, Emotion regulation, Impulsiveness, Relationships, Self-esteem, Self-motivation, Social awareness, Stress management, Empathy, Happiness and Optimism. The version of the questionnaire used in this research is a brief one with 30 items; and yields a global EI score as well as scores for each of the four subscales. Each question consisted of a 7 degree Likert scale including: completely agree (7) to completely disagree (1). The scores of some items are considered inversely. By adding all the scores obtained from each item, the cumulative score is obtained. Validity and reliability of this questionnaire was assessed by Ahmadi on a sample consisting of 936 secondary school students. Results showed good reliability and validity of the scale; inter rater and test-retest reliability were 0.76 and 0.714, respectively (29). Internal consistency of the questionnaire was derived at 0.75 through calculation of Cronbach's Alpha.

*Health & Safety Executive (HSE) Questionnaire* - This questionnaire has 35 items and 7 areas of: demand, control, managerial support, peer support, relationship, role and changes. It has a 5-degree Likert spectrum consisting of "never, rarely, sometimes, often and always", having a minimum grade of 1 and a maximum grade of 5. Grading for the 'demand' sub-scale was done inversely. Azademarzabadi and Gholami evaluated validity and reliability of this questionnaire by using Cronbach's Alpha and split-half method at 0.78 and 0.65, respectively. In addition, they studied construct and

concurrent validity and confirmed that the questionnaire has high level of validity (30). Internal consistency of the questionnaire was derived at 0.81 by calculating Cronbach's Alpha. SPSS version 16.0 was used to analyze the gathered data. First, Cronbach's alpha was used to assess the reliability of measurement scales. Second, analysis of variance, Pearson's correlation analysis and descriptive statistics were conducted to assess the research variables and the usefulness of the data set. Finally, a stepwise regression analysis was used to assess the direct relationship between variables as well as to show the causal relationship and the nature of relationship between the variables.

**Results**
Data showed that 62.1% of the rehabilitation staff (82 persons) were women aged between 25 to 35 years (51.2%). 69.7% of the participants were married. The average professional experience of the staff was 9.08 years with a standard deviation of 6.41. 50.8% of them were recruited on Permanent & Probationary basis. Persons having Bachelor's Degree were the most frequent and the disciplines of physiotherapy and occupational therapy with 32.6% and 21.9%, respectively, had the highest frequency among the qualified participants (Table 1).

**Table 1.** Distribution of demographical variables of the participants

| | Variable | Number (Percentage) |
|---|---|---|
| Sex | Male | 82 (62.1%) |
| | Female | 50 (37.9%) |
| Age | Younger than 25 years | 18 (13.7%) |
| | 25-35 years | 59 (44.7) |
| | 35-45 years | 42 (31.9%) |
| | Older than 45 years | 13 (9.7%) |
| Length of Service | Less than 5 years | 46 (34.8%) |
| | 5-10 years | 44 (33.3%) |
| | 10-20 years | 34 (25.8%) |
| | More than 20 years | 8 (6.1%) |
| Employment Status (Type of job contract) | Permanent & confirmed | 46 (34.8%) |
| | Permanent & probationary | 67 (50.8%) |
| | Contractual | 19 (14.4%) |
| Marital Status | Single | 36 (27.3%) |
| | Married | 92 (69.7%) |
| | Widow/Widower | 4 (2.3%) |
| Education | Bachelor's Degree | 97 (73.5%) |
| | Master's Degree | 32 (24.2%) |
| | PhD Degree | 3 (2.3%) |
| Field of Study | Physiotherapy | 43 (32.6%) |
| | Occupational Therapy | 29 (21.9%) |
| | Optometry | 27 (20.5%) |
| | Audiology | 10 (7.6%) |
| | Speech Therapy | 15 (11.4%) |
| | Orthotic and Prosthetic Specialties | 8 (6.1%) |

The means and standard deviations for the two variables under investigation (occupational stress and Total EI) have been presented in Table (2).

**Table 2.** Means and Standard Deviations of the Occupational Stress and Total EI

| Variable | Number | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Total EI | 132 | 157.42 | 10.77 | 116 | 196 |
| Occupational Stress | 132 | 82.36 | 6.82 | 67 | 102 |

Table 3 shows the correlations between the four EI dimensions and occupational stress. As outlined in Table 3, self-awareness, and social skill and empathy showed negative significant relationships with occupational stress. No significant relationship between optimism and occupational stress was

found. In terms of the Total EI score and occupational stress, a negative significant relationship emerged between Total EI and occupational stress, suggesting that higher scores on EI are related to lower occupational stress.

In order to explore which of the specific dimensions of EI were important as predictors of occupational stress, standard regression analyses were undertaken with the occupational stress variable as the dependent variable, and each of the four EI dimensions as independent variables. Clearly, only variables with significant correlations (Table 3) were included in this analysis. The results of this analysis are presented in Table (4).

**Table 3.** Pearson's Correlation between Total EI and Its Dimensions with Occupational Stress

| Research Variables | Correlation Coefficient | Sig. |
|---|---|---|
| Total EI and occupational stress | -0.33 | 0.000 |
| Self-awareness and occupational stress | -0.18 | 0.031 |
| Social skill and occupational stress | -0.302 | 0.000 |
| Empathy and occupational stress | -0.238 | 0.006 |
| Motivation and occupational stress | -0.03 | 0.69 |

Table (4) shows the standard regression model with occupational stress as the dependent variables and the dimensions of EI as predictor variables. Collectively social skills and understanding others' emotions accounted for 10.5% of the variance in occupational stress ($R^2=0.105$). Therefore, only social skill and empathy emerged as significant predictors.

**Table 4.** Dependent Occupational Stress Variable with the EI Predictor Variables

| Model | Un-standardized Coefficients | | standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. error | Beta | | |
| (Constant) | 102.764 | 5.669 | | 18.126 | 0.000 |
| 1.Social skill | -0.415 | 0.115 | -0.302 | -3.618 | 0.000 |
| (Constant) | 111.474 | 7.081 | | 15.742 | 0.000 |
| 1.Social skills | -0.355 | 0.117 | -0.259 | -3.025 | 0.003 |
| 2.Empathy | -0.285 | 0.141 | -0.172 | -2.012 | 0.046 |

**Discussion**

Our findings showed that there is a negative correlation between EI and occupational stress among the rehabilitation staff. Among four EI dimensions, only 'motivation' was irrelevant to occupational stress. This finding is in line with the findings from Sunil (2009) concerning that there is a negative correlation between stress and EI (31).

In addition, results of this research are in line with Jude's findings. Jude contended that EI has an influence on perceived occupational stress and there is a significant difference between occupational stresses of school teachers with high and low level of EI (32).

In contrast to the work of Brand, a negative significant relationship between EI and occupational stress was found in this research (33). The reason for the difference could be attributed to the different ways of EI measurement and the different samples used. In the mentioned study, Brand used SUEIT (Swinburne University Emotional Intelligence Test) to assess EI in a sample of university students, whereas this research has utilized a sample of rehabilitation professionals and a Petrides &

Furnham Emotional Intelligence Questionnaire. Brand stated that among the five dimensions of EI in SUEIT ('emotional recognition and expression', 'understanding of emotions external', 'emotions direct cognition', 'emotional management' and 'emotional control') only two dimensions including: 'emotional control' and 'emotional management' have significant negative relationships with occupational stress. Meanwhile, the current study showed significant negative relationships between three emotional intelligence dimensions (self-awareness, empathy and social skill) and occupational stress.

Among four EI dimensions, two of them including social skill and empathy were able to predict occupational stress and explain 10.5% of the total variance in occupational stress. This finding is in contrast with Shojaei's findings. Shojaei stated that self-control, cooperation and self-awareness explain 76% of changes in occupational stress. According to Shojaei the social skill dimension does not play a significant role in predicting occupational stress (34). This difference could be due to the difference

in the way EI was measured. Shojaei used 'Bradbury-Graves Questionnaire of Emotional Intelligence' to assess EI which has different dimensions.

According to our findings, significant relationships do not exist between occupational stress and demographic factors (age, sex, education, type of employment, length of professional service and marital status). This finding is in line with the findings of Azademarzabadi and Gholami who observed no significant relationships between occupational stress and sex and marital status (8). Jude  too, showed that sex does not have an influence on occupational stress (32).

## Conclusion

The results of this study showed that persons having high level of EI may suffer less from occupational stress. Our results confirmed that there are significant relationships between EI dimensions and occupational stress. This study therefore indicated that EI plays a key role in maintaining the personnel's mental health and reducing their occupational stress. So, medical institutes may lower the stress level of their personnel and help them stay healthier by holding training courses on emotional intelligence, improving their social skills, and increasing their efficiency at work.

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