



## The Assessment of Mental Health within Health Personnel and Paramedical in “Tabriz Social Insurance Hospitals” , Iran

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### Abstract

**Objective:** Mental health is an important part of individual, social and occupational life. World Health Organization defines mental health as absolute ability of performing social, physical and mental roles. Inattention to mental health is one of the important factors that lowers efficacy, uses up human powers, causes physical and mental complications and job exhaustion, especially in professional services. As health personnel is major part of health services and their high job incentive is a necessity for their health insurance, this research was implemented to assess their mental health quality.

**Materials and Methods:** This is a descriptive cross-sectional, correlative study which is conducted on 190 health personnel. The questionnaire consisted of two parts: Demographic characteristics and Goldenberg general health questionnaire-28 data analysis was performed by using SPSS and statistical methods were independent samples t-test, chi-square, one-way ANOVA and Pearson correlative index.

**Results:** Two-third of cases were female, mean age was 32.22. 76.3% were married, 49.5% had no child, and most of the others had one child. 32.2% of cases had mental disorders (score > 23).

**Conclusion:** Mean score of cases was 21, this score comparing with the general population of Iran is high. Mental health of health personnel for many reasons is at risk. According to these findings, great stressors of such jobs are: Facing with unexpected situations, work turns, especially night turns, organizational and individual factors.

**Keywords:** Health Personnel, Mental Disorder, Mental Health

### Introduction

Human is the most complicated creature. From past times philosophers have discussed about its integration or bipartition of body and mind.

Greece was the first people who described body and mind are apart from each other. Nowadays scientists believe in interrelationship of physical health with psychological factors and social community.

Body and mind interact with each other in health and disease. There are many theories and viewpoints about mental health; According to Freud, mental health is: the balance between nature, ego and superego, and balance between conscious and unconscious mind. Adler believes, a person “who designs his lifestyle realistically without any feeling

of irretrievable inner humiliation” is a mentally healthy person (1).

Larose great psychological encyclopedia defines mental health as:

Mental susceptibility for harmonious, pleasant and efficient work, amenity in difficult situations and ability for self-equilibrium.

World Health Organization defines mental health within the overall concept of health: Health is full capacity to perform social, mental and physical roles (2).

Several studies show that social and mental problems are the main causes of many physical and emotional complications, and emphasizes on three aspects of human: Mental, social and physical.

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Besides, living in a world full of stress and tension needs a lot of adaptation skills, lack of these skills threatens individual health (3). On the other hand, high prices of psychopathic treatment and time lasting preventive services in secondary and tertiary levels make mental health providers and experts to focus on primary level planning.

According to national association of mental health, people with mental health are: who they have good feelings to others, like and trust them, they can face with life requirements and are responsible for their own deeds, and hence mental health is spiritual condition of a person who feels well and can associate in society with pleasure (4).

General health is related to mental health. Certainly, mental health completes physical and social health and interaction of these three parts, provide socio-individual well-being.

Interrelationship of physic and spirit is proven for many years, now scientists believe that any disorder of each one affects other part, and general health is not mono polar.

Psychological stressors in urban life are the main threat for mental and general health. Recent studies have focused on complications and outcomes of psychological stressors.

Factors such as workplace and bad conditions such as work difficulties, working time, noise, overwork, type of clients, irrelevant expectations and eventually how to deal with them can negatively affect people.

Duration and severity of stress, causal factors, and individual cognitive assessment aggravate these negative impressions.

Job stresses highly affect physical and mental health, they usually affect job performance, individual life and cause serious mental and physical disease (5,6).

Nowadays health service as is directly related with human health, is one of important aspects for sustainable development in human society, this requires health personnel to achieve a healthy, vibrant and high motivation.

Nature of a nurse or midwives work is unpleasant as she deals with patients body (her blood ,urine or vomit)directly in the atmosphere of pain and discomfort, on the other hand, lack of equipment's and drugs, overwork, work turns and low-wage are factors that increase their tension and in all their professional dignity is subject to stress.

Several Study Show found that nurses who work in emergency wards are significantly more exposed to job exhaustion than other nurses job exhaustion is more common in jobs like working in a hotel, health services , banks, insurances offices, teaching and research that women are more occupied in these jobs thus it signifies the importance of paying more attention to mental health in these professions (1,7-11).

For upgrading quality and efficiency in job performance many measures are done, for example

environmental empowerment, using modern technology and providing mechanized services. Nowadays medical staff's health is ignored. If mental health quality and problems originating due to ignorance are measured beside all services mentioned above, it will have very important role in identifying and dealing with health personnel job problems. By improving mental health level in the staff, clients will be satisfied too, and even it will affect efficacy and optimum work.

The main purpose of this study was determining mental and physical condition of health personnel and paramedical with emphasis on the necessity of providing safety and security in work for them and their clients.

### Materials and Methods

This study is a descriptive, cross-sectional, correlative one. Research population consisted of all paramedical working in Tabriz Social Insurance Hospitals, Iran, in summer 2007. we included all paramedical staff, questionnaires distributed among them ensured confidentiality of their information and explained them how to fill it, asked to put them in special boxes of their own ward, blank or incomplete questionnaires were omitted and excluded, all collected questionnaires were 190, questionnaire contained two parts:

1. Demographic and individual characteristics that contained age, sex, marital status, education, work experience, work hours during a week, the ward of work, work turn, children and economic condition.

2. General health questionnaire (GHQ)-28 Goldberg.

First adjusted it in 1972 and another questionnaire based on self-reporting which is used in clinical society to detect people who suffer from a mental disorder.

It mainly focuses on two items:

1. disability in a safe and proper reaction

2. Occurrence new phenomenon with disabling nature. The study aims at differentiating between mental disorder and mental health, not to diagnose a special mental disease. The main part of questionnaire consists of 60 questions, which is translated to 38 languages until now and is being used in 70 countries. The 28 items questionnaire is designed for all the society population and detects disorders with length less than 2 weeks and is sensitive to transient diseases. It contains 4 subscales:

Somatization, anxiety and sleep disorders, social malfunction and depression.

Every subscale consisted of 7 questions by the range of scores between 0 and 21. Scores 1-7 are considered as mild, 8-14 moderate and 15-21 as a severe disorder. All 4 subscales were separately determined, and the sum of their mean scores was estimated as the general health score. High scores showed much more disorder and low general health quality.

Bolharie et al. (12) highest score is 84 and the

cut-off score is 23. Every questionnaire was filled out in 8 min. Reliability is determined by using alpha coefficient = 0.89. Validity is according to several Studies by using whole score of symptom checklist. One question is revised (Symptom Checklist-90-Revised), Calculated and alpha coefficient for the four subscales, respectively, 0.86, 0.85, 0.72 and 0.82 is obtained (7,13-15). Goldberg and Hillier in revising of 43 studies reported 84% sensitivity and 82% specification (16).

**Statistical analysis**

Data were analyzed by using descriptive statistical methods [mean ± standard deviation (SD), frequency] and statically tests: Independent samples t-test, chi-square, ANOVA and Pearson correlation index in SPSS software (version 14, SPSS Inc., Chicago, IL, USA).

**Results**

Two-third of research population was female (66.3%) and one-third was male (33.7%). Mean age was 32.22 ± 6.3. 76.3% was married and 23.7 was not married. 49.5% did not have any child and 51.5% had child most of them had one child (33.2%). By education: most of them had B.A degree, 70.4% had work experience less than 10 years and 21.2% between 10 and 20 years, only 8.5% had work experience more than 20 years. Mean working hours during a week was 54.03 ± 19.85. The lowest working hours was 33 and the highest one was 102. In all 80.4% worked over time. 26.8% worked in fix morning shifts, and 73.2% worked in circulating shifts (morning, afternoon and night). By economic condition, about two third was relatively satisfied and 16.5% was dissatisfied. Complete and relative

frequencies Showed that mean general health score in this study was 21, 32.2% of samples had scores higher than cut-off (16) and 67.8% had scores lower than cut-off.

Table 1 shows mean ± SD scores in subscales of GHQ. As it shows mean scores of three subscales (somatization, anxiety and sleep disorders and social malfunction) is higher than norm score (6) and in depression and intend to suicide subscales is lower than norm score. Mean of total score was 21 ± 10.87.

Table 2 (relationship between demographic characteristics and mental health), shows that somatization score in men is lower than women with significant difference (P < 0.005).

It means men are healthier than women, but in anxiety, sleep disorders and depression despite high scores of women compared with men, it is not significant.

According to education, samples with associate degree have lowest scores and samples with MSc degree have highest score of mental health, but the difference isn't significant.

General health score in not married ones was higher, but it was not significant. Samples who had three or more children had lowest mental health score with significant difference (P < 0.050).

Table 3 shows that scores of somatization, anxiety, sleep disorders and depression in the group without over time working was low but without significant difference. By work turns, somatization, anxiety and sleep disorders in the group of circulating shifts was more than morning fix shifts with significant difference (P < 0.050).

**Table 1.** Mean ± standard deviation (SD) scores of samples according to scales of health questionnaire

Sub scales	Number	Lowest	Highest	Mean ± SD
Somatization	190	0	21	6.09 ± 3.93
Anxiety and sleep disorders	190	0	21	6.14 ± 4.22
Social malfunction	190	0	17	6.43 ± 2.42
Depression and intention to suicide	190	0	17	2.30 ± 3.01
Total	190	4	73	21.00 ± 10.87

SD: Standard deviation

**Table 2.** Results of general health questionnaire (GHQ) according to gender, education, marital status, number of children and economic condition

Character	Somatization Mean ± SD	Anxiety and insomnia Mean ± SD	Action Inefficiency Mean ± SD	Depression Mean ± SD	Total Mean ± SD	P
Gender						
Man	4.78 ±3.03	5.78 ±3.84	6.66 ±2.60	1.83 ±2.49	19.16 ±8.89	0.0005
Woman	6.76 ±4.17	6.33 ±4.41	6.32 ±2.33	2.54±3.22	21.92 ±11.66	
Education						
Diploma	5.84 ±3.71	5.68 ±4.50	6.05 ±2.09	3.05 ±4.37	20.88 ±11.98	0.0800
Associate degree	5.58 ±4.19	5.40 ±4.58	6.26 ±2.65	2.00 ±2.73	19.18 ±10.89	
BSc degree	6.44 ±3.88	6.54 ±3.86	6.60 ±2.39	2.28 ±2.79	21.92 ±10.51	
MSc degree	4.33 ±2.08	7.66 ±8.96	6.66 ±1.52	4.00 ±6.08	22.66 ±17.67	
Marital status						
Not married	5.88 ±4.41	5.52 ±3.83	6.45 ±2.28	2.71 ±2.94	20.57 ±10.99	0.1500
Married	6.15 ±3.78	6.33 ±4.33	6.43 ±2.47	2.18 ±3.03	21.13 ±10.87	
Number of children						
0	6.21 ±4.26	6.13 ±4.24	6.54 ±2.73	2.62 ±3.31	21.64 ±12.40	0.0400
1-2	6.19 ±3.63	6.42 ±4.24	6.31 ±2.19	2.11 ±2.78	20.98 ±9.43	
3-4	3.28 ±1.38	2.57 ±1.98	6.71 ±0.71	0.85 ±0.89	13.42 ±2.93	

SD: Standard deviation

**Table 3.** Results of general health questionnaire (GHQ) according to overtime work, work turn and economic condition

Character	Somatization (mean ± SD)	Anxiety and insomnia (mean ± SD)	Action inefficiency (mean ± SD)	Depression (mean ± SD)	Total (mean ± SD)	P
Over time						
Yes	6.16 ± 4.00	6.20 ± 4.34	6.36 ± 2.08	2.32 ± 3.14	21.10 ± 11.41	0.070
No	5.94 ± 3.60	5.89 ± 3.83	6.71 ± 1.65	2.20 ± 2.48	20.68 ± 8.62	
Work turn						
Fix morning	5.25 ± 3.39	4.98 ± 3.90	6.33 ± 2.20	2.14 ± 2.78	18.77 ± 9.47	0.030
Circulating	6.40 ± 4.08	6.57 ± 4.27	6.47 ± 2.50	2.36 ± 3.10	21.81 ± 11.26	
Economic condition						
Satisfied	6.83 ± 5.34	6.03 ± 5.64	7.00 ± 2.63	2.47 ± 3.70	22.37 ± 15.71	0.110
Relatively satisfied	5.94 ± 3.72	6.00 ± 3.93	6.31 ± 2.26	2.10 ± 2.54	20.39 ± 9.72	
Dissatisfied	6.16 ± 3.21	7.00 ± 3.90	6.48 ± 2.87	3.18 ± 3.91	22.96 ± 9.70	

SD: Standard deviation

By economic condition the group that were relatively satisfied had better mental health condition but without significance.

### Discussion

Complete and relative frequencies Showed that mean general health score in this study was 21, 32.2% of samples had scores higher than cutoff (16) and 67.8% had scores lower than cut-off. Mean scores of three subscales (somatization, anxiety and sleep disorders and social malfunction) is higher than norm score (6) and in depression and intend to suicide subscales is lower than norm score. Men are healthier than women, but in anxiety, sleep disorders and depression despite high scores of women compared with men, it is not significant. Samples with associate degree have lowest scores and samples with MSc degree have highest score of mental health, but the difference isn't significant.

General health score in not married ones was higher, but it was not significant. Samples who had three or more children had lowest mental health score with significant difference ( $P < 0.05$ ).

Even though most of studies had some limitations, the data imply that mental health level in Iran's general population differs from 11.9% to 23.8%. A study about mental health condition in people > 15 years in Iran showed that 21% of people doubtedly suffer from mental health.

Mental health of paramedical and health personnel is exposed to danger more than other groups of society, the most important reason is stress or nature of these professions, work turns especially night shifts, unexpected conditions, overwork, disproportion of wage with their job difficulties, organizational and individual factors.

On the other hand most of the personnel of these jobs are women who are responsible of housework and nursery too, that increases anxiety, stress and job exhaustion and threatens their mental health. There are different statistics about prevalence of mental health disorders among nurses all around the world (34%, 41%, 21%, 48.8%), according to these prevalence mental health disorders among nurses is high. General health mean score according to A scale

(somatization) 6.09, B scale (anxiety and sleep disorder) 6.14, C scale (social malfunction) 6.43 and D scale (depression and intention to suicide) was 2.30. Mean score of social malfunction (6.43) showed the highest disorder. By subscales of this questionnaire, social malfunction frequency was the highest one (50.5%) and depression and intention to suicide frequency (8.4%) was the lowest one. A number of other researchers also came to the same conclusion in their assessment of the mental health level of nurses (11,17-23).

Circling or night shifts account for higher sleep disorders and social malfunction that inhibits people from social interactions. It is obvious that even though mean difference of some scales as sex, number of children and working turns is significant, in other cases there are obvious differences that will change to significant soon. According to the saying "prevention is better than cure" can deal with good planning, and proper teaching.

Findings can be used as a source of information and statistics to help authorities and programmers of mental health. Significant prevalence of mental health disorders needs to be paid attention. Interventions like group encouragement, interfering them in decision making, job supporting, decreasing conflictions, Psychological interventions to decrease job stressors and increasing coping skills with work environment are recommended.

### Ethical issues

This research was approved by the Ethics Committee of Tabriz Branch, Islamic Azad University.

### Conflict of interests

We declare that we have no conflict of interests.

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