The study of mental health status among staff

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Abstract

Introduction: Mental health is an important matter in human life and very effective in personal and social life. The aim of this research is studying the effective factors on mental health such as depression, job stress, type of personality physical activity in employees working environment.

Methods: The research is descriptive-cross sectional study and the sample includes 749 individuals of official staffs selected via two-step cluster sampling. The samples were selected, conditioned to at least 1 year medical health history and lack of any apparent physical or mental health. The following questionnaires were used for evaluation: General Health Questionnaire (GHQ), Health and Safety Executive (HSE), Physical Activity Questionnaire (AFPAQ), Beck Depression Questionnaire, Framingham Personality Questionnaire and Demographic information scale. Descriptive statistical methods and inferential ones, also SPSS was used for data analysis.

Results: Results show that there is negative meaningful relation between job stress and mental health. Also there is a meaningful relation between mental health sub-scales with job stress .There is a meaningful statistical correlation between mental health and sub-scales job stress. Results show that there is a meaningful relation between physical activity while working and Physical activity while relaxation and tiredness with mental health. Based on the results, depression has a positive meaningful relation with each of the mental health sub-scales. Also, mental health had a positive and meaningful with depression, Personality Type had a meaningful statistical and indirect correlative relation with mental health. Also correlation of Personality Type and each of mental health sub-scales; somatic symptoms, anxiety/ insomnia, Social dysfunction and depression was

Conclusion: Results show the importance of staff mental health in job environment in order to improve organizations efficiency. Psychological evaluation while hiring staff and during cooperation protects individuals and organizations from wasting resources.

Keywords: Mental Health, Depression, Stress, Personality Type, Physical Activity

Introduction

Mental health is one of the evaluation factors of indices in society[1] which is in fact a general conception of health [2]. From WHO's point of view, mental health is nothing but lack of mental disorders and includes mental goodness, self-efficacy perception, independency, competency, inter-generation dependency, self-actualization of potential mind and emotional abilities [3] . WHO [3], in 1990, announced that five out of ten diseases that has caused most disabilities in the world are mental disorders including basic depression, drug and alcohol misuse, Bipolar affective disorder, Schizophrenia and Obsessive-Compulsive Disorder. In most resent predictions by the WHO, from 2002 to 2030, depression disorder in developed countries arises from 4th place to 1st place and in developing countries (with 80% of world's population) from 4th to 2nd place after HIV [4].

In a research, it was reported that mental disorders prevalence in Iran is 21% (25.9 in Women and 14.9% in Men)[5] which is 14.5 % of the total diseases and after accidents, shared the second place with cardiovascular diseases [6].

As all the aspects of human life is very important, there are several studies relating to mental health investigations in various conditions, such as job, which have been reported [7]. Many Factors in job environment widely effect health and disease of staff[8] . International Labor Organization (ILO)[9] reported that one out of three staff believe that conflicts between job and home environment is one of biggest problems in life. Thus, continues investigation of staff physical and mental health in order to improve the welfare and health level is one of the most important goals in each organization [10]. So awareness of effective factors on mental health and risky ones are necessary.

Among the factors that cause mental disorders are psychological ones such as depression, stress [11], type of personality [12] and physical inactivity [13]. Several studies deal with the effect of stress and depression on mental health. *Gigantesco* [14], for example, reported the effect of stressful factors in job environments on mental health. Results of studies on mental health and type of personality show that there is a meaningful correlation between type of personality and mental health [15] and physical activity can effect positively on mental health [16].

As the mental health is an important matter in human life and effects on individual life and society, the aim of this research is studying the effective factors on mental health such as depression, job stress and type of personality physical activity in employees. Notice that having some important and effective factor simultaneously, having a suitable volume, wide various geographical range and sampling from different places of Iran are advantageous of this research.

Methods

This research is analytical - cross sectional and samples include all official staff of the government with at least 1 year experience and non-retirement during study, also conditioned to have no obvious physical or mental diseases. The sampling started by dividing provinces of the country based on climate division of Iran [17] into 6 regions, Caspian region, mountain, internal foothill, external foothill, central and south regions. Due to the limitation in no of questioner, just four region out of six; i.e. Caspian region, mountain, external foothill and central regions studied. The sample table was calculated by *Morgan* and *Krejcie* table of estimated sample according to the statistical volume sample [18].

The estimated sample size was 750. Based on the estimated population of each region of the sample, respectively, 44, 88, 353 and 265 respectively for each of the Caspian region, mountain, central and outer foothills were considered. The Gilan and Mazandaran provinces in the Caspian region, the provinces of East Azerbaijan, West Azerbaijan, Ardebil, North Khorasan, Zanjan, Kurdistan, Lorestan, Hamedan, Kermanshah as mountainous regions, cities of Tehran, Isfahan and central Khorasan, Semnan, Qom, Kermanand sampling was done randomly. In this study, descriptive statistics (mean, standard deviation, percent and frequency) and analytical (Chi-square, correlation) and to analyze the data using SPSS version 18 was used.

General Health Questioner (GHQ), is a standard self-report questionnaire designated for all people of the society and includes 28 questions about four sub-scales, each one with 7 questions. These four sub-scales are somatic symptoms, anxiety and insomnia, social dysfunction and depression. The questionnaire is measured by 4 choices: “no, little, much and too much”. The minimum point is 0 and maximum is 84. Higher point means lower mental health and vice versa. The cutting point, for mental health evaluation, in this questionnaire is 21. Internal and external studies prove the reliability and validity of this questionnaire [19].

Health and Safety Executive (HSE): Designated in seven fields: 1-Demands: includes subjects such as work load, characteristics and job environment. 2-Control: to say that how much a person is in the right way. 3-Managerial Support: amount of support given by manager or the organization person work for. 4- Peer Support: amount of support given by peers. 5-Relationships: increasing positive characteristics in order to increase mass communication and to decrease struggling and conflicts in job environment. 6- Role: correct perception of person’s role in the work and organization, and finally 7- Changes: organizing and changing resources of an organization. Various studies for achieving validity, suitable content of the questionnaire, also various fields and less questions in compare to competitors’ questionnaire are some of the advantageous of this questionnaire [20]. The questionnaire includes Likert 5 Choices (never, seldom sometimes, often and always) with a Min point of 0 (having more stress) and a Max point of 5 (more mental health and lower stress). The reliability and validity of this questionnaire is investigated by Gholami and Azad [21].

Azad and *Fesharaki* Physical Activity Questionnaire (AFPAQ): the questionnaire includes 13 question with Likert 5 Choices in three fields “physical activity during job”, “physical activity during leisure time” and “Tiredness”. The questionnaire was normalized via content and structure validity and its reliability reported as 70% in re-testing [22].

Beck Depression Questionnaire: in order to measure the depression, Beck standardized questionnaire was used. It includes 21 questions each one with four choices from 0 to 3. In order to evaluate the depression of each person, all points are added and calculated then based on the final score, the type of depression is determined (0-9 no symptom, 10-18 low depression, 19-29 medium depression, 30-63 severe depression) [23]. The symptoms evaluated by this questionnaire are emotional, motivational and cognitive and finally physical symptoms [24]. *Beck* depression questionnaire

has been used for measuring depression in clinical researches and has been designated bay Beck in 1961 and revised in 1974. The questionnaire has been widely psychometrically evaluated since writing [25] . *Fata* (1992), narrated by *Posht Mashhadi* et al. [24] has reported the correlation coefficient between Beck depression test and Hamilton depression rating scale in Iranian subjects as 0.66. Also, the correlation of all the questions was between 0.31 and 0.68. In another study, the calculated coefficient reported from 0.73 to 0.92 with an average of 0.86 [25].

Framingham personality type inventory: this questionnaire is used for measuring personality type. It contains 10 questions. The first five questions have four choices (never, little, much and too much) and the second ones are "yes, no". The minimum score is 0 and the maximum is 10. Higher scores is mostly close to the Type A personality. Reliability and validity of the questionnaire in various studies are expressed (i.e. high content validity and Cronbach's alpha 0.7) [26].

Demographic information questionnaire includes sex, age, education, marital status, occupation and experience. Here, after the selection of examinees, they were reassured that the answers are safe and are specifically for the research aims. Afterwards, examinees were asked to choose the closest choice to their conditions in previous month.

Results

The sample includes 749 individuals, 54 women (7.3%) and 685 men (92.7%). Among these, there were 175 singles (23.6%) and 566 married (76.4%). The education level was as follows: 60 with school education (9.3%), 202 Diploma (31.3%), 178 Associate Degree (27.6 %), 205 B.A and higher degrees (31.8%). Job background was as follows: 187 below 5 years (27.8%), 150 between 5-10 years (22.3%), 112 between 11-15 years (16%) and 224 over 15 years (33.3%).A hundred and thirty three had one child (33.4%), 130 with two children (32.7%), 135 more than two children (33.9%). Age: 163 below 25 years old (22.1%), 402 between 26-40 years (54.4%) and 174 over 40 years (23.5%). Forty seven were smoking (6.4%) and 687 were non-smoking (93.6 %). Job satisfaction: 138 completely satisfied (18.8 %), 412 satisfied (56%), 64 had no idea (8.7%), 82 unsatisfied (11.1%) and 40 completely unsatisfied (5.4%). Five individuals were low weighted (0.8%), 354 normal weight (53.5%), 257 overweighed (38.8%), 41 fat (6.2%) and 5 individuals were morbid obesity (0.8%). The relation between demographic factors are shown in Table1.

Results show that the staff with ages over 41 years old, 15 years job experience, men compared to women, married ones compare to singles and those with education associate degree have more mental health.

Based on Pierson correlation (table 2), results show that there is a negative meaningful relation between job stress and mental health (R= -0.47). Also, there are meaningful relations between sub-scales of somatic symptoms, anxiety/ insomnia, Social dysfunction and depression with job stress in -0.45, -0.43, -0.31 and -0.40, respectively. There are also a meaningful relation between mental health and sub-scales of demands, control, managerial support, peers support, relation, role and changes in -0.35, -0.24, -0.38, 0.37, 0.32, 0.27 and 0.28 respectively.

Table 1. Mental health's percent in demographic variables

age	N	Percent*	Work Experiences	N	percent	Sex, Marital state	N	Percent	Degree of education	N	percent
<25	118	72.4	<5	142	75.9	Male	535	78.1	School	40	66.7
25-40	303	75.4	5-10	116	77.3	Female	37	68.5	Diploma	145	71.8
>41	151	86.8	11-15	82	73.2	single	125	71.4	Associate diploma	147	82.6
p-value	0.002		>15	186	83	Married	449	79.3	Post Graduate	165	80.5
			p-value	0.149	p-value	sex	0.127		p-value	0.01	
						Marita State	0.038				

* Percent of mentally healthy people

Table 2. The correlation between job stress and its sub-parts with four parts of mental health questionnaire and General mental health questionnaire

Varibale	Total stress	Changes	Role	Relation	peers support	managerial support	Control	Demand	Correlation/ P-value
Somatic symptoms	-.450**	-.283**	-.240**	-.321**	-.361**	-.351**	-.213**	-.306**	Correlation
	.000	.000	.000	.000	.000	.000	.000	.000	P-value
Anxiety/ Insomnia	-.432**	-.234**	-.287**	-.306**	-.324**	-.324**	-.181**	-.354**	Correlation
	.000	.000	.000	.000	.000	.000	.000	.000	P-value
Social dysfunction	-.317**	-.205**	-.176**	-.192**	-.233**	-.254**	-.183**	-.230**	Correlation
	.000	.000	.000	.000	.000	.000	.000	.000	P-value
Depression	-.408**	-.252**	-.329**	-.206**	-.339**	-.304**	-.216**	-.246**	Correlation
	.000	.000	.000	.000	.000	.000	.000	.000	P-value
General mental health	-.479**	-.283**	-.276**	-.322**	-.376**	-.377**	-.244**	-.351**	Correlation
	.000	.000	.000	.000	.000	.000	.000	.000	P-value

According to Pierson correlation (table 3) there is a relation between physical activity during job, during relaxation and tiredness with mental health in -0.139, -0.353 and 0.339 which are all statistically meaningful. Mental health scales (96anxiety/ insomnia, Social dysfunction and depression) and physical activity while working in -0.128, -0.075, -0.144; and also sub-scales of somatic symptoms, anxiety/ insomnia, Social dysfunction and depression were in correlation with physical activity while relaxing in 0.322, 0.310, 0.237, 0.283 (P<0.001).

According to Pierson correlation (table 4), there is a positive meaningful relation between depression with sub-scales of mental health; somatic symptoms, anxiety/ insomnia, Social dysfunction and depression (0.723, 0.781, 0.561 and 0.75) which are all meaningful statistically. Mental health scales (anxiety/ insomnia, Social dysfunction and depression) and physical activity while working in -0.128, -0.075, -0.144; also sub-scales of somatic symptoms, anxiety/ insomnia, Social dysfunction and depression were in correlation with physical activity while relaxing in 0.322, 0.310, 0.237, 0.283 (P<0.001). General mental health has a positive meaningful relation with depression in level 0.0001 (0.83). But type of personality has an indirect correlation and meaningful relation with mental health (R^2=-0.0301). based on table 4, the correlation coefficient of type of personality was meaningful with the sub-scales of somatic symptoms, anxiety/ insomnia, Social dysfunction and depression in -0.246, -0.275, -0.216 and -0.254 (in level 0.0001) , respectively.

Discussion

The current research aims to study the effective factor on mental health. Results show that there is a negative meaningful relation between job stress and mental health. In other words, more increase in job stresses leads to more risk in mental health. Current finding is in correlation with *Shahraki-Vahed* et al. [27], *Hashemi-Nejad* et al.'s study [28]. In fact mental health is one of the factors in overcoming negative effects of job stress [27].

Results show that there is a positive correlation and meaningful relation between mental health and physical activity during relaxation which is in correlation with *Sadeghpoor* et al. [29] and *Mortazavi* et al. [30] studies which reported meaningful relations between four sub-scales of mental health and physical activity. We can say that physical activity prevents Cardiovascular, Diabetes and other systematic diseases and effects physical , mental and ability of patients [31].

Other findings of the research show the meaningful relation between depression and mental health; i.e. as depression increases, mental health is affected negatively too. *Babaei* et al (2013) show that increase of mental health, decreases depression. *Janson* et al (2011) also reported that as depression period lasting long, health condition declines. Those with higher mental health, feel better and show these feelings, but depressed patients tend toward high level of neurotic [32]. In fact, a person with higher mental health is in better mental welfare, self-ability, autonomy, and efficacy. As the mental health is somehow a kind of welfare in which person recognizes his abilities, then he is able to compatible himself with stress, depression and other common life problems [33].

Table 3. The correlation between physical activity and it's sub-parts with four parts of mental health questionnaire and mental health's total score

Variable	Correlation / value	physical activity while working	Physical activity while relaxation	Tiredness
Somatic symptoms	Correlation	-.071	.332**	-.298**
	P-value	.059	<0.001	<0.001
Anxiety/ Insomnia	Correlation	-.128**	.310**	-.344**
	P-value	.001	<0.001	<0.001
Social dysfunction	Correlation	-.075*	.237**	-.209**
	P-value	.047	<0.001	<0.001
Depression	Correlation	-.144**	.283**	-.239**
	P-value	<0.001	<0.001	<0.001
General mental health	Correlation	-.139**	.353**	-.339**
	P-value	.001	<0.001	<0.001

Table 4. The correlation between depression and personality type with four parts of mental health questionnaire and General score of mental health

Variable		Depression	Personality Type
Somatic symptoms	Correlation	.723**	-.246**
	P-value	.000	.000
Anxiety/ Insomnia	Correlation	.781**	-.275**
	P-value	.000	.000
Social dysfunction	Correlation	.561**	-.216**
	P-value	.000	.000
Depression	Correlation	.750**	-.254**
	P-value	.000	.000
General mental health	Correlation	.835**	-.301**
	P-value	.000	.000

The relation between type of personality A and mental health show that the more tendency towards Type A, the more risk in mental health. This is in correlation with *Aghili Nejad* et al. [34], *Atash-Afrooz* [35] and Gaiter et al.'s studies [36]. Those with Type A personality have specific behavior patterns such as talking fast, competitiveness, impatience, working hard, aggression, severity, intense feeling of lack of time and doing multiple jobs simultaneously [37]. Thus such persons are susceptible to diseases [38].

Conclusion

The results show that there are meaningful relations between job stress, depression, physical activity and type of personality with mental health. This shows the importance and necessity of considering staff mental health in job environments in order to increase efficiency in organizations. Organizations can protect their personnel and themselves from waste of resources by psychological evaluation, while hiring staff and during cooperation, in order to improve mental health.

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