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Mental Health Status of Hospitals Staff in Iran

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Abstract: Public well being is a perquisite for sustaining, community job and educational performance of the society which is achievable through physical mental health programs. One of important dimension of sustainable development includes health sectors which has direct influence of human health. This is possible only through healthy and motivated human resources health sector. Thereby, this study was conducted aiming in assessing the mental health status of human resources of shiraz hospitals and community performance it also studies the occupational risk factors, in relation human resources health and relationship between migraine - TTH and their mental health status. The sample size includes 1023 Shiraz hospital staff. The subjects were selected using categorical random sampling method. Data was collected using a questionnaire, which included demographic, occupational and health status of staff. The health status was assessed using GHQ_{28} standards. The diagnostic criteria of type of headache were done by using international headache society standards and interview and medical examination by a neurologist (466 individuals). 45.6% of staff had poor mental health, prevalence among male and female were 27.6(16 cases) and 54.3 (380 cases), respectively. Their average score in physical health, anxiety, social functions, depression and general mental health statue were 6.72, 6.67, 6.48, 3.28 and 23.2% respectively. Mental health status had a meaningful relationship with steep pattern, physical activity and job satisfaction. Females had more odds to disorder and results show that headache has a profound effect on mental health status and these two are not independent of each other. Findings indicate that mental health disorders have a high prevalence; thereby authorities and researchers need to pay more attention to this issue, through identifying influential factors and developing intervention programs to improve the situation. To improve the sleep pattern and make facilities available for physical activities, are essential for staff satisfaction. High co morbidity between headache and GHQ requires specific strategy and intervention development.

Key words: Migraine, Tension-Type Headache (TTH), prevalence, General Health Question (GHQ)

INTRODUCTION

Word health organization defines the health as a state of complete physical, psychological and social well being (Soltanian *et al*., 2003). Public health is a perquisite for sustainable social, occupational and education performance, with the aim of offering community mental health programs (Baherinia and Noor, 2003). In other words, well being is appropriate physical, psychological and social reaction to internal and external factors to keep the individual healthy (Baherinia and Noor, 2003). In regards to WHO statistics about 52 million individuals suffer from mental disorders, 250 million individuals have minor mental diseases and the situation in Iran is not tower than other country (WHO, 2007). According to national survey of health and disease GHQ Questionnaire, rate of disorders was 21% for individuals above 15years of age in Iran (Noorballa and Mohmmad, 1998). In this study highest prevalence of poor mental health was 39.1% in CHAHAR MAHAL BAKHTIARIE province of Iran (Noorballa and Mohmmad, 1998). In 1999, W.H.O reported that working population and has more odds to disorders, injuries and mortality (WHO, 1990). It is believed that one of the most important sectors of sustainable development is health sector which its performance depends on the well being and health of its staff (Mehrabi and Ghazavi, 2003). Researcher indicates that most of the mortality of these in employment age is due to suicide and homicide which has a high relation with their poor mental health (Soltanian *et al*., 2003).

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According to the study of Sato *et al.* (2006) and Larosa *et al.* (2005) maintenance and prevention of psychological disorders and mental health can reduce suicide rate dramatically. In addition high co-morbidity of anxiety and depression in those who have headache and their relationship indicates the importance of paying attention to health of staff, (Merskey *et al.*, 1985; Cassidy *et al.*, 2003; De mirturk *et al.*, 2002; Demjen and Bakal, 1981; Nadaoka *et al.*, 1997) other studies also show that heart attack, stroke and cardio vascular diseases have relations with psychological status of individuals (Rasul *et al.*, 2002; Rabinson *et al.*, 2004; May *et al.*, 2002).

MATERIALS AND METHODS

The survey was conducted between June and December 2005 among staff of 24 hospitals of Shiraz (south of Iran) who had at least, one - year record of service. A random sample of 1023 (20%) of the hospitals staff population was selected. Sampling method was categorical and the categories were nursing group (nurses, health workers and abstrictions), managerial and clerical group and the menial group. Sampling method of any group was carried out systematically. Data were collected by screening questionnaire followed by clinical interviews, general physical and neurological examination and diagnostic criteria of International Headache Society (IHS). IHS questionnaire was a semi structural questionnaire which proceeded to clinical characteristics of migraine and TTH. A face to face interview was conducted by 6 trained lay interviewers to all and eligible members in Shiraz hospitals. Subjects reported more than 5 times headache during preceding year were invited to have a free mental health examination and filling IHS questionnaire, followed by clinical interview, general physical and neurological examinations. Mental health was assessed by patient self- report using the General Health Questionnaire (GHQ28). The GHQ is a 28- item measure that rates general psychological distress over the previous 2 weeks. The cut point of marks was 22. To asses of relation headache and mental health was used Mann- Whitney and to asses of relation of mental health with demographic and occupational variables was used univariate and multiple regression. Test of significance were 2-tailed and the level of statistical significance was at $p<.05$. Analyses were performed using SPSS, Soft ware version 13. 0.

RESULTS

Of 1023 subjects (312 male and 711 female) 466(%45.6) (CI 95%:45.5-45.7%) subjects had mental disorder. The mental health score was compared among the subgroups established according to demographic data and the job factors. Prevalence of these disorders in male staff was 27.6% (86cases) and in female staff was 54.3% (380cases). A significant difference was observed between males and females in mental health status ($p<.0001$), the mental disorders prevalence had highest prevalence in nurses group (51%). The score of mental health among staff of hospitals was 23.2 (CI95%23.1-24.0) (Table 1).

The Table 2 shows the mental health items scores (mean+_ SD and classified score according score of 0-6, 7-13 and 14-21, respectively with disorders, suspicious and without disorders).

The GHQ scores were compared with the subgroups classified by headache. There was significant relation between Body healthy index ($p<0.001$)and anxiety ($p<0.005$) with migraine, body healthy index ($p<0.001$), social function ($p<0.002$), depressing ($p<0.013$) and anxiety ($p<0.001$) with TTH and body healthy index ($p<0.001$), social function ($p<0.002$) and depressing

Table1: Comparison of GHQ subgroup classified by demographic and job factors

Variable	Subgroups	Disorder frequency (prevalence)	Variable	Subgroups	Disorder frequency (prevalence)
Sex	Female	86(27.6)	Night shift	have	264(43.8)
	Male	380(53.4)		Don't have	202(48.1)
	Single	159(6/48)			
Marital status	Married	279(43.3)	Physical activity	have	355(50.5)
	Widow(widower)/spouse dead	28(53.8)		Don't have	111(34.7)
School education	University	38(48.7)	Satisfying of job	have	298(39.7)
	High school	157(41.3)		Don't have	168(61.8)
	Lower high school	271(48.0)			
Having child	Have	77(46.4)	Sleeping status	Normal	209(33.4)
	Don't have	230(43.6)		Subnormal	257(64.6)
	Nursing group	272(51.0)	Second job	have	412(45.6)
Post	Clerical group	98(40.8)		Don't have	54(45.0)
	Menial group	96(25.0)			
Hospital type	Private	290(47.2)			
	State	176(43.1)			

Table 2: Scores of mental health questionnaire

GHQ items	Score	Frequency (%)	Mean (CI95%)	GHQ items	Score	Mean (CI95%)	Frequency(%)
	0-6	556(54.3)			0-6		453(44.3)
Body healthy	7-13	384(37.5)	6.72(6.45-6.99)	Social function	7-13	6.48(6.30-6.66)	548(563.6)
	14-21	83(8.1)			14-21		22(2.2)
	0-6	552(54.0)			0-6		841(82.2)
Anxiety	7-13	363(35.5)	6.67(6.38-6.69)	Depressing	7-13	3.28(3.03-3.53)	148(14.5)
	14-21	108(10.6)			14-21		347(3.3)

Table 3: Odds ratio of quantitative risk factors for poor mental health by univariate logistic regression

Risk factors	Subgroups	OR	CI95%	(p-Value)
Female genders		3.02	2.26-4.03	0.0001*
School Education	University			
	High school	0.74	1.21-4.55	0.33
	Lower high school	0.97	0.06-1.65	0.90
Marital status	Single			
	Married	1		
	Widow(widower)/	0.81	0.62-1.06	0.12
	spouse dead	1.23	0.69-2.22	0.49
Having child	Have	1		
	Don't have	0.89	0.63-1.27	0.53
Job group	Nursing group	1		
	Clerical group	0.66	0.49-0.9	0.009*
	Menial group	0.60	0.44-.81	0.001*
Habit of physical activity		0.52	0.37-0.68	0.0001*
Subnormal sleeping status		3.6	2.79-4.72	0.0001*
State hospital		0.85	0.66-1.1	0.20
job dissatisfaction		0.41	0.31-0.54	0.0001*
Second job		0.98	0.67-1.43	0.89
Having night shift		1.19	0.93-1.53	0.17

Table 4: Relation of qualitative risk factors with poor mental health by univariate logistic regression

Risk factor	β	SE(β)	p Value
Age	-0.006	0.048	0.41
BMI	0.21	0.021	0.016
Night sleeping rate	-0.098	0.041	0.016
Work hours in week	-0.003	0.005	0.521

Table 5: Odds ratios of risk factors for poor mental health by multiple regression logistics

Risk factor	Subgroup	OR	CI95%	(p-Value)	β	SE(β)
Female gender		2.9	2.1-4.23	0.0001	_	_
School Education	University	1				
	High school	0.57	0.31-1.06	0.07	_	_
	Lower high school	0.52	0.24-1.11	0.89	_	_
Marital status	Single	1				
	Married	0.75	0.54-1.05	0.09	_	_
	Widow(widower)/spouse dead	0.71	0.35-1.44	0.34	_	_
Job group	Nursing group	1				
	Clerical group	0.69	0.44-1.07	0.09	_	_
	Menial group	0.64	0.34-1.07	0.16	_	_
BMI		_	_	0.35	0.018	0.019
Habit of physical activity		0.69	0.51-0.94	0.019	_	_
Subnormal sleeping status		3.28	2.45-4.39	0.0001	_	_
State hospital		0.89	0.67-1.18	0.43	_	_
job dissatisfaction		0.39	0.28-0.53	0.0001	_	_
Night sleeping rate				0.23	-0.57	0.048
Having night shift		1.19	0.93-1.53	0.17	_	_

($p<0.013$) with mixed headache. To evaluate the influence of related factors (demographic and occupational) to the mental health, univariate and multiple Logistic Regression analysis was performed. The independent variables were age, gender, school education, marital status, having child, BMI, hospital status, having night shift, work hours, physical activity, job group, job satisfying, having second job, sleeping status and rate sleeping and dependent variable was regarded as "1" when the GHQ-28 score was 22 or above and as "0"when it was less than 22.

Table 3 and 4 show result of univariate regression logistic analysis. We entered in multiple logistic regression variables with $p \leq 0.20$ in univariate regression

logistic (gender, marital status, BMI, hospital status, job group, physical activity, job satisfying, sleeping status, rate sleeping) (Table 5). The odds ratio of disorders was significantly higher in the subnormal sleeping status ($p<0.001$), female gender ($p<0.001$), job dissatisfaction ($p<0.001$), also with increase physical activity hours had decreased the probability of poor mental health ($p<0.034$) (Table 5).

DISCUSSION

Prevalence of mental disorders was 45.6% (466 individuals) that was considerably high in comparison with other studies (Soltanian *et al*., 2003; Mehrabi and Ghazavi, 2003; Montazery and Shariaty, 2000; Shariaty *et al*., 2001; Bash and Liechti, 1974; Swallow *et al*., 2003). But finding are compatible with the finding of Montazary and Shariaty (2000) which indicators 44% experienced disorders. Prevalence of mental disorders among high school students of *booshehr* province and students of university of Iran were 40.7% (Soltanian *et al*., 2003) and 42.6% (WHO, 2007), respectively. Swallow *et al*. (2003) reported 39.6% of females have mental disorders and in *Roberts* report prevalence of mental disorders was estimated 25% (Gold *et al*., 1992). Cortes *et al*. (2004) indicates that psychological disorders were 8% among men working in non-manual occupations to 19% in women working in manual. The difference in finding may be due to demographic, environmental, social occupational, family structure and also to the method of data collection. Most of the disorder among hospital staff is due to work setting stress. Findings indicate that 27.6% (86 male staff) and 54.3% (380 female staff) had mental disorders and the difference was meaningful ($p<0/0001$). *Soltanians* study among students at *Boshehr* province shows that 44.7% and 37.9% of girls and boys had mental disorders respectively ($p<0.0001$) (Soltanian *et al*., 2003) also some of studies (Shi *et al*., 2005; Kawada and Ooya, 2005; Cortes *et al*., 2004) indicates that there is a meaning difference among genders, furthermore employed women have more odds disorders in comparison to housewives (Poisson *et al*., 2001). In this regard, nursing staff scored higher in GHQ_{28} in comparison to official and menial staff, although there was no meaningful difference in applying multiple logistic. Study of poisoned also indicated that nurse and staff with shift work scored higher in GHQ (Hipwell *et al*., 1989). Other studies emphasize a higher correlation between occupational stress and poor mental health status of human resources (Suzuki *et al*., 2004; Cortes *et al*., 2004; Hipwell *et al*., 1989; Ichimiya *et al*., 2005; Asaoka *et al*., 2004). As report of occupational and safety of international institute, nursed score 27 out of 130 occupations as having psychological diseases (Mehrabi and Ghazavi, 2003). In univariate and multiple regression logistic shows no relationship among second occupation, work hours, night shift with mental health, in this regard study of *Cortes* and *Pyosent* indicates that there is a meaningful difference between work volume and mental health (Cortes *et al*., 2004; Poissonnet *et al*., 2001). Even *Kavada* and *Pyosent* emphasize that reduction in work hours at hospital staff is a good way to prevent and maintain mental health (Kawada and Ooya, 2005; Poissonnet *et al*., 2001). The discrepancy of findings among studies may be due to the control of confounding factors. Relationship of Sleeping and poor mental health was meaningful, there are several study that reported similar result (Soltanian *et al*., 2003; Ichimiy *et al*., 2005; Asaoka *et al*., 2004). There was a meaningful relationship between mental disorders and physical activity that is regard of study result of some studies (Soltanian *et al*., 2003; Chaistensen, 1993). Further analysis of our data verifies that headache generally has an effect on mental health and these two are not independent of each other. As other study there is a positive relationship between anxiety, depression and headache (Merskey *et al*., 1985; Nadaok *et al*., 1997; Robinson *et al*., 2004; Davis *et al*., 1998).

CONCLUSION

Findings of our study suggests that the prevalence at psychological disorder is high and requires much more attention to be paid to this issue by authorities and researchers, in order to identify the influential factors on psychological health and establish a series of interventional programs to improve the mental health of the staff. It is also essential to promote the sleeping disorders through providing sport facilities for staff and improve their job satisfaction which has a profound effect on mental health. Our study determines that serious reform in working condition is required in order to improve staff job satisfaction and as a result to improve the quality at health services. they co-morbidity between headache and observed GHQ, alarms the authorities and health services providers to design specific strategies to prevent and treat both of the disorders.

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