

Mental Health and Related Factors in Physicians Working in Hospitals: A Study in Western Iran in 2016

Parastoo Baharvand (1)

Maryam Hormozi (2)

KHatereh Anbari (3)

(1) Social Determinants of Health Research Center. Lorestan University of Medical Science, Khorramabad, Iran

(2) Department of Biochemistry, Lorestan University of Medical Science, Khorramabad, Iran

(3) Social Determinants of Health Research Center. Lorestan University of Medical Science Khorramabad, Iran

Corresponding author:

Maryam Hormozi

Department of Biochemistry, Lorestan University of Medical Science, Khorramabad, Iran

Email: maryamhormozi@yahoo.com

Received: January, 15, 2018; Accepted: February 15, 2018; Published: April 1, 2018

Citation: Baharvand P. et al. Mental Health and Related Factors in Physicians Working in Hospitals: A Study in Western Iran in 2016. World Family Medicine. 2018; 16(4):85-89. DOI: 10.5742/MEWFM.2018.93350

Abstract

Background and Objective: Attention to mental health is important in all areas of life, including personal, social, and occupational life. One of the factors affecting the mental health of physicians is occupational stress. This study examined the state of mental health in physicians and determined the factors associated with it.

Methods: This cross-sectional study was designed in 2016. The sampling method used was a census method and all the general practitioners working in hospitals affiliated to the Lorestan University of Medical Sciences were studied. The data was collected by the GHQ-28 questionnaire and a checklist containing the demographic characteristics and occupational status of the physicians was provided. The data was analyzed with descriptive and analytical statistics.

Results: Among 120 doctors included in the study, 36 (30%) had a mental disorder. The highest disorder was for anxiety (20 ± 5.7) and the lowest was a social disorder at 11.5 ± 5.5 . The mental health disorder of the physicians was significantly correlated with work experience, the number of shifts worked, income, overtime, marital status, employment status and status of shifts (p value <0.05).

Conclusion: With regard to the results of this study and considering the importance of mental health for the physicians, it is necessary for the managers and the authorities of the health services organizations to provide counseling services in various fields and to adjust the factors affecting mental health in the workplace in order to improve the mental health of members of this group.

Key words: Mental Health, physicians, disorder

Introduction

One of the components of health is the mental dimension of health. Maintaining mental health is as important as bodily health. There may be some measures in this regard, but mental health services are mainly allocated to a small group of people who have serious and obvious problems [1].

Mental health is a knowledge or art that helps people adapt to their environment by establishing sound psychological and emotional methods and which enables them to choose the best solutions to their problems [2].

Problems in the field of mental health have existed since the advent of humanity; no particular economic or social class is immune to them [3].

According to the available evidence, mental disorders are one of the most common components of diseases and by 2020, the share of mental disorders is expected to increase by about 50% of the total burden of disease [4]. Information from epidemiological research in this country implies that the prevalence of these problems in this country is not lower than in other countries. Regarding the prevalence of psychiatric illnesses in people aged 15 years and older in Iran, an epidemiological study in the country has found that altogether 21% of the subjects in the country suffer from mental disorders and about 10–12 million adults require mental health services. In addition, about 0.6% of the patients suffer from psychiatric disorders [5].

Mental health issues are one of the major problems that add to financial burden. The cost of dealing with psychiatric problems in Europe and North America in 1999 was \$ 120 billion [6].

Attention to mental health is important in all areas of life, including personal and social life and occupation. Occupation is one of the areas where mental health is of significance. The US National Occupational Safety and Health Administration (NSA) has introduced medicine at the top of 40 professions with a high prevalence of stress-related diseases [7]. In the medical profession, there are many stressful occupational factors like working in the shift system, workload, conflict with colleagues, frequent contact with suffering and death of patients, a lack of supporting resources, and a lack of time to address the patients' emotional needs and their own professional responsibilities.

Disruptions in the health of physicians may lead to poor performance and insufficient quality of care for patients: hence, attention to mental health of this stratum is important [7].

Few studies have been conducted on the level of mental health in doctors and related factors. Considering the inevitability of some factors affecting mental health and the need to prevent their psychological effects, the use of specific measures to improve the working environment can be helpful. This study was designed to determine the

level of mental health and the identification of the relevant factors in physicians.

Methods

Study setting and sample

This cross-sectional study was designed for general practitioners working in teaching hospitals affiliated to the Lorestan University of Medical Sciences in 2016. Census sampling was done and all physicians working in educational hospitals were studied.

Measurement and device

The data collection tools were a GHQ-28 questionnaire and a checklist containing the demographic characteristics and the physicians' occupational status (age, gender, marital status, work record, employment status, overtime, job condition, and income level). The GHQ questionnaire was first designed by Goldberg (1972) to identify and differentiate people with mental disorders. In this study, a 28-question form was used. This questionnaire has four dimensions—A, B, C, and D—and each scale has seven questions, with four categories of disorders including anxiety, physical problems, social function disorder and depression disorders.

The validity and reliability of this questionnaire has already been confirmed in previous studies [8–10]. In this study, Cronbach's alpha value for the physical symptoms was 0.84, for anxiety was 0.85, for social function was 0.79, for depression was 0.81, and for the total questionnaire was 0.91, which indicates the acceptable internal consistency of this questionnaire. The replies were encoded as a Likert Score (0-1-2-3). The cut-off point in this study was that individuals with a score of less than 23 were in the healthy group and those with a score of 23 and above were categorized in the group with mental disorder [11, 12]. In the case of subscales, the cut-off point was also considered. This means that six and fewer signs indicated a lack of disorder and higher than six signs was considered as a disorder in the sub-scale [11, 12].

Statistical methods

After collecting the questionnaires, the data was entered into the software SPSS Version 22 and using descriptive statistics (mean, standard deviation, and frequency), t-test analysis statistics, one-way ANOVA (groups were compared with Tukey's post hoc test), and multiple logistic regression (for controlling confounding and predicting factors related to mental health), the data has been described and analyzed. A significance level of $P < 0.05$ was considered.

Results

In this study, 120 subjects were interviewed and, of them, 37.5% were female and 62.5% were male. The mean age of the participants was 38.9 ± 9.8 years. The youngest participant was 27 years old and the oldest was 55 years old. Of the total number of participants, 72.5% were married, 56.6% had a record of work experience less than 10 years, 20.1% had an official record, 57.5% worked

overtime, 53.4% had more than 20 shifts in a month and 34.2% had an income of more than six million.

Of the 120 physicians, 36 (30%) had mental disorders and 84 (70%) had no mental health disorder. In examining the dimensions of the mental health questionnaire administered to the physicians, the highest disorder was for anxiety (25 ± 5.7) and the least was for social function at 11 ± 5.5 . In the other two dimensions, mental health, that is, the physical dimension and mean depression, the frequencies were 20 ± 5.9 and 15 ± 4.9 respectively.

Logistic regression analysis was used to modify the effect of the confounders and the results are shown in Table 1. In the single group, the probability for mental health disorder was 1.3 [OR: 1.3 95% CI (1.2–4.9)]. In the group with more than 20 shifts, the probability of mental health disorder was 2.4, [OR: 2.7 95% CI (1.5–3.6)]. In the night shift group, the probability of mental health disorder was 1.8 [OR: 1.8 95% CI (1.4–5.7)]. In the group with income of less than 4 million, the probability of mental health disorder was 2.1 [OR: 2.1 95% CI (1.7–6.5)]. In the group with contract employment status, the probability of mental health disorder was 3.2 [OR: 3.2 95% CI (2.5–6.6)]. In the group with less than 10 years of work experience, the probability of mental health disorder was 2.4 [OR: 2.4 95% CI (1.5–5.1)]. Overtime increased the probability of mental health disorder by 3.6% [OR: 3.6 95% CI (2.2–6.5)].

Table 1: The frequency of job and demographic variables in the groups with or without mental health disorder

Variable	Mental Health Disorder (%)	Lack of Mental Health Disorder (%)	P value
Age = <30	5 (31.2)	11 (68.8)	0.45
31–40	10 (32.2)	21 (67.8)	
41–50	13 (26.6)	32 (73.4)	
51–60	8 (28.5)	20 (71.5)	
Male	28 (37.4)	47 (62.6)	0.12
Female	8 (17.7)	37 (82.3)	
Marriage Status			0.03
Single	8 (32)	17 (68)	
Married	25(28.8)	62(71.2)	
Divorced	3(37.3)	5(62.7)	
Work experience less than 10 years	25(36.8)	43(63.2)	0.01
Work experience of 10 to 20 years	10(31.3)	22(68.7)	
Work experience of 21–30	1(5)	19 (95)	
Employment Status = Contractual	24(41.4)	34(58.6)	0.002
Employment Status = Contract	9(23.7)	29(76.3)	
Employment Status = Official	3(12.5)	21(87.5)	
Shift time			0.001
Morning	5(27.7)	13(72.3)	
Afternoon	4(23.5)	13(76.5)	
Night	22(35.4)	40(64.6)	
Rotational	5(21.7)	18(78.3)	
Overtime = Yes	30(43.5)	39(56.5)	0.001
No	6(11.8)	45(88.2)	
Number of shifts			0.04
Less than 10 shifts	5(27.7)	13(72.3)	
10–20 shifts	9(23.6)	29(76.4)	
More than 20 shifts	22(34.3)	42(65.7)	
Income of less than 4 million	17(36.9)	29(63.1)	0.001
Income of 4–6 million	9(27.2)	24(72.8)	
Income of more than 6 million	10(24.3)	31(75.7)	

Discussion

The present study was designed to investigate the state of mental health in physicians and to investigate the factors affecting it. The findings of this study showed that (30%) of the subjects had mental health disorders. The results of this study are similar to other studies conducted in this regard. Claplan stated that in the UK the level of stress, anxiety, and depression among hospital staff was more than expected [13]. In a study by Flaherty & Richman mental illness in the US was reported by 23% of the doctors [14]. In a study conducted by Firth-Cozens, 20% of the physicians had some kind of mental health disorder [15].

Another finding of this study was the relationship between mental health disorders and marital status. The results of Masoomeh Saberian's study showed that those who do not live with their partners or reasons such as death, divorce or other causes are more affected by mental illness [16]. In a study by Firoozabadi, the relationship between mental health disorders and marital status is also mentioned [17]. With regard to these results, it can be said that married people are in a better position in terms of social and psychological performance than single or divorced physicians and this can be due to factors such as the difference caused by communicative and participatory skills.

The results of our study showed that there is a significant relationship between the employment status and overall mental health score. Similar results were obtained in the study of Mustafa Brezidah [18]. Naturally, the more people feel they are at risk in terms of job security, the more they ruminate mentally, looking for the right solution to leave the current job, and focusing on finding a better and more permanent job. In such a situation, the likelihood of psychological harm increases. In this study, there was a significant relationship between work experience and mental health disorder in the physicians. Similar results were obtained in the study of Mollart [19]. In a study by Tattersall the relationship between mental health disorders and work experience is also mentioned. [20]. This can be attributed to increased experience and adaptation to the stressors as well as better skills.

Another finding of this study was the direct relationship between the number of work shifts and mental health disorder in physicians. In Firth-Cozens' study, there was a significant relationship between the number of shifts and mental health status of the physicians and as the number of shifts increased, psychiatric disorders increased [15]. In the same vein, Poissonnet also reported a significant relationship between the number of shifts and mental health—and the findings are consistent with the results of our study [21]. Long and unpredictable work hours are directly linked to increased stress and psychosocial illnesses.

In this study, there was a significant inverse relationship between income and mental health disorder. This result is not consistent with the results of the study conducted by Lambert et al. [22]. Khaghanizadeh observed a significant

relationship between the economic status and mental health of nurses in their study and it was consistent with our results [23]. Considering the unevenness of income in the subjects of this study, these results are justifiable. Insufficient wages lead to long hours of work and full-time activities which endanger employee health.

In our study, there was a significant relationship between shift status and mental health in the physicians. The group that had night shifts was more affected by mental health problems. This finding is consistent with the results of the study by Mustafa Brezideh et al. and the research by Firth-Cozens [15]. It seems that work in the night shift affects the sleep cycle, causing insufficient rest. Personnel working in night shifts need to sleep during the day, which often does not allow full and undisturbed sleep. Owing to the ambient noise during the day, the quality of sleep is impaired. On the other hand, such professionals tend to sleep for shorter durations so that they can spend some time with family and friends. Also, some of these people may have to do other jobs during the hours of the day for additional income, which causes eventual burnout.

The findings of this study showed a significant relationship between working overtime and the overall mental health score in the physicians. This relationship with overwork was also observed in sub-scales like anxiety and physical dimension. In a study conducted by Morteza Khaghanizadeh on 200 nurses working in teaching hospitals affiliated to the Tehran University of Medical Sciences, there was a significant relationship between the overwork variable and mental health, which was a higher level of psychiatric disorders in overworked people [24]. Also, in a study conducted by Suzuki on the hospital nurses in Japan, there was a significant relationship between mental health and overwork and overworked nurses suffered from more psychiatric disorders [24].

Of the factors that cause mental health disorders in overworked people, it is possible to point out the stressful nature of their professions, workload, exposure to unexpected situations, work shifts, organizational factors as well as individual factors. On the other hand, these stressors also disrupt physical health.

Considering the high prevalence of mental disorders in the physicians and the importance of mental health and wellbeing for healthcare professionals, it is necessary to attract the attention of the doctors to this issue. Meanwhile, the managers and the authorities in the field of healthcare are also required to take action in order to modify some of the psychological pressures on this group, including establishing a balance between the state of shifts, creating job security, and raising wages and salaries in relation to inflation. Another suggestion is that in this country there are many studies on mental health status of nurses working in hospitals but less attention is paid to the mental health status of the doctors. Therefore, more such studies are recommended so that by identifying the factors associated with mental health disorders, the managers in the healthcare sector can plan to prevent and respond to these problems.

References

- 1- Shamlo Saeed. Psychological Health. Tehran. Promotion of growth. 1999: 11-12
- 2- Monir Pour-Nader, Improvement of Student's Mental Health, First Printing, Tehran, Shahid Beheshti University Jihad Publications, 2010, 18-22
- 3- Hatami Hossein, Razavi Seyyed Mansour, Eftekhari Ardebili Hasan et al. A comprehensive school of public health. Tehran. Arjmand Publication. Second edition. Jeld III. 2013. Section 12: 1: 89-1580
- 4- Farhady Y, Ashtari Z, Sadeghi A. Level of Mental Health in a Sample of psychiatric centers professionals. *Teb & Taz Kieh* 2005;14(56):18-23. (In Persian)
- 5- Nourbala Ahmad Ali, Mohammad Kazem, Bagheri Yazdi, Seyyed Abbas, Yasemi Mohammad Taghi. A Study of Mental Health in 15 Years and Upper Persons in Iran in Year 1999. *Hakim Research Paper* 2002. No. 5: 10: 1-1. Hospital Quarterly
- 6- de Vries MW, Wilkerson B. Stress, work and mental health: a global perspective. *Acta Neuropsychiatrica*. 2003 15 (1): p. 44-53
- 7- Goldberg DF, Gater R, Sartorius N, Ustun TB. The validity of two versions of the GHQ in general health care. *Psychological Medicine*. 1997; 27(1): 191-197.
- 8- YaghobiH, Baradaran M. The relationship between mental health with happiness, physical activity and emotional intelligence. *Modern psychological research*.2011;6(23):204-224. (In Persian)
- 9- Rahmani F, Behshid M, Zamanzadeh V, Rahmani F. Relationship between general health, occupational stress and burnout in critical care nurses of Tabriz teaching hospitals. *J of Iran Nursing*.2010; 23(66):55-63. (In Persian)
- 10- Hoseini N, Ahghar GH, Akbari Agh, Sharifi N, Sharifi HP. Research questionnaires in the field of psychology, counseling, education and sociology. Tehran 1387. Publication of Sokhan
- 11- Asad Zandi M, Sayari R, Ebadi A, Sanainasab H,=. Mental health status of Military Nurses. *Tebe nezami*.2009; 11(3):135-141. (In Persian)
- 12- Pourreza A, Monazam MR, Abassinia M, Asghri M, Safari H, Sorani M, et al. Relationship between job burnout and mental health of nurses working in province of Qom. *Journal of hospital*. 2012; 11(2):45-53. (In Persian)
- 13- Caplan RP. Stress, anxiety and depression in hospital consultants, general practitioners and senior health service managers. *Br Med J*, 2008; 309:1261-3
- 14- Flaherty, J.H., & Richman, J.A. Substance use and addiction among medical students, residents, and physicians: Recent advances in the treatment of addictive disorders. *Psychiatric Clinics of North America*, (1993); 16, 189-195.
- 15- Firth-Cozens, J. A perspective on stress and depression. In J. Cox, J. King, A. Hutchinson & P. McAvoy (Eds.), *Understanding doctors' performance*. Oxford: Radcliffe Publishing. (2006); pp. 22-25
- 16- Masoumeh Saberiyan, A survey on mental health status of personnel of Semnan University of medical sciences, Semnan University of Medical Sciences, Vol. 8, No. 2, winter 2006, 76-88
- 17- Firoozabadi Ali, Evaluation of depression and its effective factors in the community of hospitals in Semnan, Final report of the research project, University of Medical Sciences. Semnan, 2006: page 65
- 18- Mostafa Berzideh, Alireza Choobineh. The Dimensions of Job Stress and its Relationship with General Health Status in Nurses, *Quarterly Journal of Occupational Medicine*, Fourth Edition, No 3, Autumn 2011, pp. 17-27
- 19- Mollart L, Skinner VM, Newing C, Foureur M. Factors that may influence midwives work-related stress and burnout. *Women and Birth: Journal of the Australian College of Midwives*.2013 Mar; 26(1):26-32.
- 20- Tattersall, A.J., Bennett, P., & Pugh, S. Stress and coping in hospital doctors. *Stress and health j*.1999; 15(2), 109-113.
- 21- Poissonnet CM, Iwatsubo Y, Cosquer M, Quera Salva MA, Caillard JF, Veron M. A cross-sectional study of the health effects of work. Schedules on 3212 hospital work France: implications for the new French work schedules policy. *J Hum Ergol (Tokyo)*. 2001; 30 (1-2): 387-91.
- 22- Lambert VA, Lambert CE, Itano J, Inouye J, Kim S, Kuniviktikul W, et al. Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among hospital nurses in Japan, Thailand, South Korea and the USA (Hawaii). *Int J Nurs Stud* 2004; 41:671-84.
- 23- Khaghanizade M, Sirati Nayer M, Abdi F, Kaviani H. Assessing of mental level of employed nurses in educational hospitals affiliated to Tehran medical sciences university. *The Quarterly Journal of Fundamentals of Mental Health* 2006; 31-32:141-148.
- 24- Suzuki K, Ohida T, Kaneita Y, Yokoyama E, Miyake T, Harano S, et al. Mental health status, shift work, and occupational accidents among hospital nurses in Japan. *J Occup Health*. 2004 Nov; 46(6):448-54