



Mental Health of General Practitioners in Emergency Wards

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ABSTRACT

Aims General practitioners have an essential role in patient care and are exposed to high levels of job stress. General practitioners' mental health has effects on their functional abilities and medical managements. This study was carried out to evaluate the mental health of general practitioners in emergency wards in Kashan University of Medical Sciences, Iran.

Materials & Methods In this cross-sectional study, all of General practitioners in emergency wards (n=87) were studied. The survey instruments included two questionnaires: 1-demographic variables and 2- General Health Questionnaire (GHQ-28). Data were analyzed using SPSS 16 software and Chi square, Fisher exact and Mann-Whitney statistical tests.

Findings The mean age of general practitioners was 36.11±5.67 years; 89.7% of them were married; 60.3% were male. 41% of the total general practitioners had mental health problems. The mean score of GHQ was 22.56±9.24. There were significant relationships between mental health and each age, employment situation, and number of children (p<0.05). Older physicians had better mental health than the younger ones. There were significant relationships between employment situation and anxiety (p=0.017) and somatic symptom (p=0.03). There were no significant relationships between mental health and each sex and marital status (p>0.05).

Conclusion The majority of employed general practitioners in emergency rooms do not have proper mental health statuses.

Keywords General practitioners; Mental Health; Questionnaires; Emergencies

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Introduction

Mental health has been defined in various ways. In fact, the concept conveys general health of the body. World Health Organization (WHO) has defined it as the state of complete physical, psychological and social convenience without the presence of any diseases [1]. Various factors are involved in mental health impairments, including social injustice, social insecurity, discrimination, and the lack of creative opportunities for individuals [2].

Medicine is regarded as a highly stressed profession so that the physicians may be at risk of psychological problems [3, 4], serious ill health [5], burnout [6] and even committing suicide [7-9]. A systematic review in Australia has demonstrated that the physicians have more problems in using the services than others do [10]. Moreover, a review study in Norway showed that psychological problems are prevalent among physicians, and therefore specialized psychiatric services should be provided for physicians [11]. A study in Spain has reported that the prevalence rate of the problems among physicians has been 25.7% [12]. Based on a study in New Zealand, 29.1% of general practitioners (GPs) experience psychological problems [13]. A study in Sanandaj, Iran, has demonstrated that the prevalence rate of mental disorders among GPs has been estimated as 24.5% [14]. A study in Shiraz, Iran, has shown a lower health status in the medical staff compared with the non-medical ones. The overall prevalence rate of psychological problems among the studied staff was 45.6% [15].

Considering mental health in all aspects of life including personal, social, and professional, it is an important issue and inattention to it may cause inefficiency in work, unemployment and psychosomatic complications, especially in professional degrees. Given that medicine is a highly stressful profession which is closely connected with the health of human, the health of physicians in terms of its psychosomatic aspect influences the populations' health. Taking into account that the GPs' health has not been studied yet and considering that they have contact with a major group of people, the health of this group is of great importance, as mental problems in this group can cause improper consequences related to the diagnoses of diseases and ultimately may increase the mortality rate.

The goal of this study was to study the mental health status of GPs in emergency wards of a number of hospitals in Kashan, Iran.

Materials & Methods

This is a cross-sectional descriptive, analytical study conducted on GPs of the Emergency Departments of Kashan University of Medical Sciences hospitals during 2011. 87 GPs were selected by random sampling method. The inclusion criteria were being certified with the GP training and having worked in emergency rooms of the university hospitals (Serum Darmani, Golabchi, and Shahid Beheshti Hospitals) for at least three months.

Data were collected using demographic questionnaire and the general health questionnaire (GHQ). The demographic questionnaire encompassed data such as age, gender, marital status, employment duration in the departments, history of any psychological or physical disorder, number of children, status of working shifts, and employment status. Goldberg has initially devised GHQ in 1972. It consisted of 60 questions and has 2 shorter forms with 12 and 28 questions. It has been translated into 38 languages and is being used in 70 countries. It is applicable for detecting people at risk of developing psychological disorders [16] and with its two fields (inability to carry out normal functions and the appearance of new phenomena accompanied with a distress nature) it focuses on alternations and normal functioning of brain. The instrument can detect any appeared disorders at least 2 weeks prior to the appearance and is sensitive to transient disorders. GHQ has been used in surveys of the general population, for special groups, and in comparative studies of psychiatric disorders at different times [16].

The 28-item GHQ used in the study has 4 scales; A, B, C, and D. Each scale had 7 questions assessing 4 non-psychiatric disorders like somatic symptoms (questions 1-7), anxiety and insomnia (questions 8-14), social dysfunction (questions 15-21), and severe depression and tendency to commit suicide (questions 22-28). The scale for each disorder is from 1 to 21. Those with scales lower than 14 are normal, but those ranging 14 to 21 have a problem. The validity and reliability have been studied in various countries; the sensitivity and specificity have

been reported 84% and 82%, respectively [17]. In Iran, a study by Palahang *et al.* investigated the sensitivity, specificity, and efficiency of the questionnaire (84, 79, and 84%, respectively) by applying it to 619 candidates over 15 years old who lived in Kashan [18]. The cutoff points for males and females were 22 and 23, consecutively.

The data were collected by referring to the aforementioned departments. After obtaining personal informed consents and ensuring the data confidentiality, the researchers filled in two questionnaires including the demographic questionnaire and the GHQ. Private codes were printed on the questionnaires for confidentiality assurance as well as personal reference which enable the participants to be aware of their mental health.

After collecting data, the data were analyzed using SPSS software by statistical tests such as Chi-square (for determination of association between mental health status and anxiety status with qualitative variables such as sex, age, marital status, work duration, number of children and employment status), Student T (for determination of difference of GHQ score mean in sex groups and employment status), Mann-Whitney (for determination of difference of GHQ score mean in marital status), and Kruskal-Wallis (for determination

of difference of GHQ score mean in age, work duration and number of children groups).

Findings

At first, the sample size encompassed 87 GPs, of which 9 were excluded from the study due to not meeting the inclusion criteria and disinclination to fill in the questionnaires. Ultimately, 78 individuals were included in the study. The mean age of the entire sample GPs was 36.11±5.67 years. Two GPs (2.6%) had history of mental problems and 10 (12.8%) had a physical problem, mostly a backache (3.8%).

32 GPs (41%) had mental disorders. The mean score for GHQ was 22.56±9.24 (the minimum score 9 and the maximum 49). The mean scores for social dysfunction, anxiety, somatic symptoms, and depression were 7.78±1.71, 6.08±3.92, 5.82±3.16, and 2.83±3.45, respectively. The GHQ score in unmarried GPs was higher than that of the married ones. Additionally, that score in female GPs was higher than in male ones. The mean score of GHQ increased with decreasing age (Figure 1).

54 GPs (69.2%) under the age of 30 had mental disorders; younger GPs possessed poorer mental health than the older counterparts did ($p=0.019$).

Figure 1 Comparison between the mean scores of General Health Questionnaire, the prevalence rate of mental health status, and the prevalence distribution of anxiety in general practitioners based on demographic variables (The values in the parentheses are percent and out are numbers)

Variables	GHQ Mean	p value	No mental disorders	Have mental disorder(s)	p value	Positive Anxiety	Negative Anxiety	p value
Age (year)								
≤30 (n=13)	26.53±8.89	0.273	4 (30.8)	9 (69.2)	0.019	1 (7.7)	12 (92.3)	0.308
31-35 (n=23)	23.34±8.29		13 (56.5)	10 (43.5)		3 (13.1)	20 (86.9)	
36-40 (n=25)	20.88±8.16		17 (68)	8 (32)		0 (0)	25 (100)	
≥ 41 (n=17)	20.94±11.66		12 (70.6)	5 (29.4)		2 (11.8)	15 (88.2)	
Sex								
Female (n=31)	24.35±9.31	0.166	17 (54.8)	14 (45.2)	0.148	4 (12.9)	27 (87.1)	0.09
Male (n=47)	21.38±9.10		29 (61.7)	18 (38.3)		2 (4.3)	45 (95.7)	
Marital status								
Single (n=8)	26.37±10.86	0.221	3 (37.5)	5 (62.5)	0.238	0 (0)	8 (100)	0.804
Married (n=70)	22.12±9.02		43 (61.4)	27 (39.6)		2 (2.9)	68 (97.1)	
Work duration (year)								
≤5 (n=30)	24.50±9.08	0.341	12 (40)	18 (60)	0.259	4 (13.3)	26 (86.7)	0.259
6-10 (n=24)	21.62±9.46		17 (70.8)	7 (29.2)		1 (4.2)	23 (95.8)	
≥11 (n=24)	21.08±9.19		17 (70.8)	7 (29.2)		1 (4.2)	23 (95.8)	
Number of children								
No child (n=19)	26.37±9.12	0.114	7 (36.8)	12 (32.4)	0.048	1 (5.3)	18 (94.7)	0.729
One child (n=22)	21.77±7.08		14 (63.6)	8 (36.4)		0 (0)	22 (100)	
≥ 2 children (n=37)	21.08±10.08		25 (67.6)	12 (32.4)		1 (2.7)	36 (97.3)	
Employment status								
Employed (n=28)	18.61±7.67	0.004	21 (75)	7 (25)	0.02	1 (3.6)	27 (96.4)	0.017
Unemployed (n=50)	24.78±9.37		25 (50)	25 (50)		5 (10)	45 (90)	

The mean score of depression in younger GPs was higher than the older ones ($p=0.023$); 38.3% of male and 45.2% of female GPs had mental disorders which was statistically insignificant.

The female GPs had higher somatic symptoms (2.12%) than the male ones. By the increase of the number of children the mental health status increased, so that the GPs with no child, one child, and two children or more scored 36.8, 63.6, and 67.6%, respectively. There was a significant correlation between mental health and the number of children ($p=0.048$). Those GPs employed by the university had higher mental health statuses (75%). There was a significant association ($p=0.02$) between mental health and employment status (Figure 1).

GPs who were not employed had a higher anxiety rate (10%) than the employed ones (3.6%). The unemployed GPs had a higher rate of somatic symptoms than the employed ones. There were significant differences in the anxiety rate and somatic symptoms with employment status ($p=0.017$). There were no significant differences in mental health with gender, marital status, the employment duration, and the history of mental disorders (Figure 1).

Discussion

Studies regarding mental health in various countries demonstrate a score range from 25.7% to 29.1%, which are fewer than the ones in our study [19]. A study in Sanandaj indicates that the mean score in the studied setting was 23.83 ± 9.21 , which was compatible with our results [14]. A study in Kashan by Ahmadvand *et al.* has demonstrated that the prevalence rate of mental disorders in Kashan population is 29% [20]. The result of our study are significantly higher than that of this study, which could be due to a stress, tension or unexpected situations in the workplace, night shifts, organizational factors, and GPs' personal factors, affecting their mental health. In a study in Military University of Medical Sciences of the Islamic Republic of Iran, 47.8% of the participants had mental disorders, which is somehow compatible with our results [21]. A study by Noorbala *et al.* has reported the prevalence rate of mental disorders as 21% [21]. This finding is lower

than the one in our study, which could be due to different sample sizes or different periods of conducting the studies, indicating that mental health of GPs is at a higher risk than the rest of the society.

In the current study, the mental health of younger individuals has been poorer than others, so that the mental health has been improving with increasing age. This may be due to increased experience in dealing with patients, diminished stress, or improved financial status.

In the current study, there is no statistically comprehensible association between the mental health status and gender, which is compatible with the one reported in New Zealand [13]. However, a study in Sanandaj, Iran, has demonstrated that mental problems are more prevalent among females than males [13]. The same results have also been reported by Abdi Masooleh *et al.* [16] and Sahebi & Ayatollahi [22]. The difference might be due to different studied samples.

In this study, there is no statistically meaningful correspondence between mental health disorders and marital status, while a study by Mousavi *et al.* has shown a significant relationship [9], which is incompatible with our results.

In our study, mental health significantly increases with increase in the number of children. A study by Khaghanizadeh *et al.* has revealed that there is no statistical association between mental health and the number of children [23], which is incompatible with the results of the present study.

The current study showed that those GPs employed by the university have better mental health statuses and lower rates of anxiety and somatic syndrome than the counterparts not employed by the university; the difference was statistically significant. This could be due to job security and high expectations for the future which could diminish the individual's stress and consequently improve mental health.

In the current study, the mean scores for social dysfunction and anxiety are high. Another study in Sanandaj has demonstrated similar results [14]. The main culprits in social dysfunction in the target group could be job stress, job insecurity and long shifts including night shifts, causing fatigue and lack of

concentration during the day.

In this study, the rate of anxiety in females is higher than that of males; but, this is statistically insignificant. A study by Mousavi *et al.* has shown that there is a statistically significant correlation between anxiety and gender [9].

Given the significance and the necessity of improved mental health conditions of GPs possessing the key roles in the quality of health care services and also the treatment of patients, it is recommended to investigate the precise accounts of mental problems and also implement preventive strategies such as increasing the job support, providing psychological consultations, considering their position in the list of hard jobs, providing financial support, and having active communication with mental health care authorities, to adopt an appropriate plan to improve their mental health and prevent or diminish mental disorders in the target group including GPs and medical staff.

Conclusion

The majority of employed GPs in emergency rooms do not have proper mental health statuses.

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