

## ORIGINAL RESEARCH

## Iranian Medical Practitioner's Mental Health

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**Abstract:** **Introduction:** While the Mental health of Medical practitioners has drawn much attention worldwide in recent years, it has been neglected in Iran. This research aims to provide a quick insight into the mental health of the medical practitioner. **Methods:** Samples were 208 medical practitioners with different scientific ranks and various specialties in an educational hospital in Tehran. The General health questionnaire (GHQ-12) was used as research too. **Results:** The Data collected by standard GHQ-12 questionnaire and demographic survey were analysed with a cut-off point of 3 for classifying GHQ status among medical practitioners and 3.5 (average point of Iranian adults according to Ebadi et al. 2006) for comparing medical practitioners with the general population. Data analysis revealed that 51.4% of medical practitioners fell below the average point of Iranian society in terms of mental health. Other criteria were gender, marital status, scientific rank, work experience, and specialty. There was no significant difference between males and females ( $Z=-1.662$ ,  $p<0.096$ ) and between single and married ones ( $Z=0.604$ ,  $p<0.546$ ). A significant difference existed between medical practitioners with different scientific ranks (assistant, assistant professor, associate professor, and professor) ( $Z=7.614$ ,  $p<0.022$ ). There was also a significant positive relationship between work experience and mental health ( $r=0.240$ ,  $p<0.001$ ) and between age and mental health ( $r=0.201$ ,  $p<0.004$ ). A comparison of surgical groups with the non-surgical group confirmed the absence of significant difference ( $Z=-1.252$ ,  $p<0.210$ ), with both groups suffering from equally poor mental health. The average mental health of internists and pathologists was significantly lower than general surgeons and physiologists. **Conclusion:** The results denote that medical practitioners are exposed to stressful events arising from their profession. It is recommended that their occupational conditions be carefully examined, and mental health promotion programs are designed and implemented.

**Keywords:** GHQ-12; Medical practitioners; Mental Health

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## 1. Introduction

Mental health is a state of mind described as emotional welfare and physical wellbeing (1). Mental problems do not occur in a vacuum but result from social and cultural factors in interaction with individual characteristics (2). Medical practitioners tolerate high pressure due to specific expectations of society and the common belief that they should be free of error and mistake. The pressure may be intensified

by educational and occupational conditions. Mental, and sometimes physical, pressure may be mitigated in two ways. Firstly, necessary measures need to be taken by concerned authorities. Secondly, the factors, intensity, and frequency of problems in different areas of mental and physical health need to be identified. The latter is an introduction to the former and will be dealt with in this study.

Unfortunately, no documented evidence on the frequency and intensity of medical practitioners' mental problems is available. Kohen, Winstanley, and Green (3) explored medical practitioners' attitudes towards their mental problems and reported that 60% of the participants suffered from mental problems, with younger medical practitioners being less inclined to disclose their problems.

Interns and young medical practitioners are much more likely to respond to the treatment of mental health problems. Early discovery and treatment of their problems can

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considerably reduce the risk factors and their influences on their life. Nevertheless, this group tends to be disinclined to follow up treatment due to such factors as a shortage of time, fear of being labeled, and concern about the negative impact of mental disease on their professional career (4).

Past studies have mainly addressed medical and paramedical students. Since they are not longitudinal and do not consider the professional growth of students over a period, the results may be somewhat unreliable. The present study is unique in that it attempts to estimate the frequency and intensity of mental problems of medical practitioners.

## 2. Methods

This is a descriptive, exploratory study aimed at identifying mental problems among medical practitioners. This study is a general survey and quick estimation of the mental problems of the medical profession.

### 2.1. Participants

Participants are medical practitioners working in different sections of state hospitals. Table 1 represents the frequency distribution and percentage of participants in each section separated by age. A minimum sample of 185 people was estimated using Krejcie and Morgan Table. Nevertheless, more samples were selected as far as possible to anticipate the drop in the number of participants. Questionnaires were distributed and finally, 208 questionnaires were returned.

**Inclusion and Exclusion Criteria:** All Medical practitioners who currently practicing in the medical wards, were included in the study. On the other hand, medical staff and nurses were excluded from the study.

### 2.2. Research Tools

The 12-item mental health questionnaire (GHQ-12) was used to measure the mental health of medical staff, including medical practitioners and residents. This questionnaire was introduced in 1988 by Goldberg and William from a long 60-item form. Goldberg (5) asserted that the 12-item form was unidimensional, but multiple studies (6, 7) suggest that it is multidimensional. This test has 1 to 3 dimensions. Studies with Rasch analysis indicate that this test is more appropriate for stress and anxiety disorders (8). The reliability of the test was first reported to 0.87 in Iran (9). While (10) have used this test earlier, they have not reported its validity and reliability.

As regards validity, people with a higher quality of life normally get lower scores in this test. Montazeri and colleagues (6) have reported the reliability of this test to be 0.87 and confirmed a significant relationship ( $r=.56$ ,  $p<0.001$ ). They also reported two factors of social dysfunction and mental

distress. The reliability of test is 0.93 in India (11), 0.72 in Korea (12), 0.80 in China (7), 0.76 in Spain (13) and 0.89 in Canada (8). Studies have reported different cut-off points depending on the scoring method. Man and colleagues (8) report a cut-off point of 4 with a specificity of 0.92 and a sensitivity of 0.71. Ebadi and colleagues (9) report a cut-off point of 3.5 with a sensitivity of 0.87 and specificity of 60. In the present study, the overall reliability of 0.866 was obtained.

## 3. Results

Table 1 represents descriptive indicators, demographic information, and diagnostically classification of medical practitioners' mental health.

As illustrated in Table 1, 47.1% of medical practitioners are male, 37.0% are single, 63.5% are residents, 14.9% are assistant professors, and 9.6% is an associate professor. Based on the proposed cut-off point (Ebadi et al., 2002), 51.4% of the medical practitioners all not in stable mental health, and subsequently 48.6% of medical practitioners are in a state of good mental health.

Table 2 shows descriptive indicators (frequency, percentage, mean and standard deviation) of response to each question of a mental health test. The worst symptom has been reported in question 12 (57.2% feel reasonably happy) and the best symptom reported in question 8 (33.2% come to terms with problems).

Table 3 illustrates that the distribution of doctor's scores in mental health test is not normal, so we used non-parametric tests.

Table 4 shows that the mean scores of medical practitioners in mental health tests (1.73) are significantly lower than the cut-off point (3.5) in society. It should be noted that this cut-off point relates to the ordinary youth population.

As illustrated in Table 5, there is not a significant difference between female and male medical practitioners ( $Z=1.662$ ,  $p<0.096$ ) and between single and married medical practitioners ( $Z=0.604$ ,  $p<0.545$ ) in terms of mental health. A significant difference exists between different scientific ranks ( $Z=7.614$ ,  $p<0.022$ ), with associate professors having a higher mean score than residents and assistant professors. There is no significant difference between residents and assistant professors.

A comparison of specialized groups suggests that the mean score of the general surgeons' group in mental health is significantly higher than that of dermatologists ( $Z=-2.623$ ,  $p<0.007$ ) and internists ( $Z=2.176$ ,  $p<0.03$ ). The mean score of gynecologists is significantly higher than that of dermatologists ( $Z=-2.486$ ,  $p<0.04$ ) and internists ( $Z=-2.022$ ,  $p<0.043$ ). The mean score of dermatologists is significantly lower than that of forensic specialists ( $Z=-1.960$ ,  $p<0.048$ ), phys-

**Table 1:** Demographic characteristics of the Physician

Variable	Percent (Frequency)	M(SD)
Age		35.63±10.554
Gender (Male) Not identified	47.1% (98M:109F).5% (1)	
Marital Status (Single) Not identified	37.0% (77S:127M) 1.9% (4)	
<b>Job Rank</b>		
Assistant	132	63.5
Assistant Professor	31	14.9
Associate Professor	25	12.0
Not identified	20	9.6
Diagnosis (High)	48.6% (101H:107L)	

**Table 2:** Frequency (%) and Mean (SD) of Medical practitioner's responses to GHQ-12 items

GHQ-12 Items	Better than usual	Same as usual	Less than usual	Much less than usual	Mean (SD)
Able to concentrate	9(4.3%)	42(20.2%)	137(65.9%)	20(9.6%)	1.81(.661)
Lost much sleep	8(3.8%)	28(13.5%)	133(63.9%)	39(18.8%)	1.98(.691)
Playing the useful part	4(1.9%)	34(16.3%)	136(65.4%)	34(16.3%)	1.96(.636)
Capable of making decisions	28(13.5%)	60(28.8%)	100(48.1%)	20(9.6%)	1.54(.845)
Under stress	11(5.3%)	38(18.3%)	136(65.4%)	23(11.1%)	1.82(.690)
Could not overcome difficulties	13(6.3%)	68(32.7%)	108(51.9%)	19(9.1%)	1.64(.735)
Enjoy normal activities	31(14.9%)	66(31.7%)	66(31.7%)	45(21.6%)	1.60(.988)
Face up to problems	69(33.2%)	57(27.4%)	66(31.7%)	16(7.7%)	1.14(.970)
Feeling unhappy and depressed	21(10.1%)	57(27.4%)	96(46.2%)	34(16.3%)	1.69(.864)
Losing confidence	32(15.4%)	60(28.8%)	77(37.0%)	39(18.8%)	1.59(.964)
Thinking of self as worthless	23(11.1%)	53(25.5%)	53(25.5%)	79(38.0%)	1.90(1.036)
Feeling reasonably happy	14(6.7%)	31(14.9%)	44(21.2%)	119(57.2%)	2.29(.955)

ical medicine specialist ( $Z=-2.276$ ,  $p<0.023$ ), and nuclear medicine specialists ( $Z=-1.986$ ,  $p<0.045$ ). The mean score of physical medicine specialists is significantly higher than that of internists ( $Z=-2.083$ ,  $p<0.037$ ). A comparison of mean scores of surgical and non-surgical specialists shows that no significant difference exists between these two groups ( $Z=-1.101$ ,  $p<0.271$ ) in terms of mental health.

Also, the results confirmed a significant relationship between work experience and mental health ( $r=0.240$ ,  $p<0.001$ ).

#### 4. Discussion

The results of this study revealed that 48.6% of medical practitioners are close to the average level in terms of mental health. Gender and marital status have no significant impact on the mental health of medical practitioners, but scientific rank has an influential role in their mental health. Residents and assistant professors have a lower level of mental health compared with associate professors. There is a sig-

nificant positive relationship between age, work experience, and mental health. The mental health of CCU personnel is generally better than other specialties. General surgeons and physical medicine specialists have better mental health compared with internists. Previous studies suggest that stress and anxiety are prevalent among medical practitioners (14). 3.4% of Australian medical practitioners suffer mental problems, 21% have received diagnosis and treatment (15) and 25% suffer depression.

A study on Nigerian medical practitioners (16) reports that 14% of medical practitioners have scored 4 and higher in mental health tests and are at the risk of mental disorders. At least 50% of American medical practitioners suffer occupational stress (17). Foreign studies report that stress, anxiety, and depression are more prevalent among female medical practitioners (15, 18, 19). A study in Kuwait Al-Wotayan, Annaka, and Nazar (2019) suggests that married medical practitioners suffer more mental problems than single ones. As regards age and job rank, age groups of 30-39 and 40-49 have obtained higher scores in mental health tests in the present



**Table 3:** Tests of Normality for GHQ-12 and Residuals

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<b>GHQ-12</b>	.113	208	.001	.956	208	.001
<b>Residuals</b>	.094	207	.001	.963	207	.001

**Table 4:** Comparing Mean of the Physician in GHQ with Cutoff-point

Variable	N	Msamp	Cutoff	SD	t	P	95CI%
GHQ	208	1/73	3/5	0.503	-50/835	0/001	-1/84 -1/70

study as research of Al-Wotayan, Annaka, and Nazar (20). Also, residents suffer more mental problems compared with other job ranks.

There is a high prevalence of mental problems among medical practitioners. Unfortunately, their mental disorders often remain untreated and contribute to the prevalence of suicide. One-third to 50% of medical practitioners have neither a private doctor nor a routine health plan. Nearly 40% of medical practitioners are disinclined to seek treatment under the fear that the medical council certificate might not be renewed (21).

A longitudinal study on Norway medical practitioners (21) reports that mental problems mainly stem from situational stress and personal characteristics of medical practitioners. Job stress often manifests as burnout and is accompanied by three characteristics of emotional frustration, metamorphosis, and indifference to surrounding events. Occupational stress may influence the ability to serve patients at any level of education and the medical profession. burnout and lack of enthusiasm are significantly associated with patient satisfaction and recovery time (17). The longitudinal study of Norway medical practitioners suggests that job stress may predict severe depression symptoms among medical practitioners (19).

## 5. Conclusion

According to findings, it was revealed that our medical practitioners urgently need intervention programs for the promotion of their mental health. Unfortunately, the sources of occupational stress among medical practitioners remain unsettled due to insufficient research, particularly longitudinal study, in the country and specific characteristics of this community such as unwillingness to cooperate. This requires broad research at the national level. Based on the findings of this study, it is recommended that hospitals implement a comprehensive mental health assessment program for medical practitioners to identify the sources of occupational stress among medical practitioners.

## 6. Appendix

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None.

### 6.2. Author contribution

All authors have the same Contribution.

### 6.3. Funding/Support

None.

### 6.4. Conflict of interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

## References

- VandenBos G. APA dictionary of psychology. 2nd eds. Washington, DC: APA. 2015.
- Butcher JN, Mineka S, Hooley JM. Abnormal psychology: Pearson Education India; 2017.
- Cohen D, Winstanley S, Greene G. Understanding doctors' attitudes towards self-disclosure of mental ill health. *Occupational Medicine*. 2016;66(5):383-9.
- Givens JL, Tjia J. Depressed medical students' use of mental health services and barriers to use. *Academic medicine*. 2002;77(9):918-21.
- Goldberg DP. User's guide to the General Health Questionnaire. Windsor. 1988.
- Montazeri A, Harirchi AM, Shariati M, Garmaroudi G, Ebadi M, Fateh A. The 12-item General Health Questionnaire (GHQ-12): translation and validation study of the Iranian version. *Health and quality of life outcomes*. 2003;1(1):66..
- Liang Y, Wang L, Yin X. The factor structure of the 12-item general health questionnaire (GHQ-12) in young Chi-

**Table 5:** Comparing Physicians GHQ in terms of Gender, Marital Status, and Professions

Variable	N	MR	Z	P-Value
Male	98	111.29	-1.662	0.096
Female	109	97.45		
Single	77	99.30	-0.604	0.545
Married	127	104.44		
Assistant	132	88.54	7.614	0.022
Assistant Professor	31	98.73		
Associate Professor	25	120.74		
Gsurgery	27	20.46	-2.623	0.007
Skin	8	9.69		
General. Surgery	27	36.54	-2.176	0.030
Internal	34	26.60		
Women	16	13.66	-2.486	0.011
Skin	8	7.44		
Women	16	31.56	-2.022	0.034
Internal	34	22.65		
Skin	8	5.06	-1.960	0.048
Forensic Med	4	9.38		
Skin	8	8.13	-2.276	0.023
Physical Med	17	15.29		
Skin	8	5.31	-1.986	0.045
Nuclear Med	5	9.70		
Physical Med	17	32.12	-2.083	0.037
Internal	34	22.94		
Surgery	69	111.01	-1.101	0.271
Non-Surgery	139	101.27		

nese civil servants. Health and quality of life outcomes. 2016;14(1):1-9.

8. Mann RE, Cheung JT, Ialomiteanu A, Stoduto G, Chan V, Wickens CM, et al. Estimating prevalence of anxiety and mood disorder in survey data using the GHQ12: Exploration of threshold values. *The European Journal of Psychiatry*. 2011;25(2):81-91.
9. EBADI M, HARIR CHI AM, SHARIATI M, GARMAROUDI GR, FATEH A, MONTAZERI A. TRANSLATION, RELIABILITY AND VALIDITY OF THE 12-ITEM GENERAL HEALTH QUESTIONNAIRE AMONG YOUNG PEOPLE IN IRAN. *PAYESH*. 2002;1(3):-.
10. Moradian Sorkhkalaei M, Eftekhar H, Nejat S, Saepour N, Esmaeel Shemirzadi S. The state of mental health of students of Tehran medical sciences university in the academic year 2010-2011. *Jorjani Biomedicine Journal*. 2012(1):16-22.
11. Kashyap GC, Singh SK. Reliability and validity of general health questionnaire (GHQ-12) for male tannery workers: a study carried out in Kanpur, India. *BMC psychiatry*. 2017;17(1):102.
12. Kim YJ, Cho MJ, Park S, Hong JP, Sohn JH, Bae JN, et al. The 12-item general health questionnaire as an effective mental health screening tool for general Korean adult population. *Psychiatry investigation*. 2013;10(4):352.
13. del Pilar Sánchez-López M, Dresch V. The 12-Item General Health Questionnaire (GHQ-12): reliability, external validity and factor structure in the Spanish population. *Psicothema*. 2008;20(4):839-43.
14. Wozniak G. Risk of psychiatric Morbidity among the medical and nursing staff of a Greek Public General Hospital. *J Depress Anxiety*. 2014;4(169):2167-1044.1000169.
15. Wu F, Ireland M, Hafekost K, Lawrence D. National mental health survey of doctors and medical students. 2013.
16. Ofili A, Asuzu M, Isah E, Ogbeide O. Job satisfaction and psychological health of doctors at the University of Benin Teaching Hospital. *Occupational medicine*. 2004;54(6):400-3.
17. Walker R, Pine H. Physician Wellness Is an Ethical and Public Health Issue. *Otolaryngology-Head and Neck Surgery*. 2018;158(6):970-1.
18. Compton MT, Frank E. Mental health concerns among Canadian physicians: results from the 2007-2008 Canadian Physician Health Study. *Comprehensive psychiatry*. 2011;52(5):542-7.
19. Tyssen R. Work and mental health in doctors: A short review of Norwegian studies. *Porto Biomedical Journal*. 2019;4(5).
20. Al-Wotayan R, Annaka M, Nazar M. Job Satisfaction and Mental Health among Physicians in Primary Health Care Centers in Kuwait. *Health*. 2019;11(6):692-710.
21. Dyrbye LN, West CP, Sinsky CA, Goeders LE, Satele DV,



Shanafelt TD, editors. Medical licensure questions and physician reluctance to seek care for mental health con-

ditions. Mayo clinic proceedings; 2017: Elsevier.

