

Original Article

A Survey on Mental Health Status of Adult Population Aged 15 and above in the Province of Golestan, Iran

Ahmad Ali Noorbala MD¹, Seyed Abbas Bagheri Yazdi MSc², Soghra Faghihzadeh PhD³, Koorosh Kamali MD PhD⁴, Elham Faghihzadeh PhD Candidate⁵, Ahmad Hajebi MD⁶, Shahin Akhondzadeh PhD⁷, Alia Shakiba MD⁸, Seyedeh Maryam Hashemi Nasab MA⁹

Abstract

Introduction: This research aims to determine the mental health status of population aged 15 and over in the province of Golestan in 2015.

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Golestan province in Iran. An estimated sample size of 1200 people was chosen using systematic random cluster sampling. The access was provided by the contribution of Geographical Post Office of Gorgan, Gonbad-e-Qabus, and Aqqala cities. The General Health Questionnaire-28 (GHQ-28) was used as the screening tool for mental disorders. The analysis of data in the current study was carried out using the SPSS-18 computer software.

Results: Using GHQ traditional scoring method, the results showed that 12.8% of the subjects showed to be at risk of mental disorders (13.3% of females and 12.3% of males). Urban areas (13%) were more at risk of mental disorders compared with rural residents (12.3%). Anxiety and somatization symptoms were more frequent than depression and social dysfunction among respondents. The obtained data revealed that the prevalence of mental disorders increased with age. The results also indicated that mental disorders were more common in certain subgroups, in particular women, those aged 65 years and above, the divorced and widowed, illiterate and retired adults.

Conclusion: Our findings suggest that one eighth of the participants were at risk of developing mental disorders. Although the prevalence of these disorders has decreased from 39.1% to 12.8% between 1999 and 2015, it is still of great importance to further promote mental health policies and advocate psychological welfare of those suffering from mental disorders along with their re-empowerment.

Keywords: Adult population, general health questionnaire (GHQ-28), Golestan province, mental health status

Cite this article as: Noorbala AA, Bagheri Yazdi SA, Faghihzadeh S, Kamali K, Faghihzadeh E, Hajebi A, Akhondzadeh S, Shakiba A, Hashemi Nasab SM. A survey on mental health status of adult population aged 15 and above in the province of Golestan, Iran. *Arch Iran Med.* 2017; **20(11 Suppl. 1)**: S35 – S38.

Introduction

Golestan province lies in the north of Iran, south of the Caspian Sea; it is bounded to the west by the province of Mazandaran, to the east by the province of North Khorasan, and to the south by the Alborz Mountains. Until June 1997, Golestan province was the eastern part of the Mazandaran

Authors' affiliations: ¹Psychosomatic Medicine Research Center, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran, ²Department of Mental Health, Ministry of Health and Medical Education of Iran, Tehran, Iran, ³Department of Biostatistics and Epidemiology, Faculty of Medicine, Zanjan University of Medical Sciences, Zanjan, Iran, ⁴Department of Public Health, School of Public Health, Zanjan University of Medical Sciences, Zanjan, Iran, ⁵Department of Biostatistics, Paramedical School, Shahid Beheshti University of Medical Sciences, Tehran, Iran, ⁶Research Center for Addiction and Risky Behaviors (ReCARB), Psychiatric Department, Iran University of Medical Sciences, Tehran, Iran, ⁷Psychiatric Research Center, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran, ⁸Psychiatrist, Psychiatry and Psychology Research Center, Tehran University of Medical Sciences, Tehran, Iran, ⁹Responsible Manager of Mental Health office of Golestan Provincial Health Center, Golestan University of Medical Sciences, Gorgan, Iran.

***Corresponding author and reprints:** Ahmad Ali Noorbala MD, Head of Psychosomatic Medicine Research Center, Imam Khomeini Hospital, Keshavarz Blv., Tehran, Iran. Tel: +98-21-61190000, E-mail: noorbala1@tums.ac.ir.

Accepted for publication: 18 October 2017

province. The new province of Golestan has an area of 20460 km² and the population of 1,935,000, of whom 1,024,000 (53.2%) reside in urban and 911,000 (46.8%) reside in rural areas. There are 14 counties, 26 cities and 60 villages in the province. The majority of people are Muslims and speak Persian. Diverse ethnic groups live in Golestan province: Fars (41.8%), Turkmens (33.4%) and Sistani (15.1%) are the major ethnic groups. Totally, 75.4% of people are literate and the rate of unemployment is 11.8%.¹

There are 47 urban and 97 rural health centers (total 144), 608 health houses (the first level of providing health services in the rural areas), and 25 hospitals with a total of 2560 beds in Golestan. Also, there are 192 psychiatric beds (86 in a psychiatric hospital and 86 in general hospitals), which is equivalent to 0.9 psychiatric beds for 10000 people, 150 methadone maintenance therapy clinics and 7 drop in centers (DIC). A total of 250 general practitioners who are trained for the diagnosis and management of mental health problems work in the public health sector. Mental health professionals in the Golestan province consist of 21 psychiatrists and 17 psychologists.²

The previous nationwide epidemiological survey in 1999 on 808 people aged 15 years and older, indicated the prevalence of mental health problems to be 37.3% (20.4% in males and 50.3% in

females)³. As mental health problems represent an important public health problem with high burden, the present epidemiological survey was undertaken to provide the current prevalence of mental health problem and determine its longitudinal changes in the last 15 years.

Materials and Methods

This research was performed in the form of a cross-sectional field survey in Golestan province in 2015. The population sample of this survey consisted of urban and rural dwellers in the age group of 15 and above. The sample size was estimated as 1200 people who were selected through systematic random cluster sampling among the people living in urban and rural areas of Gorgan (provincial center), Gonbad-e-Qabus, and Aqqala. The samples were selected using the Post Office Software.

The 28-item General Health Questionnaire (GHQ-28) was used as the screening tool for detection of mental disorders. This questionnaire was developed by Goldberg & Hillier (1979) for screening somatization, anxiety, social dysfunction and depression.⁴ A review of studies on the validation of the GHQ-28 in different countries demonstrates its high validity and reliability as the screening tool for mental disorders in the community.⁵ It includes four subscales with 7-item criteria related to the somatization, anxiety, social dysfunction and depression symptoms. There are different ways of scoring GHQ-28, such as Likert and the traditional scoring method.⁶ Using the traditional scoring method, the best cutoff point for this questionnaire was score 6 and for each subscales were 2. These cutoff points were

obtained through a research on standardization of this screening tool in Iran.⁷

The survey started in December 2014 and lasted until January 2015. The survey team (a man and a woman) referred to the samples' houses based on their 10-digit Postal Code and beginning with each of head clusters in accordance with the survey completion guideline manual. Based on six age groups (15 to 25 years, 26 to 35 years, 36 to 45 years, 46 to 55 years, 56 to 65 years and 66 years and over), 12 adults (6 males and 6 females) were evaluated in each cluster. In each research unit (Household), only one person was examined. In cases when more than one individual was eligible, the sample was selected randomly.

Data related to the survey were analyzed using the SPSS-18. Logistic regression modelling was used to determine the factors that affect mental disorders. The average time to complete each questionnaire was 45 minutes.

Results

A total of 1149 persons completed the questionnaire. Data regarding prevalence of suspected cases of mental disorders in terms of gender, place of residence, age, marital status, education and occupation are presented in Table 1. The results showed that 12.8% of the samples (13.3% of females and 12.3% of males) are suspected to suffer from mental disorders. The highest prevalence of mental disorders was in the urban areas (13%), individuals aged 65 and over (17.1%), divorced or widowed (22.4%), illiterate (15.2%) and retired people (19.7%).

Information related to logistic regression of variables and

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1149)

Variables	Sample size (n)	Suspected cases (n)	Prevalence rate (%)
Gender			
Male	576	71	12.3
Female	573	76	13.3
Place of residence			
Urban	798	104	13.0
Rural	351	43	12.3
Age group (years)			
15-24	136	15	11.0
25-44	435	51	11.7
45-64	397	50	12.6
+65	181	31	17.1
Marital status			
Unmarried	443	43	9.7
Married	483	54	11.2
Widowed, or divorced	223	50	22.4
Occupation			
Employed	307	35	9.5
Unemployed	112	13	11.4
Student	94	9	9.6
Housewife	489	61	12.5
Retired	147	29	19.7
Education			
Illiterate	343	52	15.2
Primary & secondary	327	35	10.7
Diploma	246	35	14.2
Graduated	202	22	10.8
Post Graduated	31	3	9.7
Total	1149	147	12.8

Table 2. Estimated logistic regression coefficients and odds ratios

Variables	B	S.E.	Sig.	OR	95% C. I. for OR	
					Lower	Upper
Marital Status						
Married	---	---	---	---	---	---
Unmarried	0.667	0.374	0.559	1.175	0.935	4.060
Widowed, or divorced	0.143	0.305	0.050	1.949	0.635	2.095
Gender						
Male	---	---	---	---	---	---
Female	0.287	0.322	0.373	1.332	0.709	2.503
Age	0.018	0.008	0.021	1.018	1.003	1.034
Place of residence						
Rural	---	---	---	---	---	---
Urban	0.125	0.220	0.570	1.133	0.736	1.743
Occupation						
Employed	---	---	---	---	---	---
Unemployed	-0.017	0.375	0.965	0.984	0.471	2.052
Student	-0.095	0.520	0.855	0.909	0.328	2.519
Housewife	0.702	0.376	0.062	1.787	0.967	4.215
Retired	0.581	0.313	0.064	2.019	0.968	3.303
Education						
Post Graduated	0.185	1.101	0.867	1.203	0.139	10.415
Graduated	---	---	---	---	---	---
Diploma	0.028	0.267	0.915	1.029	0.610	1.736
Primary & Secondary	0.418	0.290	0.249	1.169	0.860	2.682
Illiterate	0.149	0.352	0.671	1.561	0.582	2.316
OR= Odds Ratio						

the odds ratio are presented in Table 2. Based on the logistic regression analyses (Table 2), the results indicated that females had a relative risk of mental disorders of 1.332 compared with males. The risk of mental disorders increased significantly with age. Divorced or widowed people were 1.949 times more at risk of mental disorders compared with married people. The highest risk of mental disorders pertained to retired people who were 2.019 times more at risk of mental disorders compared with employed people. Illiterate individuals were 1.561 times more vulnerable to mental disorders than people with postgraduate degrees and above.

The results also showed that 32.6% of the studied sample scored high on somatization subscale (28.5% of males and 36.8% of females), 33.1% on anxiety subscale (31% of males and 35.3% of females), 15.8% on social dysfunction subscale (14.6% of males and 16.1% of females), and 11.6% on depression subscale (10% of males and 13.1% of females).

Discussion

The findings of this study revealed that over one eighth of the sample are at risk of mental disorders. The first national epidemiology study (1999) estimated the prevalence of mental disorders in this province at about 39.1%.⁸ The risk of mental disorders in this study is 13.3% for females and 12.3% for males, which used to be 52.9% and 20.2% respectively in 1999, indicating a significant decrease.^{8,9} Both studies suggest that women are more vulnerable to mental disorders which is consistent with previous

research findings around the world,¹⁰ including Iran.¹¹⁻¹³ This could be due to multiple factors such as biological vulnerability, gender role, environmental and occupational stressors, satisfaction resource limitations, and restricted social participation of women.

The risk of mental disorders among urban residents is 13% which is higher than that of rural population (12.3%). This is consistent with the results of the national epidemiology study: 34.8% and 42.8% in urban and rural residents, respectively.⁹ Economic problems and inadequate welfare state along with lack of communication means can contribute to the phenomenon.

This study also supports aging as a correlate of mental disorders prevalence which is the highest among those aged 65-years and above (17.1%), in line with the first national mental health study. This could be due to retirement, menopause and biological changes.⁸

Additionally, mental disorders were more common among illiterates (15.2%) than other subgroups in this study, in accordance with national mental health study results in 1999¹¹ Social and cultural limitations, and coping mechanisms insufficiency have been mentioned to play a significant role in the observation that people with lower education levels who suffer from mental disorders are greater in number than those with higher education levels.

In this study, the prevalence of mental disorders was higher among the retired subgroup than others, which is also consistent with the national mental health study and other research results.¹¹⁻¹³ Economic problems have been recognized to be the contributing factor.

This study also showed that those at risk of somatization and anxiety are greater in number than those with depression and social dysfunction. However, in the 1999 study,⁸ the province showed higher rates of depression and anxiety than somatization and social dysfunction symptoms. It seems that integrating the national comprehensive health program into the healthcare systems has decreased the rate of mental disorders in the province and also caused vulnerable people to demonstrate the symptoms in terms of depression and somatization.

Conflict of interest

The authors declare that they have no conflict of interest.

Acknowledgments

This paper is the product of the national mental health and social capital survey in Iran in the year 2015 sponsored by the deputy of research and technology of the Ministry of Health and Medical Education of Iran and scientific research deputy of the Tehran university of Medical Sciences. Hereby, we thank all of them and particularly comprehensive support of Dr. Reza Malekzadeh, respectable deputy of research and technology of MOHME, and we are grateful for the support of the health deputy of Golestan University of Medical Sciences. We also thank all the trained psychologists who undertook this research and provided a lot in collecting the data and appreciate the patience of participants and their respectful families in completing the questionnaires.

References

1. Internet database of Iran Statistics Center of, demography of the province of the country on the basis of the results of the population and house census, 2016. Available from: URL: <https://www.amar.org.ir>. (Accessed Date: October 2015).
2. The function reports of health and treatment department of Golestan University of Medical Sciences, 2016.
3. Noorbala AA, Mohammad K, Bagheri Yazdi SA, Yasamy MT. A view of mental health in Iran. Iranian Red-Crescent Society Publication, 2001, Tehran, Iran.
4. Goldberg DP. The detection of psychiatric illness by Questionnaire. *Oxford University Press*. 1973; London.
5. Goldberg DP, Hillier VF. A scaled version of general health questionnaire. *Psychological Medicine*. 1979; 9: 131 – 145.
6. Goldberg DP, Gater R, Sartorius N, Ustun TB. The validity of two version of GHQ in general health care. *Psychological Medicine*. 1997; 27(1): 191 – 197.
7. Noorbala AA, Bagheri Yazdi SA, Mohammad K. The validation of general health questionnaire-28 as a psychiatric screening tool. *Hakim Health Sys Res*. 2004; 11(4): 47 – 53.
8. Noorbala AA, Mohamad Kazem, Bagheri Yazdi SA, Yasamy MT. Study of the mental health status of the 15 years and older people in Islamic Republic of Iran. *Hakim Research Journal*. 2002; 5 (1): 1 – 10.
9. Noorbala AA, Faghihzadeh S, Kamali K, Bagheri-Yazdi SA, Hajebi A, Mousavi MT, et al. Mental health survey of the adult population of Iran in 2015. *Arch Iran Med*. 2017; 20(3): 128 – 134.
10. Steel Z, Marnane C, Iranpour C, Chey T, Jackson JW, Patel V, et al. The global prevalence of common mental disorders: a systematic review and meta-analysis 1980–2013. *Int J Epidemiol*. 2014; 43: 476 – 493.
11. Noorbala AA, Bagheri Yazdi SA, Yasamy MT, Mohammad K. Mental health survey of the adult population in Iran. *Br J Psychiatry*. 2004; 184: 70 – 73.
12. Mohammadi MR, Davidian H, Noorbala AA, Malekafzali H, Naghavi HR, Pouretamad HR, et al. An epidemiological survey of psychiatric disorders in Iran. *Clin Pract Epidemiol Ment Health*. 2005; 1: 16.
13. Sharifi V, Amin-Esmaili M, Hajebi A, Motavalian A, Radgoodarzi R, Hefazi M, et al. Twelve-month prevalence and correlates of psychiatric disorders in Iran: The Iran mental health survey-2011. *Arch Iran Med*. 2015; 18(2): 76 – 84.