Original Article

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

Ahmad Ali Noorbala MD•[1], Seyed Abbas Bagheri Yazdi MSc[2], Soghrat Faghihzadeh PhD[3], Koorosh Kamali MD PhD[4], Elham Faghihzadeh PhD Candidate[5], Ahmad Hajebi MD[6], Shahin Akhondzadeh PhD[7], Ali Akbari MD[8], Bijan Kazemi MSc[9]

Abstract

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

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of South Khorasan in Iran. Through systematic random cluster sampling, 1200 individuals were selected from the residents of urban and rural areas of Birjand, Ghayen and Ferdows cities. The 28-item version of the General Health Questionnaire was applied as the screening tool. The data were analyzed using SPSS, version 18.0 for windows.

Results: Based on GHQ traditional scoring method, this study showed that 17.1% of the respondents (20% of women and 14.1% of men) were suspected of having mental disorders. The prevalence of suspected individuals for mental disorders was higher in urban areas (18.2%) than rural areas (14.5%). It was also shown that the prevalence of anxiety and somatization symptoms was higher than social dysfunction and depression symptoms, and women revealed higher prevalence for these disorders compared with men. The findings of this study also indicated that the prevalence of suspected cases for mental disorders increased with age. The prevalence of suspected cases of these disorders was higher in women aged 65 and over, divorced, widowed, uneducated and the retired compared to the other groups.

Conclusion: The results of this study show that one sixth of the sample population were suspected of mental disorders; therefore, health authorities and administrators need to take the principled measures to ensure and maintain the mental health of individuals as well as the evaluation and treatment of patients with mental disorders.

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

Cite this article as: Noorbala AA, Bagheri Yazdi SA, Faghihzadeh S, Kamali K, Faghihzadeh E, Hajebi A, Akhondzadeh S, Akbari A, Kazemi B. A survey on mental health status of adult population aged 15 and above in the province of South Khorasan, Iran. *Arch Iran Med.* 2017; **20(11 Suppl. 1):** S111 – S114.

Introduction

South Khorasan Province is located in the east of Iran with its center of Birjand city. The population of this province is 769,801, of whom 471,146 people live in urban areas (61%) and 298,655 people live in rural areas (39%). The male population is 389,815 (50.6%) and the female population is 379,986 (49.4%). People mostly speak Persian and the religion of the people of the province is Islam (Shia and Sunni). The household size in the province is 3.7.[1]

Authors' affiliations: [1]Psychosomatic Medicine Research Center, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran, [2]Department of Mental Health, Ministry of Health and Medical Education of Iran, Tehran, Iran, [3]Department of Biostatistics and Epidemiology, Faculty of Medicine, Zanjan University of Medical Sciences, Zanjan, Iran, [4]Department of Public Health, School of Public Health, Zanjan University of Medical Sciences, Zanjan, Iran, [5]Department of Biostatistics, Paramedical School, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [6]Research Center for Addiction and Risky Behaviors (ReCARB), Psychiatric Department, Iran University of Medical Sciences, Tehran, Iran, [7]Psychiatric Research Center, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran, [8]Department of Psychiatry, Faculty of Medicine, Gonabad University of Medical Sciences, Gonabad, Iran, [9]Responsible Expertise of Mental Health in South Khorasan Provincial Health Center, South Khorasan University of Medical Sciences, Birjand, 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

Regarding health care facilities, this province has 100 health centers, with 38 urban centers and 62 rural centers. There are also 316 health houses in rural areas and 25 health centers in urban areas providing health services to people. There are 975 hospital beds in this province, of which 76 beds are in the psychiatric ward in general hospitals. Therefore, there is 1 psychiatric bed for every 10,000 people in the province. A total of 59 methadone maintenance centers (MMT) and 1 harm reduction center in the province provide health and preventive services to people in need. In terms of manpower mental health specialists, 10 psychiatrists work in the province. The number of general practitioners employed in health centers is 150, and the number of Ph.D. in Clinical Psychology is 1 and the number of Master's degree in Clinical Psychology in the province is 27, which provide psychological services for the total urban and rural population of the province, and in particular 5834 patients with mental disorders covered by the mental health program in the family physician system.[2]

Considering that this province was previously part of Khorasan province, it is not possible to compare the results of this study with the study of the state of mental health in 1999.[3]

Considering the importance of studies on the epidemiology of mental disorders in determining the mental health status, identifying the demographic characteristics associated with these disorders, as well as estimating the resources and health services

required for the province, this study was conducted to determine the mental health status of people in the province over the past 15 years.

Materials and Methods

This research was conducted in the form of a cross sectional and field study in December and January 2015. The statistical population of the study consisted of people aged 15 and over residing in urban and rural areas of the province. The sample size was 1200 in the cities of Birjand (provincial center), Ferdows and Ghayen. These samples were extracted using the software of the Post Office.

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 thetraditional 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 tears, 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 individual was one 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 1113 persons completed the questionnaire. The distribution of the prevalence of mental disorders in the population studied in the province is given in Table 1. The information in this table shows that 17.1% of the subjects were suspected of having mental disorders (14.1% of males and 20% of females). The highest susceptibility to mental disorders in each of the variables studied pertained to those living in urban areas by 18.2%, people from the age group of 65 and older (30.1%), divorced and widowed (30.8%), illiterate (19.7%), and retired people (25.4%).

Data in table 2 shows that risk of developing a psychiatric disorder in females was 1.611 times higher than such risk in males and the risk increased incrementally with age. The risk was 2.055 times higher in divorced and widows than married individuals, 2.347 times higher in the retired than persons who have a job and 2.176 times higher in the illiterate than educated persons.

Based on subscales of the questionnaire, 21.5% of the people were suspected of somatization (17.2% of males and 26% of females), 22.1% suspected of anxiety (18.3% of males and 25.8% of females), 12.4% suspected of having social dysfunction (11.8% of males and 13% of females) and 8.9% suspected of having depression (7.2% of males and 10.6% females).

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1113)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	553	78	14.1
Female	560	112	20.0
Place of residence			
Urban	776	141	18.2
Rural	337	49	14.5
Age group (years)			
15–24	853	90	10.6
25–44	142	28	19.7
45–64	118	26	22.0
+65	153	46	30.1
Marital status			
Unmarried	385	56	14.5
Married	367	70	19.1
Widowed, or divorced	208	64	30.8
Occupation			
Employed	323	36	11.1
Unemployed	88	11	12.5
Student	87	14	16.1
Housewife	408	76	18.6
Retired	207	53	25.4
Education			
Illiterate	370	73	19.7
Primary & secondary	300	39	13.0
Diploma	227	43	18.9
Graduated	184	32	17.4
Post Graduated	32	3	9.4
Total	1113	190	17.1

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	0.446	0.348	0.200	1.562	0.790	3.086
Widowed, or divorced	0.720	0.251	0.004	2.055	1.256	3.361
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.477	0.245	0.052	1.611	0.996	2.606
Age	-0.009	0.007	0.235	0.991	0.977	1.006
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	0.209	0.199	0.293	1.232	0.835	1.819
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	-0.160	0.394	0.685	0.852	0.394	1.844
Student	-0.268	0.442	0.544	0.765	0.321	1.819
Housewife	0.126	0.309	0.684	1.134	0.619	2.076
Retired	0.853	0.298	0.004	2.347	1.308	4.213
Education						
Post Graduated	- - -	- - -	- - -	- - -	- - -	- - -
Graduated	0.641	0.650	0.324	1.298	0.531	1.386
Diploma	0.691	0.650	0.288	1.396	0.559	1.531
Primary & Secondary	0.398	0.654	0.543	1.489	0.413	2.467
Illiterate	0.778	0.662	0.240	2.176	0.595	3.962

OR= Odds Ratio

Discussion

The results of this study showed that a total of one-sixth of the people surveyed in the province were suspected of mental illness, which is lower than the national average of the prevalence of mental disorders in Iran in 2015.[9] The present study showed that the prevalence of suspected mental disorders was 20% in women and is 14.1% in men. A review of studies conducted in the world[10] and Iran,[11–13] confirms this finding that the incidence of mental disorders in women is higher than men. The higher prevalence of mental disorders in women compared to men can be due to biological factors, gender role, environmental stress and occupation, limited source of satisfaction and limitation of women's social participation.

The present study showed that the prevalence of people suspected of mental disorders was higher among residents of urban areas (18.2%) than rural areas (14.5%). This finding is not consistent with the results of a similar study in 1999 in Khorasan province, before division of Khorasan province into northern, Razavi and southern parts (18.7% in rural areas and 17.1% in urban areas).[8] Economic problems, lack of adequate income and less development of urban areas in South Khorasan province can account for the higher prevalence of these disorders in these individuals than those living in rural areas.

The results of this study showed that with increasing age, the prevalence of mental disorders increased and the highest incidence pertained to people 65 years of age and older (30.1%), which is consistent with the findings of the first mental health survey in the Khorasan province in 1999. Most studies in Iran and the world indicate a higher prevalence of suspected cases of mental disorder at an older age.[9–13] The higher prevalence of suspected of mental disorder in old age can be attributed to factors such as retirement, menopause, and biological changes in individuals.

In terms of education in this study, the prevalence of suspected cases of mental disorder in the illiterate group was 19.7%, higher than the other groups, which is consistent with the results of studies conducted in Iran and the world.[10,11] The social and cultural constraints and the incapacity of illiterate people to employ effective methods of coping with stressful factors can account for the higher prevalence of these disorders in illiterate people than the other educational groups.

The findings of this study indicate that the prevalence of suspected mental disorders was higher among retired people than the other groups, which is consistent with the findings of studies conducted in Iran[11] and the world.[10] Losing a job, having economic problems and insufficient income for retired people can be considered as factors that increase the prevalence of mental disorders compared to employed people.

The prevalence of suspected mental disorders in divorced and widowed individuals was higher than the married, which is consistent with the results of surveys conducted in Iran and the world.[3,10] The loss of loved ones or the problems caused by separation can account for the significant increase in these disorders in divorced and widowed people compared to the other groups.

The findings of this study based on GHQ subscales showed that the prevalence of anxiety and somatization symptoms was higher than social dysfunction and depression, and the prevalence of these symptoms was higher in women than men. Review of the related research literature indicates that anxiety and social dysfunction symptoms are more common in males and depression and somatization in females.

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 South Khorasan 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 South Khorasan 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, Pouretemad HR, et al. An epidemiological survey of psychiatric disorders in Iran. *Clin Pract Epidemiol Ment Health*. 2005; 1: 16.
13. Sharifi V, Amin-Esmaeili 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.