

Original Article

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

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Abstract

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

Method: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Semnan province in Iran. Through systematic random cluster sampling, 1200 individuals were selected from the residents of urban and rural areas of Semnan, Garmsar and Shahroud. 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: This study showed that using the traditional scoring method, 14.5% of the subjects (15.8% of females and 13.1% of males) were suspected of having mental disorders. The prevalence of suspected psychiatric disorders in urban areas (15.5%) was higher than the prevalence of these disorders in rural areas (12.1%). The prevalence of suspected anxiety and the somatization of symptoms was higher than the prevalence of social dysfunction and depression, and the prevalence of these components was higher in women than in men. The findings of this study also showed that the prevalence of suspected mental disorders increased significantly with age. The prevalence of suspected cases of these disorders was higher among women, the age group of 65 and older, people living in urban areas, divorced and widowed, illiterate, and unemployed people than the other groups.

Conclusion: The results of this study showed that about a sixth of the people in the province were suspected to have mental disorders. Therefore, it is mandatory for the provincial public health authorities to take the needed steps to ensure that necessary requirements encompassing prevention and promotion of mental health are implemented.

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

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Introduction

Semnan province is located south of Alborz Mountains and has an area of 97335 square kilometers. It has 8 counties and its center is Semnan city. Semnan province is limited to the north by North Khorasan, Golestan and Mazandaran provinces, to the south by Khorasan and Isfahan provinces, to the

east by Khorasan Razavi province and to the west by Tehran and Qom provinces. The population of the province is 6,840,000 people, of whom 536,000 people live in urban areas (78.4%) and 148,000 people in rural areas (21.6%). Totally, 51% of the population are males and the remaining 49% are females. The entire population of the province is covered by health services of Semnan and Shahrud Medical Sciences Universities. The people of the province mostly speak in Persian and their religion is Islam. Life expectancy is 78.3 years, literacy rate is 91.2%, unemployment is 6.7% and household size is 3.4.¹

Concerning health facilities, this province has 65 health centers, 35 of which are urban and 30 are rural. A total of 140 health houses in rural areas provide health services to the public. In the province, there are 10 hospitals with 1412 beds. The province lacks a mental hospital, but there are 52 psychiatric beds in the general hospitals. Therefore, there are 0.8 psychiatric beds per 10,000 populations in the province. A total of 94 Methadone Maintenance Therapy (MMT) clinics and 2 centers of harm reduction provide services of prevention and treatment to addicts. Regarding the mental health human resource specialists, there are 12 psychiatrists, 3 PhD and 60 Master of Science in clinical psychology in Semnan province. The number of physicians who have completed a mental health education course and work in health centers is over

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93, and they provide mental health services to the urban and rural population of the province, in particular, 3,498 mental patients under the National Mental Health Program.²

In the first national mental health survey conducted by Noorbala, et al. (1999), which evaluated 443 people aged 15 years and older in the province, the prevalence of suspected psychiatric disorders in the sample was 16.9%; 13.2% in males and 20.1% in females.³

Regarding the importance of epidemiological studies in determining the mental health status of general population, detecting demographic features associated with these disorders and also estimating the required resources and facilities within the province, this study was conducted to examine and compare the mental health status of population in this province in the past 15 years.

Materials and Methods

This research was performed in the form of a cross-sectional field survey in Semnan province in 2015. The population sample of this survey consisted of urban and rural residents of the province 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 Semnan (provincial center), Garmsar and Shahroud cities. 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 analyses 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 1024 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 1. Prevalence of mental disorders in terms of the demographic variables (n= 1024)

Variables	Sample size (n)	Suspected cases (n)	Prevalence rate (%)
Gender			
Male	510	67	13.1
Female	514	81	15.8
Place of residence			
Urban	718	111	15.5
Rural	306	37	12.1
Age group (years)			
15-24	124	11	8.9
25-44	358	49	13.7
45-64	360	51	14.2
+65	173	36	20.8
Marital status			
Unmarried	781	116	14.9
Married	147	14	9.5
Widowed, or divorced	94	18	19.1
Occupation			
Employed	329	39	11.9
Unemployed	86	18	20.9
Student	67	5	7.5
Housewife	350	52	14.9
Retired	186	34	18.3
Education			
Illiterate	254	46	18.1
Primary & secondary	298	47	15.8
Diploma	244	31	12.7
Graduated	192	20	10.4
Post Graduated	28	4	14.3
Total	1024	148	14.5

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	0.421	0.369	0.255	1.523	0.739	2.140
Widowed, or divorced	0.440	0.484	0.363	1.553	0.602	3.010
Gender						
Male	---	---	---	---	---	---
Female	0.238	0.256	0.352	1.269	0.769	2.095
Age	0.006	0.008	0.399	1.006	0.992	1.021
Place of residence						
Rural	---	---	---	---	---	---
Urban	0.449	0.208	0.031	1.566	1.041	2.355
Occupation						
Employed	---	---	---	---	---	---
Unemployed	0.887	0.316	0.005	2.429	1.309	3.507
Student	-0.310	0.564	0.583	0.733	0.243	2.216
Housewife	-0.134	0.299	0.654	0.874	0.486	1.572
Retired	0.135	0.277	0.626	1.144	0.665	1.968
Education						
Graduated	---	---	---	---	---	---
Post Graduated	-0.159	0.592	0.788	0.853	0.267	1.720
Diploma	0.095	0.582	0.870	1.100	0.352	2.439
Primary & Secondary	0.303	0.582	0.603	1.354	0.433	1.233
Illiterate	0.371	0.606	0.540	1.449	0.442	3.753
OR = Odds Ratio						

table shows that 14.5% of the subjects were suspected of having mental disorders (15.8% of females and 13.1% of males). The highest susceptibility to mental disorders in each of the variables studied pertained to those living in urban areas by 15.5%, people from the age group of 65 and older (20.8%), divorced and widowed (19.1%), illiterate (18.1%), and unemployed (20.9%).

The findings in Table 2 indicate that the risk of mental disorders in women was 1.269 times higher than that of men. The risk of mental disorders increased significantly with age. The risk of divorced and widows was 1.553 times higher than that of married people. Unemployed people were 2.429 times more at risk of mental disorders compared with employed people. Illiterate individuals were 1.449 times more vulnerable to mental disorders than people with postgraduate degrees and above.

The results also showed that 20.2% of the sample experienced somatization (13.5% of males and 21.4% of females), 23.8% were suspected of anxiety (17.7% of males and 26.8% of females), 12.2% were suspected of social dysfunction (10.4% of males and 14% of females), and 7.2% were suspected of depression (6.5% of males and 7.9% of females).

Discussion

The results of this study showed that a sixth of people were suspected to suffer from mental disorders in Semnan province. The prevalence rate of mental disorders in the first mental health survey in this province was 16.9%,⁸ which demonstrates a slight decrease in the prevalence rate of mental disorders.⁹ In this study, the prevalence rate of suspected cases of mental disorders

was higher in females than males. The prevalence of suspected psychiatric disorders in the first national survey in the province (1999),⁸ was 20.1% in females and 13.2% in males. Comparison of the two studies shows that in the province, women have higher vulnerability than men. Reviewing studies in the countries of the world¹⁰ and Iran,¹¹⁻¹³ confirms this finding that the prevalence of mental disorders in women is higher than men. This higher prevalence rate can be due to biological factors, gender role, environmental and economic problems, limited satisfaction and also social participation restrictions.

Considering place of residency, the prevalence rate of suspected cases of mental disorders was higher in people living in urban areas than rural areas, which is not consistent with the findings of the first national survey of mental health in Iran (15.9% in urban areas and 18.2% in rural areas).³ Economic constraints and lack of appropriate welfare facilities as well as the limitations of rural people in using effective communication factors can account for the higher prevalence of these disorders in comparison with those in rural areas.

The results of this study showed that the prevalence rate of suspected cases of mental disorders increased with aging, and the highest rate pertained to the age group of 65 years and above (20.8%), which is consistent with the findings of the 1999 national study. Most studies in Iran¹¹⁻¹³ and the world¹⁰ indicate the higher prevalence of mental disorders in old age. Physical disability in retirement age, menopause and biological changes in elderly women can account for the increasing prevalence of suspected mental disorder in the province.

Regarding literacy, the results showed a higher rate of mental

disorders in illiterate individuals compared with the other groups, which is consistent with the findings of most researches in Iran.¹¹⁻¹³ Social and cultural restrictions and also disability of individuals in using effective methods of stress management can be considered as reasons for the higher prevalence rate of mental disorders in this age group and lower prevalence rate for graduated individuals.

The findings of this study indicate that the prevalence of suspected psychiatric disorders was higher in the unemployed than the other groups, consistent with the findings of studies conducted in Iran and the world.⁹⁻¹³ Economic problems, inflation and lack of income for the unemployed can be considered as factors that increase the prevalence of mental disorders in these people compared to those employed in the province.

The prevalence of suspected mental disorders in divorced and widowed individuals was higher than the prevalence of these disorders in married and single individuals, which is consistent with the results of studies in Iran.¹¹⁻¹³ Problems caused by losing the dear ones or separation can be considered among the reasons behind the higher prevalence rate of mental disorders in this group compared with unmarried and married individuals.

The findings of this study on GHQ subscales showed that the prevalence rate of anxiety and somatization was greater than social dysfunction and depression, and the prevalence of these disorders was higher in women than men, which is different from the findings of the 1999 survey, in which the prevalence of anxiety and depression was higher than the other subscales.³ The higher prevalence of suspected anxiety and somatization can be attributed to environmental stressors, economic problems, and social changes in the province, which, as a result of the inability to express problems, manifest psychological symptoms in the form of somatic symptoms.

Among limitations of this study was the fact that we focused on the household population and excluded population sections likely to have high proportions of severe mental illnesses (e.g., the homeless and people living in institutions). Moreover, systematic survey nonresponse (i.e., people with mental disorders having a higher survey refusal rate than those without disorders) and systematic no reporting (i.e., recall failure, conscious no reporting, or error in the diagnostic evaluation) could lead to bias in the estimates of suspects in these surveys, particularly for lifetime events. It is likely that suspected disorder is underestimated. Further studies with more accurate diagnostic methods such as clinical interviews are recommended.

Conflict of interest

The authors declare that they have no conflict of interest.

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