Original Article

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

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Abstract

Introduction: The main objective of this study was to determine the mental health status of population aged 15 and over in the province of Alborz in the year 2015.

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Alborz province in Iran. An estimated sample size of 1200 people was chosen using systematic random cluster sampling. Access was provided by the contribution of Geographical Post Office of Karaj, Mohammad Abad, and Nazar Abad 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 SPSS-18 software

Results: Using GHQ traditional scoring method, the results showed that 19% of individuals (23.8% of females and 14.1% males) were suspected for mental disorders. The prevalence of suspected cases of mental disorders was 21.3% in urban and 13.8% in rural areas. It also showed that somatization and anxiety symptoms were more prevalent than social dysfunction and depression symptoms, and were more common in women than men. The results of this research also showed that the prevalence of suspected cases of mental disorders increased with aging. Such disorders were more common in females, age groups of 65 and above, people living in urban areas, divorced and widowed, illiterate and unemployed individuals compared with other groups.

Conclusion: The results of this study showed that about one fifth of people in the province are suspected for 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, Alborz province, general health questionnaire (GHQ-28), mental health status

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Introduction

Alborz province is one of the 31 provinces of Iran which was formed by division of Tehran province. The province is situated in the southern foothills of the Alborz Mountains. According to the latest national distribution, this province has 6 counties and 17 cities and its capital is Karaj. Alborz province has an area of 5142 km^2. Its population is 2,534,178 people, of whom 2,392,505 live in urban areas (94.4%) and 141,673 people (5.6%) live in rural areas. Totally, 1,284,141 (50.67%) of the province population are males and 1,250,037 (49.33%) are females. They mostly speak Persian and Turkish languages and their religion is Islam. Literacy rate of this province is 89.75%, the rate of unemployment is 19.3% and the average household size is 3.4.[1]

Concerning health facilities, this province has 86 health centers, 70 of which are located in urban and 16 are located in rural areas. Seventy-nine health houses in rural areas provide health services for people. There are 17 general hospitals in the province, but there is not any independent psychiatric hospital, and only 7 beds in the psychiatric ward of a general hospital are allocated to these patients. As a result, there are 0.0027 psychiatric beds per 10,000 people in Alborz province. To provide curative and preventive services to addicts seeking treatment, there are 193 methane maintenance treatment (MMT) centers and 5 harm reduction centers in the province. Regarding the mental health human resource specialists, there are 41 psychiatrists, 168 trained general physicians and 60 clinical psychologists in Alborz province who engaged in providing mental health services to the community. Currently, 9144 mentally ill patients are under coverage of the national program of mental health through the family physician system.[2]

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The population of the province was previously covered by Iran university of medical science, which was affiliated to Tehran province, so we cannot break down the results of mental health survey study that was carried out in 1999.[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 determine the population's mental health status in 2015.

Materials and Methods

This research was performed in the form of a cross-sectional field survey in Alborz 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 Karaj (provincial center), Mohammad Abad, and Nazar Abad 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 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 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 one individual was eligible, the sample was selected randomly.

Data related to the survey were analyzed using 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 1066 persons completed the questionnaire. Data on 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

Table 1. Prevalence of mental disorders in terms of demographic variables (n= 1066)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	524	74	14.1
Female	542	129	23.8
Place of residence			
Urban	741	158	21.3
Rural	325	45	13.8
Age group (years)			
15–24	154	18	11.7
25–44	361	61	16.9
45–64	358	78	21.8
+65	191	45	23.6
Marital status			
Unmarried	770	144	18.7
Married	185	28	15.1
Widowed, divorced	110	31	28.2
Occupation			
Employed	305	37	12.1
Unemployed	92	24	26.1
Student	73	10	13.7
Housewife	429	98	22.9
Retired	153	34	22.2
Education			
Illiterate	260	63	24.2
Primary & Secondary	326	65	19.9
Diploma	285	41	14.4
Graduate	157	30	19.1
postgraduate	28	4	14.3
Total	**1066**	**203**	**19.0**

Table 2. Estimated logistic regression coefficients and odds ratios

Variables	B	S.E.	Sig.	OR	95% C.I. for OR lower	95% C.I. for OR upper
Marital status						
Married	- - -	- - -	- - -	- - -	- - -	- - -
Unmarried	0.052	0.313	0.867	1.054	0.571	1.946
Widowed, or divorced	0.016	0.262	0.220	1.817	0.608	1.700
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.849	0.266	0.001	2.337	1.387	3.935
Age group (years)	0.012	0.007	0.097	1.012	0.998	1.027
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	0.525	0.195	0.007	1.690	1.154	2.475
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.776	0.316	0.014	2.172	1.170	4.032
Student	-0.010	0.462	0.984	0.991	0.401	2.449
Housewife	-0.032	0.320	0.920	0.968	0.518	1.812
Retired	0.278	0.308	0.366	1.321	0.723	2.413
Education						
Post graduate	- - -	- - -	- - -	- - -	- - -	- - -
Graduate	0.295	0.592	0.618	1.244	0.421	4.289
Diploma	-0.027	0.587	0.963	0.973	0.308	3.076
Primary & secondary	0.457	0.581	0.173	1.595	0.506	4.937
Illiterate	0.259	0.602	0.667	1.580	0.398	4.214

OR = odds ratio

21.4 % of the samples (26.3 % females and 16.5 % males) were suspected to suffer from mental disorders. The highest prevalence of mental disorders was in the rural areas (22.8 %), individuals aged 65 and over (35%), divorced or widowed (44.3%), illiterate (31.1%) and unemployed people (29.9%).

Table 2 shows that the risk of mental disorders for women was 2.337 times higher than that of men. The risk also increased with age. Divorced or widowed people were 1.817 times more at risk compared with singles. Unemployed persons were 2.172 times more at risk compared with employed individuals. The risk was 1.595 times higher among illiterate people compared with the educated.

The obtained data also showed that considering subscales of the questionnaire, 31.4% of the studied cases were suspected of somatization (22.9% of men and 39.8% of women), 29.2% were at risk of anxiety (25.9% of men and 32.3% of women), 11.9% were suspected of social dysfunction (10.4% of men and 13.5% of women), and 9.7% were at risk of depression (7.7% of men and 11.7% of women).

Discussion

The results of this study showed that a fifth of the population were suspected to suffer from mental disorders in Alborz province. The prevalence rate of mental disorders in this province is 19%, which is lower than the average of mental disorders in the nationwide study conducted in 2015.[8] In this study, the prevalence rate of suspected cases of mental disorders was higher in females (23.8%) than males (14.1%). Review of the studies conducted worldwide[9] and in Iran[10–12] indicates that the prevalence rate of mental disorders is higher in females. This higher prevalence rate can be due to the 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 (21.3% *vs.* 13.8%) which is consistent with the findings of other studies in Iran.[10–12] Economic problems and changing life style of living in urban areas can be reasons behind the higher prevalence rate of mental disorders in comparison to the rural residents studied in this province.

The results of this study showed that the prevalence rate of suspected cases of mental disorders increases with aging, and the highest rate was in the age group of 65 years and above (23.6%). Most of the studies carried out in Iran[13] and in other countries,[9] indicate that the higher prevalence rate of mental disorders in the old age can be attributed to factors like disability, menopause, retirement and biological changes of individuals.

Regarding literacy, the results showed the higher rate of mental disorders in illiterate individuals compared with other groups, which is consistent with the findings of most Iranian researches. Social and cultural restrictions and also disability of individuals in using effective methods of stress management can be considered as the reasons for higher prevalence rate of mental disorders in this age group and lower prevalence rate for educated individuals.

Findings of this study showed a higher rate of mental disorders in unemployed individuals compared to other groups, which is in line with the findings of most studies done in Iran.[10–12] The economic problems and lack of income in unemployed people can be considered as factors that increase the prevalence of mental

disorders in unemployed people.

With regard to marital status, the results indicated that widowed or divorced population were more vulnerable compared to other groups, which is compatible with the results of other survey in Iran.[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.

Confirming the results of other epidemiological study in Iran,[3] our surveys' findings demonstrate higher prevalence rate of anxiety disorders, somatic symptoms, social dysfunction symptoms and depressive symptoms in females compared with males. The high prevalence of these symptoms can be attributed to numerous economic, political and social stressors in the province.

Conflict of interest

The authors declare that they have no conflict of interest.

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