Original Article

A Survey on Mental Health Status of Adult Population Aged 15 and above in the Province of Zanjan, 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 Zanjan in 2015.

Method: This cross-sectional field study was conducted on the residents of both urban and rural areas of the Zanjan province. Through systematic random cluster sampling, 1200 individuals were selected from the residents of urban and rural areas of of Zanjan, Abhar and Qeydar. 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, 28.5% of the subjects (32.9% of females and 24.2% of males) were suspected of having mental disorders. The prevalence of suspected psychiatric disorders in urban areas (30%) was higher than the prevalence of these disorders in rural areas (24.8%). 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 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 retired individuals compared to the other groups.

Conclusion: The results of this study show that more than one quarter of the sample (28.5%) were suspected of mental disorders, and the prevalence of these disorders has increased from 21.3% in 1999 to 28.5% in 2015. Therefore, it is up to the authorities and health managers of the province to take the basic steps to supply, maintain, and preserve the mental health of those in need and promote the mental health of the community.

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

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Introduction

Zanjan province is located in the northwest of Iran with an area of 22164 km^2. The population of this province is 1,015,734, of whom 634,809 are in urban areas (62.5%) and 380,925 people live in rural areas (37.5%). Totally, 509,193 inhabitants of the province are men (50.1%) and 506,442 are women (49.9%). Zanjan province consists of 8 counties and 18 cities and its center is Zanjan. People mainly speak Azari and their religion is Islam. The literacy rate is 75.4%, the unemployment rate is 11.8% and the household size is about 4 people.[1]

In terms of health facilities, this province has 96 health centers (44 metropolitans and 52 rural centers) and 448 health houses that provide health services to citizens in rural and urban areas. A total of 13 hospitals with 1565 beds provide health care to people in need. Of these, 123 beds are allocated to mental patients (95 beds in the psychiatric hospital and 28 psychiatric beds in public and military hospitals); therefore, for every 10,000 people in the province, there are 1.2 psychiatric beds. There are 150 treatment centers with agonist drugs, 2 temporary harm reduction centers (DICs), 4 behavioral disorder counseling centers and six harm reduction centers in the province that provide treatment and addiction prevention services to people in need. In terms of mental health specialist human resources, there are 22 psychiatrists and 39 psychologists in the province who provide specialized mental health services to people. There are also 149 general practitioners trained in mental health in health centers that provide mental health services to mental patients covered by these centers.[2]

In terms of the prevalence of mental disorders, a national study conducted by Noorbala, et al. (1999) on 521 people aged 15 and over, showed that the prevalence of suspected psychiatric disorders in the sample was 21.3%: 13.3% in males and 28.1% in females.[3]

Considering the importance of epidemiological studies of mental

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disorders in determining the mental health status, identifying the demographic characteristics associated with these diseases, as well as estimating the resources and health services required by the province, this study was conducted to investigate and compare the mental health status of people in the province over the past 15 years.

Materials and Methods

This research was conducted in the format of a cross sectional and field study in Zanjan province in 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 of the study in the province was determined as 1200 people who were selected from the three cities of Zanjan (provincial center), Abhar and Qeydar, by random systematic and cluster sampling. This sample was extracted from the urban and rural population of the three cities with the help of 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 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 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 1099 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 28.5% of the subjects were suspected of having mental disorders (24.2% of males and 32.9% of females). The highest susceptibility to mental disorders in each of the variables

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1099)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	558	135	24.2
Female	541	178	32.9
Place of residence			
Urban	776	233	30.0
Rural	323	80	24.8
Age group (years)			
15–24	145	22	15.2
25–44	380	92	24.2
45–64	371	117	31.5
+65	203	82	40.4
Marital status			
Unmarried	855	236	27.6
Married	147	31	21.1
Widowed, or divorced	96	46	47.9
Occupation			
Employed	306	70	22.9
Unemployed	99	28	28.3
Student	117	15	13.2
Housewife	438	147	33.6
Retired	138	53	38.4
Education			
Illiterate	460	168	36.5
Primary & secondary	335	69	20.6
Diploma	166	38	22.9
Graduated	112	30	26.8
Post Graduated	20	6	30.0
Total	**1099**	**313**	**28.5**

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	0.140	0.282	0.621	1.150	0.661	2.000
Widowed, or divorced	0.205	0.231	0.376	1.227	0.780	1.930
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.142	0.247	0.565	1.152	0.711	1.869
Age	0.013	0.006	0.033	1.013	1.001	1.026
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	0.220	0.158	0.164	1.246	0.914	1.699
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.249	0.264	0.346	1.282	0.765	2.150
Student	-0.081	0.385	0.834	0.922	0.434	1.963
Housewife	0.220	0.284	0.439	1.246	0.714	2.175
Retired	0.239	0.246	0.331	1.270	0.784	2.059
Education						
Post Graduated	- - -	- - -	- - -	- - -	- - -	- - -
Graduated	-0.430	0.196	0.287	0.897	0.443	0.954
Diploma	-0.404	0.248	0.443	0.668	0.411	1.085
Primary & Secondary	-0.100	0.278	0.276	0.905	0.525	1.559
Illiterate	0.215	0.479	0.103	1.240	0.485	3.168

OR= Odds Ratio

studied pertained to those living in rural areas by 30%, people from the age group of 65 and older (40.4%), divorced and widowed (47.9%), illiterates (36.5%), and retired (38.4%).

Data in table 2 shows that the risk of developing a psychiatric disorder in females was 1.152 times higher than the risk in males and the risk increased incrementally with age. The risk was 1.227 times higher in divorced and widows than married individuals, 1.270 times higher in retired than persons who have a job and 1.240 times higher in illiterates than educated persons

Considering sub scales, the data show that 37.9% have somatization, (27.8% of males and 48.3% of females), 35.8% had anxiety (28.4% of males and 43.3 of females), 18.7% had social dysfunction (17.2% of males and 20.3% of females) and 10.2% had depression (9.5% of males and 10.9% of females).

Discussion

The results of this study showed that more than one quarter of the subjects in the province (28.5%) were suspected of mental disorders. The prevalence of suspected psychiatric disorders in the first national survey conducted in the province (1999) was 21.3%,[8] which indicates an increase in the prevalence of these disorders in 2015 compared to 1999.[9] This rise in prevalence of these suspected disorders can be attributed to changes in the livelihood as well as social, economic and political structure of the province.

In this study, the prevalence of suspected psychiatric disorders was 32.9% in females and 24.2% in males. The prevalence of suspected psychiatric disorders in the first national survey in 1999 was 28.1% in females and 13.3% in males. Comparison of the two studies shows that in the province, women are more vulnerable than men. A review of studies conducted in countries around the world[10] and Iran,[11–13] confirms the finding that the prevalence of mental disorders is higher in women than men. The reason for the higher prevalence of suspected women's mental disorders in comparison to men in the province can be biological factors, environmental stress, as well as the limited social participation of women according to the religious context of Zanjan province.

The prevalence of suspected psychiatric disorders in urban areas was 30%, higher than the prevalence of these disorders in urban areas with 24.8%, which is consistent with the findings of the survey in 1999 (17.9% of rural residents and 24% of urban residents).[8] 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 them compared to urban people.

The results of this study indicate that with increasing age, the prevalence of mental disorders increased and the highest incidence pertained to people 65 years of age and older with 40.4% of cases, which is in line with the results of the 1999 survey in the province. Most studies in Iran[9, 11–13] and the world[10] indicate a higher prevalence of suspected mental disorders in the elderly. The inability of people at retirement age, menopause and biological changes in elderly women can account for the increase in suspicious cases of mental disorders in the province.

In this study, the prevalence of suspected psychiatric disorders in illiterates was 36.5%, higher than the other groups which is in line with the results of the provincial survey of 1999[3] as well as

other studies conducted in Iran.[11–13] Social and cultural constraints and the incapacity of illiterate people to use effective methods of coping with stressors can be among the reasons for the higher prevalence of suspected cases of these disorders in illiterate people than the other groups.

The findings of this study indicate that the prevalence of mental disorders in retired people was higher than the other groups, which is consistent with the findings of the 1999 survey and other studies conducted in Iran and around the world.[9–13] Disability and physical constraints of retired people, as well as economic and social problems and unemployment can be considered as factors that increase the prevalence of mental disorders in these people compared to those employed.

The prevalence of suspected mental disorders in divorced and widowed people was higher than the prevalence of these disorders in married and single people, which is consistent with the results of studies conducted in Iran.[11–13] The loss of loved ones and social constraints due to separation and divorce can be reasons for the significant increase in the suspicious prevalence of these disorders in the subjects compared to the other groups.

The findings of this study suggest that 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 men; however, in 1999, the prevalence of depression and anxiety was higher than the prevalence of somatization of symptoms and social dysfunction in this province. The difference in the prevalence of these components in the present study compared to 1999[8] can be attributed to environmental stressors and economic, cultural and social changes in the province.

Conflict of interest

The authors declare that they have no conflict of interest.

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