Original Article

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

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

Results: Using GHQ traditional scoring method, the results showed that 21.4% of individuals (26.3% of females and 16.5% of males) were suspected of mental disorders. The prevalence of suspected cases of mental disorders was 20.8% in urban and 22.8% in rural areas. The results 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 group of 65 and above, people living in rural 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 were suspected of 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, Ardebil province, general health questionnaire (GHQ-28), mental health status

Introduction

Ardebil province is located in the north west of Iran with an area of 17953Km². Its population is 1,317,920, of whom 903,707 (86.6%) live in urban and 414,213 (13.4%) live in rural areas. The male population is 677,474 (51.4%) and the female population is 640,446 (48. 6%). This province consists of 10 towns and its center is Ardebil. The native language is Turkish and they are Muslims. The rate of literacy and unemployment is 91% and 12.8%, respectively.[1]

Regarding health care facilities, this province has 102 health care centers (32 for urban areas and 70 for rural areas) and 509 health houses provide health services for people. Treatment facilities in this province are provided by 15 hospitals with 1707 beds (164 beds in psychiatric hospitals and 164 beds in general hospitals provide inpatient services to psychiatric patients). Thus, for 10000 people with mental problems in the province, 1.2 beds exist. There are 92 Methadone Maintenance Therapy (MMT) centers and 1 Drop in center in the province which provide health and preventive services for addicts. Regarding specialized human resource in mental health, there are 17 psychiatrists, 3 clinical psychologists and 24 mental health experts working in the province. There are 185 trained general practitioners in health care centers, providing mental health services for patients. The national mental health program covered all urban and rural population and health care centers provide outpatient services for 13395 patients who have psychiatric disorders.[2]

A study carried out by Noorbala, et al. (1999) showed that out of 573 individuals aged 15 and above, the prevalence rate of likely mental disorders was 22.6%: 18% for men and 26% for women.[3]

Since epidemiological surveys of mental disorders are highly important to determine mental health status, identify demographic features related to mental health problems, and estimate health care facilities needed for the province, the present study was conducted in order to investigate and compare mental health status of individuals during the last 15 years.

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Materials and Methods

This research was performed in the form of a cross-sectional field survey in Ardebil 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 Ardebil (provincial center), Pars Abad, and Germi 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 where more than one individual was eligible, the sample was selected randomly.

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

Results

A total of 1116 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 21.4% of the samples (26.3% of females and 16.5% of 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%).

Information related to logistic regression of variables and the odds ratio are presented in the Table 2. This table demonstrates that the risk of mental disorders for women was 1.576 times that for men. The risk also increased with age. Divorced or widowed people were 1.518 times more at risk compared with singles. Unemployed persons were 1.331 times more at risk compared with employed individuals. The risk was 1.400 times more among illiterate people compared with the educated.

The obtained data also showed that considering subscales of the used 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).

Table 1. Prevalence of mental disorders in terms of the demographic variables (n = 1116)

Variables	Sample size (n)	Suspected cases (n)	Prevalence rate (%)
Gender			
Male	557	92	16.5
Female	559	147	26.3
Place of residence			
Urban	756	157	20.8
Rural	360	82	22.8
Age group (years)			
15–24	150	20	13.3
25–44	394	60	15.2
45–64	366	87	23.8
+65	206	72	35.0
Marital status			
Unmarried	857	170	19.8
Married	153	22	14.4
Widowed, divorced	106	47	44.3
Occupation			
Employed	259	26	10.0
Unemployed	144	43	29.9
Student	73	5	6.8
Housewife	453	130	28.7
Retired	113	29	25.7
Education			
Illiterate	511	159	31.1
Primary & Secondary	270	40	14.8
Diploma	175	20	11.4
Graduate	134	17	12.7
Postgraduate	22	3	13.6
Total	**1116**	**239**	**21.4**

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	-0.031	0.306	0.580	1.019	0.532	1.964
Widowed, or divorced	0.418	0.390	0.284	1.518	0.707	3.258
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.455	0.255	0.075	1.576	0.955	2.600
Age group (years)	0.004	0.006	0.537	1.004	0.992	1.016
Place of residence						
Urban	- - -	- - -	- - -	- - -	- - -	- - -
Rural	-0.520	0.174	0.576	1.195	0.423	0.836
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.286	0.288	0.320	1.331	0.757	2.340
Student	-0.029	0.411	0.945	0.972	0.434	2.175
Housewife	0.054	0.292	0.389	1.286	0.596	2.869
Retired	0.192	0.275	0.484	1.212	0.707	2.077
Education						
Post graduate	- - -	- - -	- - -	- - -	- - -	- - -
Graduate	-0.103	0.516	0.841	0.902	0.328	2.478
Diploma	-0.384	0.506	0.448	0.681	0.253	1.836
Primary & secondary	-0.152	0.494	0.759	0.859	0.326	2.264
Illiterate	0.336	0.502	0.503	1.400	0.523	3.744
OR=Odds Ratio						

Discussion

The results of this study revealed that 21.4% of the studied population of the province are likely cases of mental disorders, while the prevalence rate of mental problems obtained through the first study conducted in the province in 1999 was 22.6%,[8] indicating a mild decrease in the prevalence of mental disorders. This decrease can be attributed to the changes in social structure, economic and political situations, and social welfare.

The present study shows that the prevalence rate was 26.3% for females and 16.5% for males, whereas the 1999 study reported a rate of 26% for women and 18% for men. A review of previous studies carried out in other countries,[9] and in Iran[10–12] confirms that the prevalence of mental disorders is higher in women, which is in line with the findings of the current study. Biological factors, social roles, environmental and occupational tension, limitation of satisfaction and social participation can account for the higher prevalence rate in women.

Our study demonstrates higher prevalence rate for rural areas (22.8%) than urban areas (20.8%). This finding is not in line with the results of the survey conducted in 1999: 25.3% in urban regions and 16.8% in rural regions.[8] Economic problems, insufficient income, and changes in life style of rural individuals can account for this higher prevalence rate.

The survey also suggests that increase in age results in a higher prevalence rate of mental disorders, and the highest rate pertained to people aged 65 and above (35%), supporting the result of the study carried out in1999.[8] Factors such as retirement, menopause, and biological changes can be considered as probable causes.

The study shows that the rate of mental disorders among illiterate groups is 31.1%, compatible with the findings of the study conducted in 1999,[8] and those of other studies conducted all over the world.[9] This can be explained by sociocultural limitations in such groups which may result in their disability to cope with stress.

Unemployed men were at higher risk of mental disorders (29.9%), comparable with the findings of the study in 1999 and those of other studies conducted in Iran[10–13] and other countries.[9] Economic problems and insufficient income in unemployed men can be considered as possible explanations for this higher rate.

Divorced and widowed groups showed a higher rate (44.3%) than unmarried or married population. Loneliness and other social constraints caused by divorce can explain the significant increase in the prevalence rate of mental disorders. Compared with men, women were at higher risk of somatization, anxiety, social dysfunction and depression, supporting the results of the 1999 study.[8]

However, the 1999 study revealed the prevalence of the depression and social dysfunction to be higher than that of anxiety and somatization. Environmental stressful factors, economic, cultural and social changes can account for the difference in the prevalence of the above-mentioned disorders between the current study and the 1999 survey.

Conflict of interest

The authors declare that they have no conflict of interest.

Acknowledgments

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