

## Original Article

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

**Methods:** The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of East Azarbaijan in Iran. An estimated sample size of 1200 people was chosen using systematic random cluster sampling. The access was provided by the contribution of Geographical Post Office of Tabriz, Sarab and Marand 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 the SPSS-18 software.

**Results:** Using GHQ traditional scoring method, the results showed that 24.9% of the studied population (29.9% of the women and 20.1% of the men) were considered as likely cases. The prevalence rate of mental disorders was 23.1% for rural and 25.7% for urban areas. Prevalence rates of somatization and anxiety were higher than social dysfunction and depression and women revealed higher prevalence for these disorders compared with men. It was also shown that the prevalence rate significantly increased with age and was higher in women, people aged 65 and above, urban residents, widowed or divorced, illiterate, unemployed and housewives people.

**Conclusion:** The results of this study showed that about a quarter of the people in the province were suspected to have mental disorders. Comparing the results of the current survey with those of the study conducted in 1999 suggests that the prevalence of mental disorders is on the decrease in this province (from 25.2% in 1999 to 24.9% in 2015). Therefore, it seems vital that the officials take action in order to improve and maintain mental health status of the people who are at risk.

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

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## Introduction

East Azerbaijan province is located in the north west of Iran with an area of 45650Km<sup>2</sup> (2.8% of Iran's area). Its population is 3,909,652, of whom 71.8% live in urban areas and 28.2% in rural ones. The male population is 1,989,400 (50.9%) and the female population is 1,902,253 (49.1%). This

province consists of 19 towns and its center is Tabriz. The native language is Turkish and they are Muslims. Life expectancy is 75 years. The rates of literacy and unemployment are 84.7% and 12.5% respectively. The average number of family members is 3.5.<sup>1</sup>

Regarding health care facilities, this province has 277 health care centers (134 for urban areas and 133 for rural areas) and 1001 health houses provide health services for people. Concerning the professional mental health facilities, this province has 738 beds which provides inpatient services to psychiatric patients (665 beds in psychiatric hospitals and 73 beds in general hospitals). Thus, 2 beds exist for every 10000 people with mental problems in the province. There are 196 Methadone Maintenance Therapy (MMT) centers and 11 Drop in centers in the province which provide health and preventive services for addicts. Regarding specialized human resource in mental health, there are 53 psychiatrists, 5 clinical psychologists and 450 mental health experts working in the province. There are 233 trained general practitioners in health care centers, providing mental health services for patients. National mental health program covered all urban and rural population and health care centers provide outpatient services for 47098 patients who have psychiatric disorders.<sup>2</sup>

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A study carried out by Noorbala, et al. (1999) showed that out of 2101 individuals aged 15 and above, the prevalence rate of likely mental disorders was 25.3%: 20.9% for men and 29% for women.<sup>3</sup>

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.

## Materials and Methods

This cross-sectional field study was carried out in December and January (2014-2015) and included the population of age group 15 years and above living in both urban and rural regions of the East Azarbaijan province. Systematic random cluster sampling was used to select 1200 persons from Tabriz (provincial center), Sarab and Marand. 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.<sup>4</sup> 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.<sup>5</sup> 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.<sup>6</sup> 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.<sup>7</sup>

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 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 1164 persons completed the questionnaire. Table 1 shows the prevalence of mental disorders in terms of demographic variables. The obtained data suggest that 24.9% of the studied population had mental disorders (20.1% for males and 29.9% for females). The highest prevalence rate in terms of studied variables pertained to people of urban regions (25.7%), people of 65 years

**Table 1.** Prevalence of mental disorders in terms of the demographic variables (n= 1164)

Variables	Sample size (n)	Suspected cases (n)	Prevalence rate (%)
<b>Gender</b>			
Male	592	119	20.1
Female	572	171	29.9
<b>Place of residence</b>			
Urban	804	207	25.7
Rural	360	83	23.1
<b>Age group (years)</b>			
15-24	151	30	19.9
25-44	397	98	24.7
45-64	408	98	23.8
+65	202	64	31.7
<b>Marital status</b>			
Married	931	223	24.0
Unmarried	146	36	24.7
Widowed or divorced	82	31	37.8
<b>Occupation</b>			
Employed	404	77	19.1
Unemployed	85	29	34.1
Student	58	10	17.2
Housewife	467	142	30.4
Retired	112	24	21.4
Others	32	6	18.8
<b>Education</b>			
Illiterate	420	129	30.7
Primary & secondary	300	56	18.7
Diploma	233	56	24.0
Graduated	175	46	26.3
Post Graduated	22	3	13.6
<b>Total</b>	<b>1164</b>	<b>290</b>	<b>24.9</b>

**Table 2.** Estimated logistic regression coefficients and odds ratios

Variables	B	S.E.	Sig.	OR	95% C. I. for OR	
					Lower	Upper
<b>Marital Status</b>						
Married	---	---	---	---	---	---
Unmarried	0.367	0.270	0.375	1.043	0.849	2.452
Widowed, or divorced	0.246	0.264	0.151	1.479	0.763	2.145
<b>Gender</b>						
Male	---	---	---	---	---	---
Female	0.405	0.263	0.123	1.499	0.896	2.508
<b>Age</b>	0.008	0.006	0.206	1.008	0.996	1.020
<b>Place of residence</b>						
Rural	---	---	---	---	---	---
Urban	0.188	0.165	0.254	1.207	0.874	1.668
<b>Occupation</b>						
Employed	---	---	---	---	---	---
Unemployed	0.705	0.276	0.011	2.023	1.177	3.478
Student	-0.286	0.440	0.516	0.751	0.317	1.781
Housewife	0.147	0.291	0.213	1.459	0.655	2.052
Retired	-0.193	0.291	0.507	0.824	0.466	1.458
<b>Education</b>						
Post Graduated	---	---	---	---	---	---
Graduated	0.743	0.654	0.101	1.802	0.583	3.577
Diploma	0.569	0.652	0.383	1.766	0.492	3.334
Primary & Secondary	0.243	0.655	0.711	1.275	0.353	2.602
Illiterate	0.807	0.661	0.022	2.241	0.614	4.182

of age and above (31.7%), the divorced and widowed (37.8%), the illiterate (30.7%) and the unemployed (30.4%).

Table 2 shows estimated logistic regression coefficients and odds ratios. This table suggests that the risk of mental disorders for women was 1.499 times that for men. The risk also increased with age. Divorced or widowed people were 1.479 times more at risk compared with singles. Unemployed persons were 2.023 times more at risk compared with employed individuals. The risk was 2.241 times higher among illiterate people compared with the educated.

The obtained data also showed that considering subscales of the used questionnaire, 31% of the studied cases were suspected of somatization (23% of men and 38% of women), 31% were at risk of anxiety (26% of men and 36% of women), 19% were suspected of social dysfunction (16% of men and 22% of women), and 13% were at risk of depression (10% of men and 15% of women).

## Discussion

The results of this study revealed that 24.9% 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 25.2%,<sup>8</sup> 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 of population.

The present study shows that the prevalence rate was 29.9% for females and 20.1% for males, whereas the 1999 study reported the rates of 28.9% for women and 20.9% for men. A review of the previous studies carried out in other countries,<sup>9</sup> and in Iran,<sup>10-</sup>

<sup>12</sup> 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.

The study demonstrates higher prevalence rate for urban areas (25.7%) than rural areas (23.1%). This finding is in line with the results of the survey conducted in 1999: 20.6% in rural regions and 28% in urban regions.<sup>10</sup> Economical limitations, lack of facilities, and also insufficient access to the outside world can account for this higher prevalence rate in rural areas.

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 (31.7%), supporting the results of the study carried out in 1999.<sup>8</sup> 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 30.7%, compatible with the findings of the study conducted in 1999,<sup>8</sup> and those of other studies conducted all over the world.<sup>9</sup> This can be explained by sociocultural limitations in such groups which may result in their disability to cope with stress.

The unemployed and housewives were more at risk of mental disorders, comparable with the findings of the study in 1999 and other studies conducted in Iran,<sup>10-13</sup> and other countries.<sup>9</sup> Economical problems and insufficient income in unemployed people, and social limitations in female can be considered as possible explanations for this higher rate.

Divorced and widowed groups showed a higher rate than married or unmarried 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 more at risk of somatization, anxiety, social dysfunction and depression, supporting the results of the study in 1999.

However, the 1999 study revealed the prevalence of the depression and social dysfunction 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.*

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