

## Original Article

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

**Method:** This cross-sectional field study was conducted on the residents of both urban and rural areas of the Yazd province. Through systematic random cluster sampling, 1200 individuals were selected from the residents of urban and rural areas of Yazd, Ardekan and Meybod. 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 indicates that through traditional scoring method, 26.7% of study population were highly suspicious for psychiatric disorders (32.1% of females and 21.4% of males). The prevalence of probable psychiatric disorders in urban areas (28.7%) was higher than the prevalence in rural areas (21.3%). The prevalence of probable somatization and anxiety was higher than the prevalence of social dysfunction and depression, and also the prevalence of these disorders was higher in women. The findings of this study show that the prevalence of probable psychiatric disorders has a direct relationship with increasing age and the prevalence of such disorders is higher in women, urban residents, individuals aged more than 65, divorced and widowed individuals, illiterate and unemployed people.

**Conclusion:** The results of this study show that more than one quarter of study population were suspicious for psychiatric disorders and the prevalence of these disorders increased from 11.8% to 26.7% since 1999. So, health authorities in this province have to do their best for provision, maintenance and improvement of mental health.

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

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## Introduction

Yazd is one of the central provinces of Iran, it is spread over 74650 square kilometers of surface area. The population is 1,040,286, of whom 87.4% are urban and 12.6% are rural. Male population is 51.3% and female population is 48.7%. The population live in 10 cities and the capital is Yazd, the language is Persian and the religion is Islam. The life expectancy rate is 75.7 years, the unemployment rate is 11.2% and the average

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family size is 3.54 persons.<sup>1</sup>

Considering health and therapeutic facilities, Yazd province has 86 health and therapeutic centers, of which 49 centers are in urban and 36 centers are in rural area. A total of 171 health houses provide health services to people in rural areas. There are 19 hospitals with a total of 3012 beds. The mental hospital has 100 beds and there are also 53 beds for psychiatric patients in general hospitals; in other words, for every 10000 persons, there are 1.5 psychiatry beds. There are 120 methadone maintenance centers and two harm reduction centers for provision of therapeutic and preventive services to addicts. Considering mental health human resources, there are 25 psychiatrists and 150 psychology MSc for provision of mental health services. There are also 126 general practitioners who work in health centers for provision of mental health services to rural and urban people and especially to 2187 psychiatric patients enrolled in the mental health project.<sup>2</sup>

In a study by Bagheri Yazdi, et al. in 1991, the prevalence rate of psychiatric disorders in urban and rural areas of Maybod, one of the cities of Yazd province, was 12.5%.<sup>3</sup> In a study by Harrazi and Bagheri Yazdi in 1992 in urban areas of Yazd, this rate was 18.6%.<sup>4</sup> In a national study conducted by Noorbala, et al. in 1999, 592 individuals aged 15 years and more enrolled in Yazd province, and 6.5% of males and 16.2% of females were suspicious for psychiatric disorders.<sup>5</sup>

Considering the important role of epidemiological studies of

psychiatric illness in the mental health status, demographic data of the population with psychiatry disorders and knowing about health provisional services, resources and facilities could be important.

## Materials and Methods

This cross-sectional field study was carried out in 2015 and included the population of age group 15 years and above living in both urban and rural regions of the province. Systematic random cluster sampling was used to select 1200 persons from Yazd (provincial center), Ardekan and Meybod. 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>6</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>7</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>8</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>9</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 1101 persons completed the questionnaire. The frequency distribution of psychiatry disorders in population study of this province is shown in Table 1. Totally, 26.7% of study population had psychiatric disorders; 32.1% of females and 21.4% of males. Urban areas had a higher rate of psychiatric disorders (28.7% vs. 21.3%). The rate was very high in persons aged more than 65 years (36.3%), divorced and widows (41%), illiterates (37.1%) and unemployed persons (40.4%).

Data in Table 2 shows that the risk of developing a psychiatric disorder in females was 1.777 times higher than the risk in males and the risk increased incrementally with age. The risk was 2.825 times higher in divorced and widows than married individuals, 3.368 times higher in jobless than persons who have a job and 2.368 times higher in illiterates than the educated

Considering sub scales, data show that 33.1% have somatization, (24.7% of males and 41.5% of females), 32.8% had anxiety (26.6% of males and 39% of females), 19.6% had social

**Table 1.** Prevalence of mental disorders in terms of the demographic variables (n= 1101)

Variables	Sample size (n)	Suspected cases (n)	Prevalence rate (%)
<b>Gender</b>			
Male	555	119	21.4
Female	546	175	32.1
<b>Place of residence</b>			
Urban	805	231	28.7
Rural	296	63	21.3
<b>Age group (years)</b>			
15-24	150	31	20.7
25-44	386	90	23.3
45-64	369	103	27.9
+65	193	70	36.3
<b>Marital status</b>			
Unmarried	894	243	27.2
Married	127	19	15.0
Widowed, or divorced	78	32	41.0
<b>Occupation</b>			
Employed	282	47	16.7
Unemployed	57	23	40.4
Student	154	34	21.2
Housewife	443	144	32.5
Retired	159	43	27.0
<b>Education</b>			
Illiterate	291	108	37.1
Primary & secondary	342	87	25.4
Diploma	246	56	22.8
Graduated	180	39	21.7
Post Graduated	20	2	10.0
<b>Total</b>	<b>1101</b>	<b>294</b>	<b>26.7</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	0.772	0.351	0.028	2.164	1.088	2.303
Widowed, or divorced	1.039	0.444	0.019	2.825	1.182	3.752
<b>Gender</b>						
Male	---	---	---	---	---	---
Female	0.575	0.258	0.026	1.777	1.072	2.946
<b>Age</b>	0.006	0.006	0.313	1.006	0.994	1.019
<b>Place of residence</b>						
Rural	---	---	---	---	---	---
Urban	0.434	0.163	0.085	1.543	1.121	2.125
<b>Occupation</b>						
Employed	---	---	---	---	---	---
Unemployed	1.214	0.319	0.000	3.368	1.801	4.697
Housewives	0.755	0.439	0.085	2.128	0.900	3.032
Student	0.213	0.302	0.480	1.138	0.685	2.237
Retired	0.259	0.260	0.321	1.295	0.778	2.157
<b>Education</b>						
Post Graduated	---	---	---	---	---	---
Graduated	0.753	0.655	0.448	1.123	0.588	1.773
Diploma	0.678	0.657	0.302	1.571	0.544	1.640
Primary & Secondary	0.760	0.656	0.045	2.139	0.591	3.737
Illiterate	0.862	0.670	0.035	2.368	0.837	3.809
OR= Odds Ratio						

dysfunction (16.3% of males and 22.8% of females) and 11.9% had depression (8.5% of males and 15.3% of females).

## Discussion

The results of this study show that more than a quarter of Yazd province population are highly suspicious to have a psychiatry problem. This rate was 11.6% in the first national study done in 1999,<sup>10</sup> which has increased in this survey to 26.7% in 2015.<sup>11</sup> This rise in the rate of the prevalence of psychiatric disorders could be due to change in the economic, political, social and income status in this province.

In this study, the prevalence rate was 21.4% for males and 32.1% for females, but the prevalence rate in the 1999 study was 16.1% in females and 6.5% in males. Comparing the results of these two studies is in favor of greater susceptibility of females for developing psychiatric disorders. Review of studies in different countries of world,<sup>12</sup> Yazd province,<sup>3,4</sup> and Iran<sup>13-15</sup> shows similar results to ours. The explanation for this higher rate could be the sexuality, biology of the women, environmental stresses and restricted sources of satisfaction for women.

The prevalence rate of being suspicious for having psychiatric disorder was higher for urban residents (28.7%) than rural residents (21.3%), which is in line with the 1999 study in which the rate was 12.4% for urban residents and 10.2% for rural residents.<sup>13</sup> The explanation for this higher rate could be economic difficulties, money making rate and characteristics of urban living situations.

The results of this study show that with increasing age, the incidence of suspicion for a psychiatric disorder increased and the

highest rate of this problem (36.3%) pertained to persons aged 65 years or more which is in line with the results of the 1999 study. The results of most studies in Iran,<sup>13-15</sup> and the world,<sup>12</sup> are in favor of more psychiatric disorders in geriatric age. The explanation for this finding could be physical disabilities, retirement, menopause and biological changes in women.

This study shows that the prevalence rate of psychiatric disorders was very high in illiterate persons which is in line with the results of the 1999 study and other studies,<sup>13-15</sup> in Iran and the world.<sup>12</sup> Inability of illiterate person for management of stresses and social limitations could be the causes of such high rate.

The results of this study show that the prevalence of suspicion for having a psychiatric disorder was 40.4% in unemployed persons and this rate was in 41% divorced and widows, which is in line with the 1999 study and other studies in Iran<sup>13-15</sup> and the world.<sup>12</sup> Economic problems, decreased money making rate and life difficulties of jobless persons and also loss of beloved ones and social limitation secondary to separation and divorce could explain this high prevalence rate.

The results of this study show that the prevalence rate suspicion for having anxiety and somatization was higher than depression or social dysfunction. The national 1999 study and other studies in Iran and the world show similar results.<sup>5</sup> This higher rate may be due to environmental stresses, economic difficulties and social changes.

## Conflict of interest

*The authors declare that they have no conflict of interest.*

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