Original Article

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

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Kerman 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 Kerman, Jiroft and Bam 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 18.8% of the subjects showed to be at risk of mental disorders (22.9% of females and 14.8% of males). Urban areas (20.2%) were more at risk of mental disorders compared with rural residents (16%). Anxiety and somatization symptoms were more frequent than depression and social dysfunction among respondents. The obtained data revealed that the prevalence of mental disorders increased with age. The results also indicated that mental disorders were more common in certain subgroups; in particular women, those aged 65 years and above, the divorced and widowed, illiterate and unemployed adults.

Conclusion: The results of this study showed that one fifth of the samples were suspected of psychiatric disorders and the prevalence of these disorders has decreased from 22.9% in 1999 to 18.8% in 2015; so, it is on the authorities and health managers of the province to maintain the essential elements for continuity of mental health services to people with mental disorders.

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

Introduction

K erman province is one of the southeast provinces of Iran, with an area of 1,807,250 square kilometers. The population of the province is 2,938,988, of whom 1,689,842 people live in urban areas (57.5%) and 1,242,344 people in rural areas (42.5%). Totally, 50.4% of the province's population is composed of men (1,482,339) and 49.6% of the

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population are women. The people of the province mainly speak Persian and their religion is Islam. The literacy rate is 82.20%, the unemployment rate is 7.9% and the household size in the province is 3.7%.[1]

In terms of health and treatment facilities, the province has 195 health centers, 99 of which are urban centers and 96 rural centers. Totally, 759 health homes in rural areas provide health services to the public. There are 31 hospitals in the province comprising 3331 beds providing treatment to people in need of medical care. The provincial psychiatric hospital has 325 beds and 43 psychiatric beds are also available in general hospitals of the province; so, there are about 1.3 psychiatric beds per 10,000 populations. A total of 306 methadone maintenance treatment centers and 8 Drop-In centers in the province provide health and preventive services to addicted patients.[2]

In terms of mental health practitioners, 40 psychiatrists are currently working in the province. Several health centers with 286 general practitioners provide mental health services to the urban and rural population of the province, and in particular, 7692 mental health patients covered by the program.[2]

In terms of the prevalence of mental disorders, a national study conducted by Noorbala, et al. (1999) on 1049 people aged 15 and over, showed that the prevalence of suspected psychiatric disorders in the sample was 22.9%; 14.8% in men and 29.3% in women.[3]

Considering the importance of studies on the epidemiology of psychiatric 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 aims to examine and compare the mental health status of people of this province in the past 15 years.

Materials and Methods

This research was performed in the form of a cross-sectional field survey in Kerman province in 2015. The population sample of this survey consisted of urban and rural dwellers 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 Kerman (provincial center), Jiroft, and Bam. 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 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 1104 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 18.8% of the samples (22.9% of females and 14.8% of males) were suspected to suffer from mental disorders. The highest

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1104)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	553	82	14.8
Female	551	126	22.9
Place of residence			
Urban	753	152	20.2
Rural	351	56	16.0
Age group (years)			
15–24	148	23	15.5
25–44	391	60	15.3
45–64	367	78	21.3
+65	197	46	23.4
Marital status			
Unmarried	805	146	18.1
Married	185	29	15.7
Widowed, or divorced	113	33	29.2
Occupation			
Employed	302	28	9.3
Unemployed	91	28	30.8
Student	154	30	19.8
Housewife	384	86	22.4
Retired	173	36	20.8
Education			
Illiterate	279	76	27.2
Primary & secondary	288	42	14.6
Diploma	254	38	15.0
Graduated	236	45	19.1
Post Graduated	44	7	15.9
Total	**1104**	**208**	**18.8**

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	0.684	0.281	0.015	1.982	1.144	2.135
Widowed, or divorced	0.867	0.410	0.035	2.379	1.064	3.318
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.500	0.223	0.025	1.649	1.066	2.551
Age	0.000	0.007	0.985	1.000	0.986	1.014
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	0.418	0.221	0.058	1.519	0.986	2.341
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.075	0.284	0.792	1.078	0.618	1.879
Student	1.055	0.397	0.456	1.121	1.319	1.248
Housewife	-0.297	0.330	0.369	0.743	0.389	1.420
Retired	0.436	0.368	0.008	2.871	1.319	3.248
Education						
Post Graduated	- - -	- - -	- - -	- - -	- - -	- - -
Graduated	0.872	0.556	0.307	1.391	0.804	1.814
Diploma	0.900	0.570	0.254	1.460	0.805	2.120
Primary & Secondary	1.045	0.594	0.179	1.545	0.888	2.116
Illiterate	1.233	0.610	0.043	2.845	1.039	2.340
OR= Odds Ratio						

prevalence of mental disorders was in the urban areas (20.2%), individuals aged 65 and over (23.4%), divorced or widowed (29.2%), illiterate (27.2%) and unemployed people (30.8%).

Information related to logistic regression of variables and the odds ratio are presented in Table 2. Based on the logistic regression analyses (Table 2), the results indicated that females had a relative risk of mental disorders of 1.649 compared with males. The risk of mental disorders increased significantly with age. Divorced or widowed people were 2.379 times more at risk of mental disorders compared with married people. The highest risk of mental disorders pertained to retired people who were 2.871 times more at risk of mental disorders compared with employed people. Illiterate individuals were 2.845 times more vulnerable to mental disorders than people with postgraduate degrees and above.

The results also showed that 32.6% of the studied sample scored high on somatization subscale (28.5% of males and 36.8% of females), 33.1% on anxiety subscale (31% of males and 35.3% of females), 15.8% on social dysfunction subscale (14.6% of males and 16.1% of females), and 11.6% on depression subscale (10% of males and 13.1% of females).

Discussion

The results of this study showed that about a fifth of people (18.8%) were suspected to suffer from mental disorders in Kerman Province. The prevalence of suspected psychiatric disorders in the first national survey conducted in the province (1999) was 22.9%,[8] which indicates a decrease in the prevalence of these disorders in 2015 compared to 1999.[9] This decrease in suspected disorders can be attributed to changes in the social, livelihood, economic and political structure of the province.

In this study, the prevalence of suspected psychiatric disorders was 22.9% in females and 14.8% in males. The prevalence of suspected psychiatric disorders in the country's first study in 1999 was 29.3% in females and 14.8% in males. Comparison of the two studies shows that in Kerman province, women have higher vulnerability to mental disorders than men. A review of studies conducted in different countries of the world,[10] and Iran,[11–13] confirm 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, gender role, environmental stress, and limited source of women's satisfaction.

The prevalence of suspected psychiatric disorders in people living in urban areas is 20.2% higher than the prevalence of these disorders in rural areas with 16%, which was not in line with the 1999 findings (22.5% of urban residents and 23.5% of people living in rural areas).[11] Economic problems, low income and lifestyle in cities can account for the higher prevalence of these disorders compared to those living in rural areas.

The results of this study indicate that with increasing age, the prevalence of mental disorders increased and the highest incidence pertained to people aged 65 years and above with 23.4% of cases,

which is in line with the results of the research in the province in 1999.[11] Most studies in Iran and the world indicate the higher prevalence of most mental disorders in old age.[10–13] Physical disability in retirement age, menopause and biological changes in elderly women can account for the increase in suspected prevalence of mental disorders in the province.

In the present study, the prevalence of psychiatric disorders in illiterates was 27.2% higher than the other groups which is in line with the results of the provincial survey of 1999 as well as other studies conducted in Iran and the world.[9,10] The inability of illiterate people to use effective methods of coping with social constraints and stressors can be considered as one of the reasons for the higher prevalence of suspected cases of these disorders than other groups.

The findings of this study indicate that the prevalence of suspected mental disorders in the unemployed was 30.8% higher than the other groups. Also, the prevalence of these disorders in divorced and widowed individuals was 29.2% higher than the other groups, which is consistent with the findings of the 1999 survey and other studies conducted in Iran[11–13] and the world.[10] The existence of inflation and recession, as well as the lack of income and living problems of unemployed people, as well as loss of loved ones and social constraints due to separation and divorce, can be considered as reasons for a significant increase in the suspected prevalence of these disorders in the subjects studied compared to the other groups.

The findings of this study suggest that the prevalence of suspected somatic symptoms and anxiety was higher than the prevalence of social dysfunction and depression, and the prevalence of these disorders was higher in women than men. However, in the year 1999, the prevalence of somatic symptoms and depression was higher than the prevalence of anxiety and social dysfunction. The reason for the difference in the prevalence of these components in the present study, compared to 1999, can be environmental stressors, economic problems, and social changes in the province.[3]

The findings of this study suggest that somatization, anxiety, social dysfunction and depressive symptoms were more common amongst women than men and in urban areas than rural areas. The prevalence of suspected mental disorders in unemployed, divorced and widowed individuals was higher than the other groups. The research literature emphasizes the higher prevalence of somatization and anxiety compared to social dysfunction and depression and the prevalence of these disorders in women is more than men. The results illustrate that due to economic conditions, cultural and social debility, in particular emotional stress of child raising, there is a higher occurrence of mental disorders in females than males.

Conflict of interest

The authors declare that they have no conflict of interest.

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