

Original Article

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

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Kermanshah in Iran. An estimated sample size of 1200 people was chosen in three clusters: Kermanshah, Islamabad-e-Gharb, and Sonqor by using the systematic random sampling method. The General Health Questionnaire-28 (GHQ-28) was used as the screening tool for evaluation of status for mental disorders. The traditional method for scoring of GHQ-28 was used in this study. Data analysis was carried out using the SPSS-18 software.

Results: Response rate for the study was 97.83%. The results showed that 26.2% of individuals (29.4% of females and 23% of males) were suspected to suffer from mental disorder, in total. The prevalence of being suspected of mental disorders was 28.9% in urban and 19.7% in the rural areas. 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 being suspected of mental disorders increased with aging. Suspicion for these disorders was more common in females, those aged ≥65, people living in urban areas, divorced and widowed, illiterate, housewives and unemployed individuals compared with the other groups.

Conclusion: This study showed that more than a quarter of the people in Kermanshah province were suspected to have mental disorders. These findings mandate further attention in the province health policy and program planning for prevention and promotion of mental health.

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

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Introduction

Kermanshah Province is located in the west of Iran, with an area of 24640 km². Its population is about 1,981,158 people, of whom 1,454,194 live in urban areas (73%) and 536,964 in rural areas (27%). The gender ratio for the entire population is 50.1 males to 49.9 females. This population inhabits 14 cities, their major religion is Islam (Shia and Sunni) and they mostly speak the Kurdish language. The average life expectancy in this

province is 74.4%, the unemployment rate is 10.8%, and the mean family size is 3.6 members in the household.¹

Regarding health facilities, this province has 133 public health centers, of which 69 centers are urban and 64 are rural. In addition, 649 health houses in rural areas provide basic health services for people. There are 23 hospitals with 2883 beds in the province. Only one hospital with 137 beds exists to provide inpatient services to psychiatric patients. Furthermore, 5 beds in the psychiatric ward of a general hospital are allocated to these patients. As a result, there are only 0.7 psychiatric beds per every 10,000 people in Kermanshah province. Additionally, 124 methadone maintenance therapy (MMT) clinics and 3 centers for addiction harm reduction provide services of prevention and treatment to patients with substance related problems. Regarding the active mental health human service providers, there are 24 psychiatrists and 53 psychologists working in the Kermanshah province. The number of physicians working in public health centers is 317, who provide mental health services to the urban and rural population of the province, especially delivering mental health services to 6285 patients who are under coverage of the national programs of mental health through family physician system.²

In the first national mental health survey conducted by Noorbala, et al. (1999), 1025 individuals aged 15 and above were studied in the province. The result showed that 19.2% of them were

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suspected to suffer from mental disorders: 12.8% of males and 24.5% of females.³

As the epidemiological studies are important in determining the mental health status of the general population and also gauging the required resources and facilities within the province, this study was performed to examine and compare the mental health status of the population in the Kermanshah province in the past 15 years.

Materials and Methods

This research was conducted in the format of a cross sectional and field study in Kermanshah 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 Kermanshah (provincial center), Songhor and Eslamabad Gharb, 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 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 modeling was used to determine the factors that affect mental disorders. The average time to complete each questionnaire was 45 minutes.

Results

Of 1200 individuals approached by interviewers, 1174 (97.83%) agreed to participate in the study. Data regarding the prevalence of suspected cases of mental disorders in terms of gender, place of residence, age, marital status, education, and occupation

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1174)

Variables	Sample size (n)	Suspected cases (n)	Prevalence rate (%)
Gender			
Male	579	133	23.0
Female	595	175	29.4
Place of residence			
Urban	839	242	28.9
Rural	335	66	19.7
Age group (years)			
15-24	172	26	15.1
25-44	391	101	25.7
45-64	402	100	24.8
+65	209	81	38.8
Marital status			
Unmarried	355	86	24.1
Married	666	148	18.4
Widowed, or divorced	153	74	48.4
Occupation			
Employed	332	59	17.8
Unemployed	148	55	37.2
Student	96	12	12.5
Housewife	468	159	34
Retired	130	30	23.1
Education			
Illiterate	451	147	32.6
Primary & secondary	346	86	24.9
Diploma	233	51	21.9
Graduated	126	21	16.7
Post Graduated	18	3	16.7
Total	1174	308	26.2

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	0.062	0.261	0.812	1.064	0.638	1.774
Widowed, or divorced	0.823	0.333	0.014	2.276	1.184	4.374
Gender						
Male	---	---	---	---	---	---
Female	0.311	0.298	0.296	1.365	0.761	2.447
Age	0.011	0.006	0.052	1.012	1.000	1.023
Place of residence						
Rural	---	---	---	---	---	---
Urban	0.591	0.168	0.000	1.806	1.300	2.509
Occupation						
Employed	---	---	---	---	---	---
Unemployed	0.911	0.234	0.000	2.488	1.574	3.932
Student	-0.121	0.458	0.793	0.886	0.361	2.176
Housewife	0.775	0.334	0.020	2.171	1.129	4.175
Retired	-0.135	0.278	0.626	0.873	0.507	1.506
Education						
Graduated	---	---	---	---	---	---
Post Graduated	-0.354	0.617	0.567	0.702	0.209	2.354
Diploma	0.042	0.591	0.943	1.043	0.328	3.318
Primary & Secondary	0.117	0.589	0.842	1.124	0.355	3.565
Illiterate	0.070	0.604	0.208	1.272	0.328	3.506
OR= Odds Ratio						

are presented in Table 1. The results showed that 26.3% of the samples (23% of males and 29.4% of females) were suspected to suffer from mental disorders. Considering various demographic factors, the highest prevalence of mental disorders was seen in the urban areas with 28.9%, individuals aged 65 and over with 38.8%, divorced or widowed individuals with 48.4%, the illiterate with 32.6%, and unemployed people with 37.2%.

According to the logistic regression analyses (Table 2), females were at greater risk for mental disorders (1.365 times more than males). The risk of mental disorders increased significantly with age. Divorced or widowed people were 2.276 times more at risk of mental disorders compared with married people. The highest risk of mental disorders pertained to unemployment (unemployed people were 2.488 times more at risk of mental disorders). Illiterate individuals were 1.272 times more vulnerable to mental disorders than people with bachelor's degrees and above.

Regarding the subscales of general health questionnaire, 26.2% of the sample experienced somatization (22.7% males and 29.7% females), 29.3% are suspected to suffer from anxiety (26.1% males and 32.5% females), 19.8% are suspected to suffer from social dysfunction (18.6% males and 21.1% of females), and 13.3% are suspected to suffer depression (12.5% males and 14.2% of females).

Discussion

The results of this study showed that more than a quarter of people were suspected to suffer from mental disorders in Kermanshah province. The prevalence rate of the mental disorders in the 1999 mental health survey in this province was 19.2%,⁸ which demonstrated a considerable increase in the prevalence rate of mental disorders from 19.2% to 26.2%.⁹ This rise in the

prevalence rate of mental disorders in the province can be related to some extent to the changes which have occurred in the social, living and economic structures of the province at the time of research. In this study, the prevalence rate of suspected cases of mental disorders was higher in females (29.4%) than males (23%). Review of the studies which have been done worldwide,¹⁰ and in Iran,¹¹⁻¹³ indicated that the prevalence rate of mental disorders is higher in females. The higher prevalence rate of suspected cases of mental disorders in females in comparison to males can be due to the biological factors, gender role, economic problems, limited satisfaction with life and also social participation restrictions.

The trend of changes in the prevalence rate of mental disorders from the year 1999 to 2015 showed that the rate of mental disorders in females has been relatively constant (29.3 vs. 29.4, respectively), whereas in males, it has risen considerably from 14.8% to 23%.¹¹ These trends indicate that socioeconomic and political changes during the last 15 years have had greater negative effects on men. For example, the high rate of unemployment in Kermanshah province may play an adverse role in this process.

Considering the place of residence, the prevalence rate of suspected cases of mental disorders was higher in people living in urban areas than rural areas, which is consistent with the findings of the first mental health survey in this province in 1999.³ Adverse effects of factors such as overcrowding, pollution, poverty, slums, rising levels of violence, changes in social structure, inequality, and poor social support could explain the increased rate of mental disorders in urban compared to rural areas.¹⁰

The results of this study showed that the prevalence rate of suspected cases of mental disorders increased with aging and the highest rate pertained to the age group of 65 years and above with 38.8%, which is consistent with the findings of the first mental health survey in the province in 1999. Most of the

studies conducted in Iran and the world have indicated the higher prevalence rate of mental disorders in the retirement period which can be due to factors like disability, menopause and biological changes of individuals.^{14,15}

With regard to literacy, the results showed a higher rate of mental disorders in illiterates compared to the other groups which is consistent with the findings of the results of previous studies in Iran.¹⁰⁻¹² Social and cultural restrictions and also disability of individuals in using effective methods of stress management can be considered among the reasons for the higher prevalence rate of mental disorders in this age group and lower prevalence rate among graduated individuals.

The results of this study showed that mental disorders were more common in the unemployed (37.2%) compared to other occupational groups, which is consistent with findings of previous studies in Iran and the world.^{16,17} Unemployment, lack of income, limited social relations and monotony of life could result in mental disorders.

The findings indicated that widowed or divorced people were more vulnerable compared to other groups. Stress secondary to loss, and social and economic pressure on divorced or widowed people, are among contributing factors for this result. With regard to GHQ subscales, the results of the study showed that somatization and anxiety symptoms were more prevalent than social dysfunction and depression symptoms. It should be mentioned that in the previous survey in 1999, somatization and depressive symptoms were predominant.³ The reasons for changes which have occurred during the last 15 years in the symptoms profile are unknown.

Conflict of interest

The authors declare that they have no conflict of interest.

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References

1. Internet database of Iran Statistics Center of, demography of the province of the country on the basis of the results of the population and house census, 2016. Available from: URL: <https://www.amar.org.ir>. (Accessed Date: October 2015).
2. The function reports of health and treatment department of Kermanshah University of Medical Sciences, 2016.
3. Noorbala AA, Mohammad K, Bagheri Yazdi SA, Yasamy MT. A view of mental health in Iran. Iranian Red-Crescent Society Publication, 2001, Tehran, Iran.
4. Goldberg DP. The detection of psychiatric illness by Questionnaire. *Oxford University Press*. 1973; London.
5. Goldberg DP, Hillier VF. A scaled version of general health questionnaire. *Psychological Medicine*. 1979; 9: 131 – 145.
6. Goldberg DP, Gater R, Sartorius N, Ustun TB. The validity of two version of GHQ in general health care. *Psychological Medicine*. 1997; 27(1): 191 – 197.
7. Noorbala AA, Bagheri Yazdi SA, Mohammad K. The validation of general health questionnaire-28 as a psychiatric screening tool. *Hakim Health Sys Res*. 2004; 11(4): 47 – 53.
8. Noorbala AA, Mohamad K, Bagheri-Yazdi SA, Yasamy MT. Study of the mental health status of the 15 years and older people in the Islamic Republic of Iran. *Hakim*. 2004; 5 (1): 1 – 10.
9. Steel Z, Marnane C, Iranpour C, Chey T, Jackson JW, Patel V, et al. The global prevalence of common mental disorders: a systematic review and meta-analysis 1980–2013. *Int J Epidemiol*. 2014; 43: 476 – 493.
10. Noorbala AA, Bagheri Yazdi SA, Yasamy MT, Mohammad K. Mental health survey of the adult population in Iran. *Br J Psychiatry*. 2004; 184: 70 – 73.
11. Mohammadi MR, Davidian H, Noorbala AA, Malekafzali H, Naghavi HR, Pouretamad HR, Yazdi SA, et al. An epidemiological survey of psychiatric disorders in Iran. *Clin Pract Epidemiol Ment Health*. 2005; 1: 16.
12. Sharifi V, Amin-Esmaeili M, Hajebi A, Motavalian A, Radgoodarzi R, Hefazi M, Rahimi-Movaghar A. Twelve-month prevalence and correlates of psychiatric disorders in Iran: The Iran mental health survey-2011. *Arch Iran Med*. 2015; 18(2): 76 – 84.
13. Noorbala AA, Faghihzadeh S, Kamali K, Bagheri-Yazdi SA, Hajebi A, Mousavi MT, et al. Mental health survey of the adult population of Iran in 2015. *Arch Iran Med*. 2017; 20(3): 128 – 134.
14. Desai NG, Tiwari SC, Nambi S, Shah B, Singh RA, Kumar D, et al. Urban mental health services in India: How complete or incomplete? *Indian J Psychiatry*. 2004; 46(3): 194 – 212.
15. Ahmadvand A, Sepehrmanesh Z, Ghoreishi FS, Afshinmajd S. Prevalence of psychiatric disorders in general population of Kashan, Iran. *Arch Iran Med*. 2012; 15(4): 205 – 209.
16. Noorbala AA, Bagheri-Yazdi SA, Vaez-Mahdavi MR, Asadi-Lari M, Faghihzadeh S, Mohammad K, et al. Mental health changes in Tehran during a 12-year period: Comparing national health and disease survey in 1999 and project in 2011. *Sci Res J Shahed Univ*. 2014; 112: 37 – 45.
17. Kessler RC, Aguilar-Gaxiola S, Alonso J, Chatterji S, Lee S. The global burden of mental disorders: An update from the WHO world mental health surveys. *Epidemiol Psychiatr Soc*. 2009; 18(1): 23 – 33.