Original Article

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

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Ilam 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 Ilam, Dehloran and Eyvan 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 32.4% of individuals (37% of females, and 28.1% of males) were likely to have a mental disorder. The prevalence of suspected cases of mental disorders was 33% in urban and 31% in rural areas. The prevalence of mental disorders was higher in females, people living in urban areas, those aged 65 years and above, divorced or widowed, illiterate, and the retired compared to other groups. In addition, the prevalence increased with age. The prevalence of anxiety and somatization symptoms was higher than social dysfunction and depression. Moreover, the prevalence of these symptoms was higher in females than males.

Conclusion: Almost one third of the samples were likely to have a mental disorder. Therefore, the provincial authorities and health providers should take essential steps for providing and maintaining mental health services to promote community mental health.

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

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Introduction

Ilam province is located in the west of Iran with a land area of 20133 square kilometers. The people of the province experience three different climates. The mountainous north and northeast area is cold, middle foothills areas are temperate and south and southwest deserts areas are tropical. This province has a population of 555,599 inhabitants of whom 351,302 live in urban areas (63.3%) and 204,246 live in rural areas (36.7%). Men account for 284,004 people (51.2%) and women for 271,544 (48.8%). The literacy rate is 82.35%, unemployment is 21% and household size is 4.1. The population reside in 10 townships. Ilam city is the center of Ilam province. People mostly belong to four ethnicities; Kurd, Lor, Lak and Arab. In addition to Farsi, four other languages are commonly spoken including Kurdish, Lori, Laki and Arabic. These diversities in geography, climate, ethnicity and language in a relatively small province are amazing. However, in terms of religion, most people are Shia Muslims.[1]

Iraq is located at the west border of Ilam province. It means that during the 8 years of Iran-Iraq war from 1980 to 1988, Ilam was one of the main war zones. This war has caused a lot of psychosocial damages to the inhabitants. The generation who spent their childhood and adolescence in wartime, are now considered as the young and active generation. In terms of health facilities and services, this province has 63 health centers. In urban areas, 36 health centers, and in rural areas 27 health centers and 204 health-house affiliated to them provide health services. There are 11 hospitals in the province, with 807 beds providing therapeutic care to the patients. There is only one psychiatric hospital with 37 beds and there are 13 psychiatric beds in the general hospitals of the province; so, there is 1 psychiatric bed per 10,000 people. Twenty-six Methadone Maintenance Therapy (MMT) centers and one drop-in center (DIC) in the province provide prevention and treatment services to substance users. In terms of human resource, 7 psychiatrists, 106 trained physicians and 17 psychologists provide community mental health services. Currently, there are 9300 mental patients cared for by the family physician system.[2]

In a national study conducted by Noorbala *et al* in 1999, 556 adults (15 years and older) of this province were evaluated. The prevalence of likely psychiatric disorders in the sample was

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overall 12.4%; 8% in men and 16.3% in women.[3]

Considering the importance of epidemiological studies in determining the mental health status of general population, detecting demographic features associated with these disorders and also estimating the required resources and facilities within the province, this study was conducted to examine and compare the mental health status of population in this province after 15 years of the first study.

Materials and Methods

This research was performed in the form of a cross-sectional field survey in Ilam 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 Ilam (provincial center), Dehloran and Eyvan. 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 1089 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 32.4% of the samples (37% of females and 28.1% of males) are suspected to suffer from mental disorders. The highest prevalence of mental disorders was in the urban areas (33%), individuals aged 65 and above (44.6%), divorced or widowed (53.8%), illiterate (42.5%) and retired people (38.9%).

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1089)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	556	156	28.1
Female	533	197	37.0
Place of residence			
Urban	766	253	33.0
Rural	323	100	31.0
Age group (years)			
15–24	166	30	18.1
25–44	380	107	28.2
45–64	357	132	37.0
+65	184	82	44.6
Marital status			
Unmarried	779	252	32.3
Married	216	50	23.1
Widowed, or divorced	93	50	53.8
Occupation			
Employed	257	62	24.1
Unemployed	243	82	33.7
Student	83	14	16.9
Housewife	375	144	38.4
Retired	131	51	38.9
Education			
Illiterate	428	182	42.5
Primary & secondary	163	35	21.5
Diploma	259	69	26.6
Graduated	203	52	25.6
Post Graduated	31	12	38.7
Total	**1089**	**353**	**32.4**

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	0.185	0.347	0.594	1.203	0.609	2.377
Widowed, or divorced	1.593	0.428	0.037	2.444	1.055	5.658
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.149	0.236	0.529	1.160	0.731	1.842
Age	0.010	0.006	0.067	1.010	0.999	1.021
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	0.243	0.175	0.165	1.275	0.905	1.796
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.450	0.255	0.078	1.268	0.951	1.786
Student	0.361	0.469	0.442	1.334	0.572	2.594
Housewife	0.268	0.287	0.352	1.407	0.744	2.495
Retired	1.096	0.282	0.050	2.220	0.934	3.611
Education						
Primary & Secondary	- - -	- - -	- - -	- - -	- - -	- - -
Graduated	0.793	0.650	0.223	1.210	0.618	4.902
Diploma	0.860	0.634	0.175	1.363	0.682	3.188
Post graduate	1.028	0.629	0.045	2.396	0.815	4.596
Illiterate	1.274	0.635	0.002	2.776	1.029	6.423

OR= Odds Ratio

Information related to logistic regression of variables and the odds ratio is 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 1.160 compared with males. The risk of mental disorders increased significantly with age. Divorced or widowed people were 2.444 times more at risk of mental disorders compared with married people. The highest risk of mental disorders pertained to retired (retired people were 2.220 times more at risk of mental disorders compared with employed people). Illiterate individuals were 2.776 times more vulnerable to mental disorders than people with postgraduate degrees and above.

The results also showed that 28.2% of the sample experienced somatization (20.6% male and 35.8% female), 32.4% were suspected of anxiety (27.1% male and 37.7% female), 17.6% were suspected of social dysfunction (16.8% male and 18.3% female), and 8% were suspected of depression (7.1% male and 8.8% female).

Discussion

The results of this study showed that a third of the subjects in the province (32.4%) were likely to have mental disorders. The prevalence of psychiatric disorders in the first national study in the province (1999) was 12.6%,[8] which indicates a considerable increase in these disorders in 2015 compared to 1999.[9] The increased prevalence of mental disorders in this study can be partly due to being under stressors of the war, changes in the social, livelihood and economic structure of the country at the time of research.

In this study, the prevalence of likely mental disorders was 37% in females and 28.1% in males. The prevalence of mental disorders in the first national survey in 1999 was 16.6% in women and 8% in men.[10] A comparison of the two findings suggests a significant increase in these disorders in men and women in the 2015 study compared to 1999. Reviewing studies in other countries,[10] and Iran,[11–13] confirm that the prevalence of mental disorders is higher in women than men. This can be related to biological factors, gender role, environmental stress and occupation, limited source of satisfaction, and limited social participation of women in the society.

Considering place of residency, the prevalence of mental disorders among people living in urban areas is 33% which is higher than the prevalence of these disorders in rural areas (31%). In the previous national survey (1999), the prevalence of mental disorder was 13.4% in urban areas and 11.4% in rural areas.[10] Comparison of the findings of 1999 and 2015 suggests that the prevalence of mental disorders was higher in urban than rural areas.[9] This might be related to economic problems of habitants in both rural and urban residents. On the other hand, immigration from rural to urban areas has occurred over these years, which is likely to have been accompanied by the migration of healthier people to the cities for seeking opportunities and prosperity. By enhancing the relative number, this population redistribution might increase the prevalence of mentally ill people in rural areas.

The findings indicated that with increasing age, the prevalence of mental disorders increased and the highest prevalence pertained to

people aged 65 years and above (44.6%). Most studies in Iran[11–13] and the world,[10] indicate a higher prevalence of mental disorder in retirement age, which is consistent with the results of the current study. The higher prevalence of mental disorders in elders can be attributed to factors such as retirement, menopause, loss of spouse, relatives and friends, loneliness and biological changes in individuals.

Regarding literacy, the prevalence of mental disorders was higher in the illiterate compared with other groups. This finding is in line with the results of studies conducted in Iran and the world.[9–13] In the illiterate people, the social and cultural constraints and the incapacity to employ effective methods of coping with stressors, and in the educated people the bitter awareness of social and economic problems and more responsibility in community could explain the higher prevalence of mental problems.

Considering occupation, this study shows that the prevalence of mental disorders was higher in retired, housewives and unemployed people compared to other groups, which is consistent with the findings of studies in Iran[9] and the world.[10] Economic problems, lack of income and the risk of people with chronic physical illness, as well as social and cultural constraints of housewives, can be considered factors that increase the prevalence of mental disorders in these people compared to those employed in the province.

With regard to marital status, the suspected frequency of mental disorders in divorced and widowed individuals was higher than the prevalence of these disorders in married and single individuals, which is consistent with the results of studies in Iran.[11–13] The loss of loved ones or the problems caused by separation can account for the significant increase in these disorders in divorced and widowed people compared to other groups.

The findings of this study indicate that the prevalence of anxiety/insomnia and somatization symptoms was higher than social dysfunction and depression. Moreover, the prevalence of all these four subscales was higher in women than men. This is contrary to the 1999 survey which showed that the prevalence of depression and social dysfunction was higher than anxiety and somatization.[11] The higher prevalence of anxiety and somatization symptoms can be attributed to various stressors in the economic, political and social conditions of the province.

Limitations of this study are mostly related to using GHQ-28 which is not structured and unable to determine diagnosis. However, using this questionnaire after 15 years provides an opportunity to compare the two surveys in time. In conclusion, this study highlighted the fact that almost one third of the Ilam province inhabitants were likely to have a mental disorder. Therefore, the provincial authorities and health providers should take essential steps for providing and maintaining mental health services especially for women, people living in rural areas, those aged 65 years and above, divorced or widowed, illiterate, housewives and the unemployed.

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 Illam 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 Kazem, Bagheri Yazdi SA, Yasamy MT. Study of the mental health status of the 15 years and older people in Islamic Republic of Iran. *Hakim Research Journal*. 2002; 5 (1): 1 – 10.
9. 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.
10. 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.
11. 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.
12. Mohammadi MR, Davidian H, Noorbala AA, Malekafzali H, Naghavi HR, Pouretemad HR, et al. An epidemiological survey of psychiatric disorders in Iran. *Clin Pract Epidemiol Ment Health*. 2005; 1: 16.
13. Sharifi V, Amin-Esmaeili M, Hajebi A, Motavalian A, Radgoodarzi R, Hefazi M, et al. Twelve-month prevalence and correlates of psychiatric disorders in Iran: The Iran mental health survey-2011. *Arch Iran Med*. 2015; 18(2): 76 – 84.