Original Article

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

Methods: The statistical population of this cross-sectional field survey consisted of residents of urban and rural areas of Mazandaran in Iran. The access was provided by the contribution of Geographical Post Office of Sari, Babol, and Tonekabon cities. The General Health Questionnaire-28 (GHQ-28) was used as the screening tool for mental disorders. Data analysis in the current study was carried out using the SPSS-18 software.

Results: Using GHQ traditional scoring method, the results showed that 17% of the studied population (21% of females and 13% of males) were considered as likely cases. The prevalence rate of mental disorders was 19.8% for urban and 15.8% for urban areas. Prevalence of somatization and anxiety was higher than social dysfunction and depression and women revealed higher prevalence for these disorders compared to men. It was also shown that the prevalence rate significantly increased with age and was higher in women, people aged 45-64 years, urban residents, widowed or divorced, illiterate, and unemployed people.

Conclusion: The results of this study showed that about a sixth of the people in the province are 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 has increased in this province (from 12.3% in 1999 to 17% in 2015). Therefore, it seems vital for the officials to take action in order to improve and maintain mental health status of the people who are at risk.

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

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Introduction

Mazandaran province lies along the southern coast of Caspian Sea and the mid-northern foothills of the Alborz Chain. Mazandaran province has a total area of 23756 km^2 and a total population of 3,209,000, of whom 50.8% are males and 49.2% are females; and 55% of them live in rural areas. The province is divided into 22 counties with 58 cities and 131 villages. Most people living there are Muslims and speak Persian with their local accent. The rates of unemployment and illiteracy are 16.3% and 14.3% respectively. Mazandaran province accounts for 3.6% of the total GDP of the country.[1]

Public healthcare facilities in Mazandaran province include 286 health centers, 87 in urban and 180 in rural areas; 1100 rural health houses; 36 hospitals with a total capacity of 3667 beds, including 149 psychiatric beds; and one psychiatric hospital with 200 beds, thus yielding 1.1 psychiatric beds for 10000 people. There are also 367 methadone maintenance therapy clinics (MMT Clinics) and 8 drop in centers (harm reduction centers). A total of 44 psychiatrists, and 793 general practitioners who are trained for diagnosis and management of common mental disorders work in public health systems and have already provided services to 32463 patients.[2]

In a study by Noorbala, et al. in 1999 on 1583 people who were 15 years or older, the prevalence of mental health problems was 12.3%: 7.5% in males and 16.8% in females.[3]

This study was aimed at determining the prevalence of mental health problems in Mazandaran province and to define the changes of prevalence science 15 years ago.

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

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province. Systematic random cluster sampling was used to select 1200 persons from Sari (provincial center), Babol and Tonekabon. 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 1123 persons completed the questionnaire. Table 1 shows that 17% of the total population were at risk for psychiatric disorders (13% in males and 21% in females). The highest prevalence of psychiatric disorders was seen among residents of urban areas (19.8%), people who were 65 years or older (33%), the divorced or widowed (26.6%), illiterate people (29.4%), housewives (24.9%) and the unemployed (24.6%).

Table 2 shows estimated logistic regression coefficients and odds ratios. This table suggests that the risk of mental disorders for females were 1.901 times that for males. The risk also increased with age. Divorced or widowed people were 2.012 times more at risk compared with singles. Housewives were 2.735 and unemployed persons were 2.604 times more at risk compared with employed individuals. The risk was 2.158 times higher among illiterate people compared with the educated.

Considering subscales of the 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

This population-based study revealed that the prevalence of mental health problems among residents of Mazandaran province is 17%, higher than the 12.3% reported in the previous study[8] using the same methodology, but lower than the mean prevalence of mental health problems countrywide (23.44%).[9] The increase in the prevalence of mental health problems, at least partially, can be attributed to rapid urbanization. Loss of community

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1123)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	560	73	13.0
Female	563	118	21.0
Place of residence			
Rural	780	123	15.8
Urban	343	68	19.8
Age group (years)			
15–24	873	141	16.2
25–44	150	18	12.0
45–64	97	32	33.0
+65	148	19	12.8
Marital status			
Unmarried	381	49	12.9
Married	380	66	17.4
Widowed, divorced	214	57	26.6
Occupation			
Employed	320	27	8.4
Unemployed	122	30	24.6
Student	150	13	6.7
Housewife	385	96	24.9
Retired	145	25	17.2
Education			
Illiterate	289	85	29.4
Primary & Secondary	277	51	18.4
Diploma	306	30	9.8
Graduate	208	20	9.6
Postgraduate	43	5	11.6
Total	1123	191	17.0

Table 2. Estimated logistic regression coefficients and odds ratios

Variables	B	S.E.	Sig.	OR	95% C. I. for OR	
					Lower	Upper
Marital Status						
Unmarried	- - -	- - -	- - -	- - -	- - -	- - -
Married	-0.326	0.368	0.376	1.170	0.350	1.986
Widowed, or divorced	0.157	0.448	0.025	2.012	0.687	2.814
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.078	0.268	0.771	1.901	0.840	2.827
Age	-0.002	0.007	0.819	0.998	0.985	1.012
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	-0.070	0.176	0.334	1.232	0.661	2.815
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.957	0.298	0.005	2.604	1.453	3.667
Student	-0.519	0.554	0.349	0.595	0.201	1.764
Housewife	0.918	0.323	0.001	2.735	1.329	3.720
Retired	0.699	0.305	0.065	1.761	1.106	2.657
Education						
Post Graduated	- - -	- - -	- - -	- - -	- - -	- - -
Graduated	-0.264	0.545	0.629	0.768	0.264	1.237
Diploma	-0.278	0.545	0.610	0.757	0.260	1.203
Primary & Secondary	0.393	0.542	0.369	1.481	0.512	2.288
Illiterate	0.769	0.559	0.014	2.158	0.721	4.457

OR= Odds Ratio

relationships and social integration, greater stresses and unplanned immigrations that leads to poverty and marginalization with high level of hostility increase the risk for mental health problems in the province.

The present study shows that the prevalence rate was 21% for females and 13% for males, whereas the 1999 study reported rates of 16.8% for females and 7.5% for males. A review of previous studies carried out in other countries[10] and Iran[11–13] confirms that the prevalence of mental disorders is higher in women, which is in line with the findings of the current study. As the data are based on a population-based methodology, the difference could not be attributed to the higher rate of help seeking among females but can be affected by recall bias. Biological factors (sex hormones), social factors (gender role, workload, social inequities, exposure to specific life stressors) as well as psychological factors (personality traits and attributional styles), to some extent, can explain the higher rate of psychological distress among women.

Our study demonstrated that urban residents (19.8%) were more prone to psychological distress than rural residents (15.8%), which is not consistent with the findings of the previous study.[8,9] As mentioned above, rapid rural-urban migration and consequent poverty and informal settlement, is a risk factor for mental health problems.[9–13]

The survey also suggests that the increase in age results in a higher prevalence rate of mental disorders, and the highest rate pertains to people aged 65 and above (33%), which is concordant with the findings of the previous study in 1999.[8] Some, but not all, studies in other countries show a similar pattern.[10] Physical disorders and disabilities, loss of social support, decreased life satisfaction and frequent mental distress are related to the higher risk of mental health problems among older people. 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 29.9%, similar to the results of the previous study (1999).[3] We found that low educational levels were associated with increased risk of mental health problems. People with low education have limited ability to moderate their mental stress. Moreover, low education is associated with poverty, unemployment and low socioeconomic status, which are themselves risk factors for mental health problems.

In comparison to employed persons, housewives and the unemployed had higher level of mental health problems in this study. The previous study also revealed a similar finding.[11] Education and income are two measures of socioeconomic status which is negatively correlated with the prevalence of mental disorders.

Divorced and widowed groups showed higher rate than married or unmarried population. Loss of emotional support, complicated grief and raising the children alone, have long-term negative effects on mental health.

In this study, we found that somatization and anxiety symptoms were more prevalent than depression and social dysfunction. This observation is in accordance with results of the previous national survey in 1999.[3] High environmental stressors, financial problems and social changes may cause anxiety, difficulty expressing emotions, and cultural frames may lead to anxiety and somatization disorders.

Conflict of interest

The authors declare that they have no conflict of interest.

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