Original Article

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

Method: This cross-sectional survey was performed on 1,200 individuals aged fifteen years and older, living in urban, and rural areas of the three main districts of Tehran, Shahriar, and Nasimshahr of Tehran Province. Individuals were enrolled in the study by clustered and systematic randomization. The General Health Questionnaire-28 (GHQ-28) was used for screening for common mental disorders. Those scoring above the cut-off point of the GHQ-28 were considered to be suffering from at least one mental disorder. All data was analyzed using the SPSS-18 software.

Results: According to our data, 30.2% of the subjects (34.2% of females and 26.4% of males) were suspected of having mental disorders. The prevalence of suspected psychiatric disorders in urban areas (35.1%) was higher than the prevalence of these disorders in rural areas (18.2%). Scoring above the cut-off point of the GHQ-28 also had a positive correlation with age, especially among those aged 65 years old and above. Somatization and also symptoms of anxiety were more prevalent than social dysfunction and depressive symptoms, and also more prevalent among females compared to males. Being suspected of a mental disorder was also more prevalent among those who had been divorced, widowed, unemployed, and having post-graduate university education

Conclusion: The results of this study show that about one third of our sample population were suspected of suffering from a mental disorder. The prevalence of common mental disorders has increased from 21.2% in 1999 to 31.7% in 2015. Therefore, it is strongly recommended that public health authorities put more effort to ensure necessary requirements encompassing prevention and promotion of mental health of the Iranian population residing in Tehran province.

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

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Introduction

Tehran Province is located in the central area of Iran, with an approximate area of 13,357 square kilometers. According to the official data from the National Statistics Center of Iran for 2016, Tehran's population has reached around 13,618,746 people. Among this large population, 13,020,946 (95.6%) and 597,700 (4.4%) live in urban and rural areas, respectively. Also, 6,910,554 (50.1%) are male and 6,708,092 (49.9%) are female. Tehran province consists of 16 districts, including 45 cities. Tehran metropolitan area is the capital city of Iran. The main religion of the people of Tehran is Islam and their language is Persian. The three largest medical universities of Iran which are Tehran university, Iran university and Shahid Beheshti university of medical sciences, provide medical and health services for the Tehran province.[1]

This province has 283 public health centers, of which 234 are located in urban areas and 49 are located in rural areas. There are 239 health houses in rural areas which provide health services to those living in these areas. There are 168 public and private hospitals encompassing 25,920 beds. Among these hospitals, there are 12 psychiatric hospitals with 2,524 beds. There are also 569 psychiatric beds in general hospitals. So, there are 2.3 psychiatric beds for every 10,000 populations in Tehran province. Tehran province has 1,931 Methadone Maintenance Treatment (MMT) clinics and 23 Harm Reduction centers providing health services to those diagnosed with substance use disorders. There are 160 psychiatrists, and 520 general physicians working in hospitals and public governmental health facilities of the province.[2]

Previously, the results of the first national mental health survey performed by Noorbala, et al. in 1999 with a similar methodology

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and sample population showed that 21.5% (27% of females and 14.9% of males) of the 5,560 individuals surveyed in Tehran province were suspected to be suffering from at least one mental disorder according to the GHQ-28.[3]

Also, the results of another study performed by Noorbala, et al. in 2008 among a sample population of 19.4% Tehrani individuals showed that 34.2% (37.9% of females and 28.6% of males) were suspected to be suffering from at least one mental disorder. According to that study, somatic symptoms of mental disorders and also anxiety were more prevalent than social dysfunction and depressive symptoms.[4] This study was replicated in 2011, showing a 1.8-fold increase (2.5 times for males and 1.6 times for females) in the prevalence of mental health disorders compared to the previous study. In this study, among 21.3 individuals, 39.6% (43.1% of females, 37.4% of males) scored above the cut-off point of the GHQ-28. This prevalence showed increase with age, unemployment, illiteracy, and being divorced or widowed, and symptoms of anxiety disorders showed to be more prevalent than somatization, depressive symptoms, and social dysfunction.[4]

Regarding the key role of epidemiological studies in estimating the probable prevalence of mental disorders, and defining the correlating demographic features for the proper allocation of mental health resources available in this province, this study was performed to assess the change of the mental health status of the Iranian population living in Tehran province, throughout the past 15 years.

Materials and Methods

This research was conducted in the format of a cross sectional and field study in Tehran 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 Tehran (provincial center), Shahriar and Nasimshahr. 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.[5] 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.[6] 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.[7] 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.[8]

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.

Table 1. Prevalence of mental disorders in terms of the demographic variables (n= 1126)

Variables	Sample size (*n*)	Suspected cases (*n*)	Prevalence rate (%)
Gender			
Male	573	151	26.4
Female	553	189	34.2
Place of residence			
Urban	801	281	35.1
Rural	325	59	18.2
Age group (years)			
15 – 24	152	34	22.3
25 – 44	390	122	31.3
45 – 64	404	125	31.6
+65	180	59	32.8
Marital status			
Unmarried	428	126	29.4
Married	579	165	26.8
Widowed, or divorced	119	49	41.4
Occupation			
Employed	382	108	28.3
Unemployed	214	75	39.3
Student	73	17	23.2
Housewife	320	95	29.7
Retired	133	45	34.1
Education			
Illiterate	173	68	39.2
Primary & secondary	262	84	31.7
Diploma	396	122	30.7
Graduated	218	51	28.1
Post Graduated	77	15	19.8
Total	**1126**	**340**	**30.2**

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	0.196	0.254	0.339	1.217	0.740	2.001
Widowed, or divorced	0.521	0.337	0.050	1.683	0.870	3.255
Gender						
Male	- - -	- - -	- - -	- - -	- - -	- - -
Female	0.693	0.201	0.035	1.999	1.348	2.963
Age	0.004	0.006	0.549	1.004	0.991	1.016
Place of residence						
Rural	- - -	- - -	- - -	- - -	- - -	- - -
Urban	0.864	0.186	0.000	2.372	1.649	3.414
Occupation						
Employed	- - -	- - -	- - -	- - -	- - -	- - -
Unemployed	0.550	0.269	0.041	1.786	1.184	2.309
Student	-0.328	0.399	0.310	1.286	0.652	2.389
Housewife	-0.499	0.238	0.336	1.366	0.791	2.260
Retired	-0.035	0.250	0.220	1.412	0.979	2.529
Education						
Post Graduated	- - -	- - -	- - -	- - -	- - -	- - -
Graduated	0.140	0.562	0.464	1.162	0.455	1.956
Diploma	0.048	0.544	0.324	1.378	0.871	2.651
Primary & Secondary	0.186	0.551	0.486	1.156	0.464	1.755
Illiterate	0.122	0.570	0.050	1.878	0.867	3.062

OR = Odds Ratio

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 1126 persons completed the questionnaire. The distribution of the prevalence of mental disorders in the population studied in the province is given in Table 1. The information in this table shows that 30.2% of the subjects were suspected of having mental disorders (26.4% of males and 34.2% of females). The highest susceptibility to mental disorders in each of the variables studied pertained to those living in urban areas by 35.1%, people from the age group of 65 and older (32.8%), divorced and widowed (41.4%), illiterate (39.2%), and unemployed (39.3%).

Data in table 2 shows that risk of developing a psychiatric disorder in females was 1.999 times higher than such risk in males and the risk increased incrementally with age. The risk was 1.683 times higher in divorced and widows than married individuals, 1.961 times higher in unemployed than persons who have a job and 1.878 times higher in people with illiteracy than the educated.

Considering sub scales, the data show that 37.9% have somatization, (27.8% of males and 48.3% of females), 35.8% had anxiety (28.4% of males and 43.3 of females), 18.7% had social dysfunction (17.2% of males and 20.3% of females) and 10.2% had depression (9.5% of males and 10.9% of females).

Discussion

The results of this study shows that about a third of sample studied in Tehran province were suspected to have a psychiatry problem. This rate was 21.2% in the first national study in 1999,[9] which has increased in this survey to 30.2% in 2015.[10] 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 34.2% for males and 26.4% for females, but the prevalence rate in the 1999 study was 25.6% in females and 15.4% in males.[10] Comparing the results of these two studies is in favor of greater susceptibility of women for developing psychiatric disorders. Review of studies conducted in different countries[11] and Iran[12–14] 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 (35.1%) than rural residents (18.2%), which is in line with the 1999 study in which the rate for was 21.2% urban residents and 20.4% for rural residents.[8] The explanation for this higher rate could be related to 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 such problem (32.8%) was found in persons aged 65 years or more which is in line with the results of the 1999 study. The results of most studies in Iran,[12–14] and the world,[11] 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 is very high in illiterate persons which is in line with the results of the 1999 study and other studies conducted in Iran[12–14] and the world.[11] Inability of illiterate person for management of stresses and social limitations could be the causes of this high rate.

The results of this study show that the prevalence of suspicion for a psychiatric disorder was 39.3% in unemployed persons, which is in line with the 1999 study and other studies in Iran[9,10] and the world.[11] 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 such a high prevalence rate.

The results of this study show that the prevalence rate of suspicion for having anxiety and somatization was higher than having depression or social dysfunction. The national 1999 study and other studies conducted in Iran and the world show similar results.[3] 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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