

**Epidemiology of prevalence rate of psychiatric disorders among the upper 15-year-old population (case study)****<sup>1</sup>Mohammad Reza Ghaznavi, <sup>2</sup>Aleme Keikha and <sup>3</sup>Habibullah Mirshekar**<sup>1</sup>*Master of Education Technology, Sistan and Baluchestan, Iran*<sup>2</sup>*Master of Education Management, University of Zabol, Iran, P.O.Box: 98615/538*<sup>3</sup>*Islamic Azad University, Zabol Branch, Zabol, Iran.*

Mohammad Reza Ghaznavi, Aleme Keikha and Habibullah Mirshekar; Epidemiology of prevalence rate of psychiatric disorders among the upper 15-year-old population (case study)

**ABSTRACT**

The purpose of this study was to study the epidemiology of prevalence rate of psychiatric disorders in the upper 15-year-old population in Khash city. This can be considered as an epidemiologic study. The statistical community for this research is the population of 15 to 65 year-old residents in Khash city that are 60949 people and among which 621 individuals are chosen by the random systematic sampling as samples. Also, the SCL90-R questionnaire was used to measure the rate of psychiatric disorders. Data are analyzed in two levels: Descriptive (average, frequency, standard deviation, charts, and frequency percentage) and deductive (the independent T test for comparing, cohesion index for studying the relationship between variants). The results showed that total prevalence rate of psychiatric disorders (GSI) in the studied sample was 17%; 8% for men and 9% for women. So, the epidemic of psychiatric disorders among women is more than men. Moreover, the prevalence rate of aggression, psychosis, paranoid thoughts and intrapersonal sensibility among men is more than women; but the prevalence rate of anxiety, obsession, physical complaints, depression and phobia among women is more than men. The results also showed that the prevalence rate of psychiatric disorders was depended on elements like age, education, job, marriage and family in studied cases.

**Key words:** psychiatric disorders, epidemiology, prevalence rate.**Introduction**

Psychology is the study of human behaviors. Today, most of psychologists are trying to find suitable ways to cure mental illnesses that people are facing with through daily and practical interactions. Only a few people may survive them. Knowing that everybody might be a victim of mental illness, however, is not enough; since mental health is not limited only to expressing the reasons of such psychiatric disorders, but its main goal is to prevent of their occurrences (Khodayarifard and Kandovan, 1385 AHS).

The epidemiology of psychological disorders is a sub-branch of behavioral sciences that studies how such illnesses are spread in the society. Although the existence of mental illnesses in different communities have been accepted since centuries ago, it was through the 20<sup>th</sup> century that statistical approaches were used to evaluate the amount of these problems [11].

Health is one of basic needs of man that plays an important role in permanent promotion. Although at first only the physical health was being paid attention to, but by scientific promotions and reaching to an

acceptable level of physical health and controlling many of diseases, man has paid attention to other aspects of health such as mental health [9].

Providence, keeping and improving the health for majority of people has been one of the most important goals of all communities. Today, health means the complete physical, mental and social welfare; not only lack of illnesses or inabilities. Some concepts like self-satisfaction, life-satisfaction and good life are important indexes for World Health Organization (WHO) in defining the meaning of mental health and that includes positive feelings like joy, peace and happiness [7].

The concept of "Mental health" includes an inner feeling of being good with assurance, being self-contained, ability to compete, intergeneration cohesion and growing thinking, exciting abilities. In today's social life, mental pressure is inevitable. Man is facing these pressures all his life. Although this pressure is a structural part of life, when it is in the extreme or prolongs for a long period may harm one's health seriously [4].

Psychiatric disorder means one's psychological inability in truly and efficiently facing with usual problems of life. Those who have this, oppose the

**Corresponding Author**

Aleme Keikha, Master of Education Management, University of Zabol, Iran, p.o.box:98615/538

social behaviors since his/her behavior might include from unusual depression to illusions and incompleteness of thinking and expressing [6].

From Pathological point of view, unsuitable behaviors are results of an illness or disorder that according to the symptoms could be recognized. Firstly, the existence of such symptoms proves the abnormality. However, experiences have shown that number of people-especially under the complex conditions-that have no symptoms is very small [4].

Psychiatric disorders are very common within present communities. It reduces its victim's social performance and casts a lot for the states and supporting institutions. Psychiatric disorders always have been existed within human communities and nobody can claim that they are completely safe from it. Some groups have more chance to get these psychiatric disorders than the others [8].

Epidemiologic studies of psychiatric disorders in different countries show that the prevalence rate of these disorders has been evaluated differently because of variety in measurement tools, statistical communities and detecting methods. This rate has a great deal of variation between 7.3% and 39.8% [1].

According to the research of Rahgozar & others (1380 AHS) titled "The epidemiology of psychiatric disorders in Semnan province", the prevalence rate was 18.58%; 22.14% among women and 14.49% among men. The anxious and behavioral disorders with the rates of 8.28% and 5% were the most prevalent psychiatric disorders there.

Chegini & others (1379 AHS) carried out an experiment titled "the epidemiology of psychiatric disorders in upper 15-year-old people in urban and rural parts of Qum city" with the following results: Totally, 67 people which were 17.1% of whole studied community-37 women (18.2%) and 30 men (16%)-had been suffering from different psychiatric disorders. The prevalence rate of behavioral disorders was 5.8%, anxious disorders 4.9%, accommodation disorders 3.3%, pseudo-physical disorders 2.8% and 0.3% for paranoiac disorders.

HassanShahi & others (1382 AHS) through a research titled "the epidemiology of psychiatric disorders in Rafsanjan" with the following results: 34% of total studied cases (39% of men and 34% of women) had been suffering from different psychiatric disorders. There was no difference in the prevalence rate of psychiatric disorders between women and men. According to the same results, this rate has been more in employee women, undergraduate men, cases between 15-25 year old, 1-4 membered families that have passed the high school education, singles, lone and widows.

Psychiatric disorders are from prevalent health problems among different human communities and collecting information about the rate of prevalence, occurrence and crowd features of it can be useful to plan for detection, treatment and even prevention of it. The present research's subject was "the

epidemiology of psychiatric disorders in Khash city" and the main affair for which this research has been designed and performed was to find the prevalence rate of psychiatric disorders among urban residents of Khash city using SCL90-R test. Moreover, this research tries to find answers to following specific questions:

- 1- How much is the prevalence rate of psychiatric disorders (depression, anxiety, physical complaints, obsession, aggression, phobia, paranoiac thoughts, psychosis and interpersonal sensibility) among the cases studied using SCL90-R test?
- 2- How is the prevalence of psychiatric disorders according to crowd features (age, education, job, marriage and other family dimensions)?
- 3- Is there any relation between gender and the prevalence rate of psychiatric disorders in studied cases?
- 4- Is there any relation between age and the prevalence rate of psychiatric disorders in studied cases?
- 5- Is there any relation between education level and the prevalence rate of psychiatric disorders in studied cases?
- 6- Is there any relation between job and the prevalence rate of psychiatric disorders in studied cases?
- 7- Is there any relation between marriage and the prevalence rate of psychiatric disorders in studied cases?

#### *Administration method:*

This research is from epidemiologic one's in which the prevalence rate of psychiatric disorders and its elements has been gradually studied using SCL90-R test among the urban population of Khash city. Statistic community was the population between 15-65 year-old that were residents in Khash city and their total number was 60949 people from 10825 families; this community was consisted of 29596 women and 31353 men among which 621 individuals from 164 families were selected by random systematic sampling method as samples thus different parts of city (north, south, east, west and center) were selected and the questionnaires were distributed among elected families.

To measure the amount of psychiatric disorders, the SCL90-R questionnaire was used in this research. It is suitable for upper 15-year-old people and takes about 12-15 minutes to be done. It contains 90 questions that evaluate 9 different scales which are physical complaints, obligatory obsession, and sensibility in mutual interactions, depression, aggression, phobia, paranoiac thoughts and psychosis. Measuring the durability of these 9 dimensions of this test has been carried out by two methods of Alpha index and Richardson's Coder on 219 volunteers in the U.S. That all its results for 9

dimensions were satisfying. The most cohesive one was the depression dimension with 0.9% and the least one was the psychosis with 0.77%. Data were analyzed in two levels: Descriptive (average, frequency, standard deviation, charts and frequency percentage) and deductive (the independent T test for comparing, the cohesion index for variant relation analysis).

*The results of the study:*

*Descriptive information:*

The studied cases were consisted of 50.88% women and 49.12% men; the 14-24 year-old class had most frequency and upper 55 year-old class had least frequency in this case. From educational aspect, those who had passed high school possessed most

percentage (37.84%) and higher education possessed least (9.5%). From the job aspect, undergraduates and students possessed most percentage (21.41%) and military staffs and soldiers possessed least (2.89%). From the marriage aspect, most of the cases were married people (51.85%) and the least ones were lone and widows (3.70%). From the family aspect, most of them were families with 5 to 10 members and the least number were families with less than 5 members (14.33%).

*Deductive information:*

*Findings of the prevalence rate of psychiatric disorders in the studied cases:*

The prevalence rate of psychiatric disorders and its relationship with Gender

**Table 1:** Frequency and the prevalence rate of psychiatric disorders by Gender in all studied cases.

Sample	Frequency of victims	The prevalence rate of psychiatric disorders into whole population
N=316 women	60	9%
N=305 men	55	8%
N=621 (total)	105	17%

As you can see, the prevalence rate of psychiatric disorders was different between women and men and it's more common among women. Comparing the computed  $Chi^2$  (12.121) with the critical distribution value of  $Chi^2$  (6.6349) with degrees of freedom=1 showed that the difference between the prevalence rates of psychiatric disorders

among studied women and men for 99% sure is meaningful. Hence there is a relation between Gender and the prevalence rate of psychiatric disorders in the studied cases.

*The prevalence rate of psychiatric disorders and its relation with crowd features:*

**Table 2:** The prevalence rate of psychiatric disorders and its relation with age, education, job, marriage and family.

Crowd feature	Degrees of freedom	Resulted $Chi^2$	Table's $Chi^2$
Age	4	17.231	13.276
Education	4	20.816	13.276
Job	7	29.261	18.475
Marriage	3	19.171	11.344
Family dimension	2	13.161	9.210

Analyzing the relationship between the crowd features (age, education, job, marriage and family dimension) and the prevalence rate of the psychiatric disorders showed that thus the resulted  $Chi^2$  is more than table's  $Chi^2$  in every case, it could be resulted with 99% confidence that there is a meaningful relation between crowd features and the prevalence

rate of psychiatric disorders; so there is a relation between the crowd features and the prevalence rate of psychiatric disorders in the studied cases.

*The findings of the prevalence rate of psychiatric disorders evaluated by SCL90-R test:*

**Table 3:** The frequency of the prevalence rate of different psychiatric disorders in the studied cases by their gender(s).

Evaluated Disorder (using SCL90-R scales)	Women (316 people)		Men (305 people)		Total (621 people)	
	Frequency	Prevalence Rate	Frequency	Prevalence Rate	Frequency	Prevalence Rate
Physical complaints	7	2.2	1	0.3	8	1.2
Obligational Obsession	6	1.8	2	0.6	8	1.2
Intrapersonal sensibilities	3	0.9	7	2.2	10	1.6
Depression	25	7.9	5	1.6	30	4.8
Anxiety	14	4.4	3	0.9	17	2.7
Aggression	4	1.2	11	3.6	15	2.4
Phobia	4	1.2	1	0.3	5	0.8
Paranoiac thoughts	2	0.6	3	0.9	5	0.8
Psychosis	3	0.9	5	1.6	8	1.2
Total	68	21.51	38	12.45	106	17
Percentage	10.95%		6.11%		17%	

In the studied cases, depression and anxiety (4.8% and 2.7%) had most and phobia and paranoiac thoughts with the 0.8% had the least prevalence rate.

*The findings of psychiatric disorder intensities evaluated by SCL90-R test:*

Comparing the calculated T (3.88) with the critical distribution value of T (2.326) with the degrees of freedom=619 showed that with 99% confidence, the intensity of physical complaints in women is higher than in men.

Comparing the calculated T (2.423) with the critical distribution value of T (2.326) with the degrees of freedom=619 proved that with 99% confidence, Obsession is more common among women than men.

Comparing the calculated T (2.451) with the critical distribution value (2.326) in degrees of freedom=619 proved that with 99% confidence, women are more sensible in their interactions than men.

Comparing the calculated T (2.416) with the critical distribution value (2.326) in degrees of freedom=619 proved that with 99% confidence, women are more depressed than men.

Comparing the calculated T (3.215) with the critical distribution value of T (2.326) in degrees of

freedom=619 showed that with 99% confidence, women are more anxious than men.

Comparing the calculated T (0.293) with the critical distribution value of T (2.326) in degrees of freedom=619 proved that with 99% confidence, men have more aggression than women.

Comparing the calculated T (3.531) with the critical distribution value of T (2.326) in degrees of freedom=619 proved that with 99% confidence, women suffer from Phobia more than men do.

Comparing the calculated T (2.51) with the critical distribution value of T (2.326) in degrees of freedom=619 proved that with 99% confidence, men have more paranoiac thoughts than women.

Comparing the calculated T (3.12) with the critical distribution value of T (2.326) in degrees of freedom=619 proved that with 99% confidence, psychosis is more common among women than men.

Comparing the calculated T (3.87) with the critical distribution value of T (2.326) in degrees of freedom=623 proved that with 99% confidence, the GSI scale in women is more than men.

Comparing the calculated T (3.80) with the critical distribution value (2.326) in degrees of freedom=619 proved that with 99% confidence, the PST scale in women is more than men.

Comparing the calculated T (3.03) with the critical distribution value of T (2.326) proved that with 99% confidence, the Post-Traumatic Stress Disorder scale in women is more than men.

**Table 4:** The physical complaints scale score's average and standard deviation by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Physical Complaint	0.06	0.02	0.09	0.03	1.39	0.43

**Table 5:** Average and standard deviation of Obsession scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Obsession Variant	1.79	0.42	1.46	0.62	1.41	0.36

**Table 6:** Average and standard deviation of Sensibility scale scores in interactions by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Sensibility	1.59	0.44	1.39	0.56	1.37	0.41

**Table 7:** Average and standard deviation of Depression scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Depression	1.67	0.53	1.48	0.68	1.87	0.72

**Table 8:** Average and standard deviation of Anxiety scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Anxiety	1.50	0.58	1.29	0.59	1.69	0.56

**Table 9:** Average and standard deviation of aggression scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Aggression	1.57	0.67	1.60	0.74	1.59	0.7

**Table 10:** Average and standard deviation of Phobia scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Phobia	1.70	0.65	1.40	0.71	1.25	0.49

**Table 11:** Average and standard deviation of paranoiac thoughts scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Paranoiac thoughts	1.70	0.65	1.80	0.67	1.07	0.36

**Table 12:** Average and standard deviation of psychosis scale scores by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
Psychosis	1.59	0.82	1.48	0.68	1.13	0.35

**Table 13:** Average and standard deviation of General Symptoms Index (GSI) by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
GSI variant	0.18	0.04	0.15	0.08	0.17	0.05

**Table 14:** Average and standard deviation of Positive Symptoms Total (PST) by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
PST variant	16.7	4.2	14.33	5.7	15.53	5.21

**Table 15:** Average and standard deviation of Post-Traumatic Stress Disorders by Gender.

SCL90-R test's scale	Women		Men		Total	
	Average	Deviation	Average	Deviation	Average	Deviation
PTSD variant	16.7	4.2	14.33	5.7	15.53	5.21

### Discussion and Conclusion:

The results of comparing men and women using the 9 dimensions of SCL90-R, General Symptoms Index (GSI), Post-Traumatic Stress Disorder (PTSD) and Positive Symptoms Total (PST) proved that obsession, physical complaints, anxiety, depression and phobia in women was more than men and on the other hand, the average of scores related to intra-personal sensibility, aggression, paranoiac thoughts and psychosis was more common among men than women. These results match the large amount of information which shows that depression, obsession, physical complaints, anxiety and phobia is more prevalent among women than men. On the other hand, results of comparing aggression and paranoia among them showed that these are more prevalent among men than women. The more aggression among men rather than women is a result that has been proved through different researches and even among animals where males are more aggressive than females.

Through this research, the prevalence rate of psychiatric disorders in women was more than men that matches many results of other related researches in Iran such as Bash (1374 AHS), Davidian & others (1371 AHS), Shahmohammadi (1369 AHS), Bagheri Yazdi & others (1371 AHS), Bahadorkhan & others (1371 AHS) and Kovkabe & others (1371 AHS). It is reported in studied carried out in Iran that the prevalence rate in women was between 1.5 and 2.8 times more than men.

The results of this research shows that the prevalence rate of psychiatric disorders is related not

only to the Gender but also age, education, job, marriage and family dimension of studied cases.

The 25-35 year-old class possessed the most prevalence rates in this research and 45-55 class the least one. These nearly match the results of other studies such as Bagheri Yazdi & others (1371 AHS), Bahadorkhan (1371 AHS), Javidi (1372 AHS) and Palahang (1375 AHS), however, it does not have with the other results that differ from other findings that claim the prevalence rate of psychiatric disorders are increased as we grow up like Ronnie and Asrol (1954) gathered by Bagheri Yazdi (1371 AHS) and existent patterns in some developed countries.

According to this research, most of psychiatric disorder prevalence belongs to illiterates and people with low education and least of it belonged to people with secondary school degrees and higher education (not high school). This nearly matches the findings of following studies: Bagheri Yazdi (1371 AHS), Javidi (1372 AHS) and Palahang (1375 AHS). According to this research's findings, most of psychiatric disorder prevalence in women was for undergraduate, student or jobless ones and in men for jobless and labor ones. This does not match the findings of Palahang (1375 AHS) that proved the most prevalence is among employees and also the findings of Bagheri Yazdi & others (1371 AHS) that proved it's more common among housewives.

Evaluating the relationship between marriage and the prevalence rate of psychiatric disorders showed that it's more common among singles. This nearly matches the findings of Dobe (1970) and Hooper (1979), but is in contrast with findings of Bagheri Yazdi & others (1371 AHS) and Palahang &

others (1375 AHS) which showed that it's more common among married people.

According to findings of this research, the most prevalent psychiatric disorders within studied community respectively are depression and anxiety; the least one is psychosis. Behavioral disorders and anxiety were respectively the most prevalent ones through researches of Bagheri Yazdi & others (1371 AHS), Bahadorkhan & others (1371 AHS) and Palahang & others (1375 AHS). Also the findings of Vergis & others (1972), Medianson & others (1982) and Bart & others (1988) like present research's findings agree that depression and anxiety are respectively most prevalent psychiatric disorders.

According to this research, higher averages belong to depression, anxiety and aggression respectively. These findings nearly match the findings of Bagheri Yazdi & others (1371 AHS) but not the Mirzayi's ones in Iran (1359 AHS) and Dragotis's findings in American normal cases.

According to this research, the least average was for phobia and paranoiac thoughts that this finding does not match the findings of Bagheri Yazdi & others (1371 AHS), Mirzayi (1359), and Dragotis (1976) in which the least average was for psychosis.

Also, evaluating the prevalence of depression among women and men showed that there is a meaningful difference between them, so the average score for depression in men was 1.48 (4%) and in women 1.67 (12%) that noticing to  $T = -2.416$  and meaningfulness level ( $P = 0.0001$ ), this difference is meaningful. The results of this research match the results of following researches: Mohammadi & others (1380 AHS), Bagheri Yazdi & others (1380 AHS), Rahgozar & others (1380 AHS), Chegini & others (1380 AHS), HassanShahi & others (1380 AHS), Khosravi (1381 AHS), Fakhari & others (1379 AHS). The results of evaluating relationship between the prevalence of psychiatric disorders and living place showed that according to Pierson's cohesion test, the cohesion value was 0.33 that this is meaningful in alpha level which means that changing environments can express the changes in psychiatric disorders with 99% confidence; so it can be concluded that there is a meaningful cohesion between environments and psychiatric disorders. These findings match the findings of following researches: Mohammadi & others (1380 AHS), Bagheri Yazdi & others (1380 AHS), Rahgozar & others (1380 AHS), Chegini & others (1380 AHS), HassanShahi & others (1380 AHS), Khosravi (1381 AHS) and Fakhari & others (1379).

#### Suggestions:

- 1- Choosing more suitable cases using methods like Random Classic Sampling (according to the case community features) that includes other ages (under 15 year-old).

- 2- Performing more complete with permanent using of primal screener tools of psychiatric disorders and psychological detection according to classifying psychiatric disorders method.
- 3- Evaluating the prevalence rate of Retard and disorders related to drugs.
- 4- Designing and providing suitable training programs for families in order to increase their mental health since the prevalence rate is high (17%).
- 5- Performing same researches in other urban and rural areas all over the country because of the cultural, social, economic and geographic differences.
- 6- Making useful TV shows by the staff of national media in order to express the problems of people; also providing public education in order to increase mental health.
- 7- Establishing psychological, psychiatric and advisory centers.

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