

Prevalence of Psychiatric Disorders in Karachi: 2006 – 2010

Mariam Razzak¹, Rafeeq Alam Khan^{2,5}, Imran Chaudhari^{3*},
Mansoor Ahmed⁴, Nida Shamim⁵

¹Department of Pharmacology, Faculty of Pharmaceutical Sciences, Baqai Medical University, Karachi; Pakistan

²Department of Basic Medical Sciences, College of Medicine Jeddah, King Saud Bin Abdulaziz University for Health Sciences, Kingdom of Saudi Arabia

³Remedial Hospital D-9 Block I North Nazimabad Karachi 74700, Pakistan

⁴Department of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Karachi, Karachi 75270, Pakistan

⁵Department of Pharmacology, Faculty of Pharmacy, University of Karachi, Karachi 75270, Pakistan

*Corresponding Author: dr.imransadiq@yahoo.com

ABSTRACT

Present study was conducted to explore the frequency of psychiatric disorders like, schizophrenia, bipolar disorder, generalized anxiety disorder and postpartum depression at Karachi in the years 2006-2010.

Data for this purpose was collected from Remedial Hospital Karachi North Nazimabad with the assistance of Dr. Imran Chaudhari which reveals that a total of 168135 patients were registered in the hospital for the treatment of psychiatric disorders in the years 2006-2010. Analysis of the data was done on the basis of area, socioeconomic status, gender, age, family history and marital status.

The epidemiological data collected reveals that there has been an overall increasing trend in psychiatric disorders during 2006-2010, since Karachi is a densely populated city with a yearly increasing trend in population.

Despite high literacy rate in Karachi awareness about mental illness seems to be unsatisfactory and many misconceptions about mental disorders still prevail, hence patients are left at the mercy of quacks and traditional healers, which result in delay of their treatment and worsening of the condition.

Key Words: Psychiatric disorders, Karachi, Socioeconomic status

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INTRODUCTION

According to Diagnostic statistical manual–IV (DSM-IV) a mental disorder is termed as psychotic if it results in impairment that grossly interferes with the capability to meet ordinary demands of life. Previously this term has also been defined as loss of ego boundaries or gross impairment in reality testing. Basically psychotic refers to delusions; any prominent hallucinations, disorganized speech or catatonic behavior (DSM-IV, 2000).

Definitions of psychoses vary from minor concepts of conditions like profound disturbances of thought (delusions–fixed false beliefs) and sensory perception (hallucinations—sensations in the absence of external stimuli) to broader disruptions of thought form (evidenced by disorganized speech) and behavior (gross disorganization or catatonia). In DSM- IV delusions or hallucinations symptoms are applied for psychotic mood disorders and delusions, hallucinations, catatonia, disorganized speech or behavior for schizophrenia. The differential diagnosis of psychosis includes primary conditions, such as schizophrenia and psychotic mood disorders, as well as secondary disorders due to medical conditions or substances (Ketter et al., 2004).

Mental illnesses dominate, cause great suffering, and are burdensome to society (Roberts et al., 2004). Psychiatric disorders rank as the third most common cause of consultation in primary care and affect a large percentage of population. These disorders are associated with increased mortality; morbidity and general practitioner (GP) consultation time and less than 10% are referred to secondary care. Psychological factors are also inextricably linked with physical ill-health, influencing the onset of symptoms, their severity and the patient’s recovery (Nettleton et al., 2000; Gili et al., 2010).

According to psychopathologists behavioral and environmental factors also contribute to a person's vulnerability to mental illness. Environmental stresses such as violence, sexual, physical or emotional abuse, malnutrition, loss of employment, substance abuse, parental mental disorder, marital discord, marital violence, migrant from rural to urban areas and cultural factors have major influence on mental health (Patel et al., 2007: Carey et al., 1999).

Persons with severe mental illness are generally considered to be dangerous and irresponsible by the public and may lose their self-esteem due to societal stigmatizing notions. This stigma may also be an obstacle to recovery from mental illness serving as a barrier to seeking help for mental health problems (Vazquez et al., 2011: Gelb et al., 2008: Abdullah et al., 2011: Mayville et al., 1998).

Prevalence of mental disorder is generally higher than that of any other medical condition (Demyttenaere et al., 2004). According WHO the burden of mental disorders in young people is calculated through the disability-adjusted life years (DALY). Five of the ten leading causes of DALY in people aged 15–44 years are mental disorders like unipolar depressive disorders, alcohol use disorders, self-inflicted injuries, schizophrenia and bipolar affective disorder (Patel et al., 2007: Carey et al., 1999).

Approximately 6.7% Americans have major depressive disorder, 2.6% have bipolar disorder and 1.5% has dysthymic disorder, although mental disorders are similar across all cultures and nations but cultural difference exist in symptom presentation and prevalence (Kessler et al., 2005).

About 480 million people are predicted to be suffering from depression worldwide and a quarter of these have anxiety as well. 90% of mental health problems in the community are anxiety and depression and co-morbidity is common. Their combined prevalence evaluates the extent of mental illness in the community and an enormous universal burden of depression has been reported in several studies. Two third of these affected people live in the developing countries and this ratio is expected to rise due to rapid population growth, urbanization and strong link between adverse socio environmental factors that prevail mental illness.

Pakistan is a developing country with an estimated population of 140 million. About 70% of population is rural based and dependent on agriculture for its livelihood. Karachi is a megacity where 40% people live in a squatter settlement. They mostly share common problems like

overcrowding, unemployment, poor civic amenities and rapidly changing social structure (Ali et al., 2002).

One of the major health care issues in Pakistan is mental illness. Some contributing factors for psychiatric illness may be female sex, middle age, low level of education and financial difficulties. The environmental risk factor associated with the urban life make individuals more vulnerable to the development of psychosis (Gilani et al., 2005; Os et al., 2001).

The present study was a preliminary investigation in the Karachi city. The outpatient data was collected and analyzed evaluating the prevalence of some psychotic disorders like schizophrenia, bipolar disorder, generalized anxiety disorder and postpartum depression on the basis of gender, socioeconomic status, area, family history, marital status and age.

METHODOLOGY

The data selected for this epidemiological study was collected from Remedial Hospital Karachi with the assistance of Dr. Imran Chaudhari. Out patients were registered in the hospital and trained staff collect relevant clinical and pathological information. This data is added to a central database, being quality assured and continually updated.

The study was done on the patients of enrolled in Remedial Hospital Karachi suffering from schizophrenia, bipolar disorder, generalized anxiety disorder and postpartum depression. The patients residing outside Karachi are excluded from this epidemiological study; however a total numbers of 168135 patients were included in this study. The data collected was analyzed on the basis of:

1. Gender
2. Socioeconomic status i.e. families monthly income
 - a. 10,000-15,000 lower middle class (LMC)
 - b. 15,000-50,000 middle class (MC)

- c. 50,000-100,000 upper middle class (UMC) and
 - d. More than 100,000 rich (R).
3. Locality (According to district East, West, Central, South and Malir)
 4. Family history
 5. Marital status (single, married, separated, widow, divorce) and
 6. Age of the patients (Below 20, 20-40, 40-60 and above 60)

After collecting and conciliation of the data, results were displayed bar diagram.

RESULTS

A total of 168135 cases of psychotic disorders i.e. schizophrenia, bipolar disorder, generalized anxiety disorder and postpartum depression were reported during 2006-2010. Karachi is a densely populated city having yearly increasing trend in population. The approximate population of Karachi in 2006 was 1.15 million and reported cases of psychotic disorders at one hospital were 24388. In 2007 the population of Karachi was 1.21 million and reported cases of psychotic disorders were 31112, while in 2008 the population of Karachi was about 1.29 million and reported cases of psychotic disorders were 33745. Similarly in 2009 the population of Karachi was 1.31 million and reported cases of psychotic disorders were 37777 and in 2010 the population of Karachi was about 1.35 million and reported cases of psychotic disorders were 41113 (Figure 1). Result reveals that there has been an overall increasing trend in all psychotic disorders from the year 2006-2010; however the most prevalent illness during this period was found to be bipolar disorder and then schizophrenia and generalized anxiety disorder. The least frequency was found to be for postpartum depression.

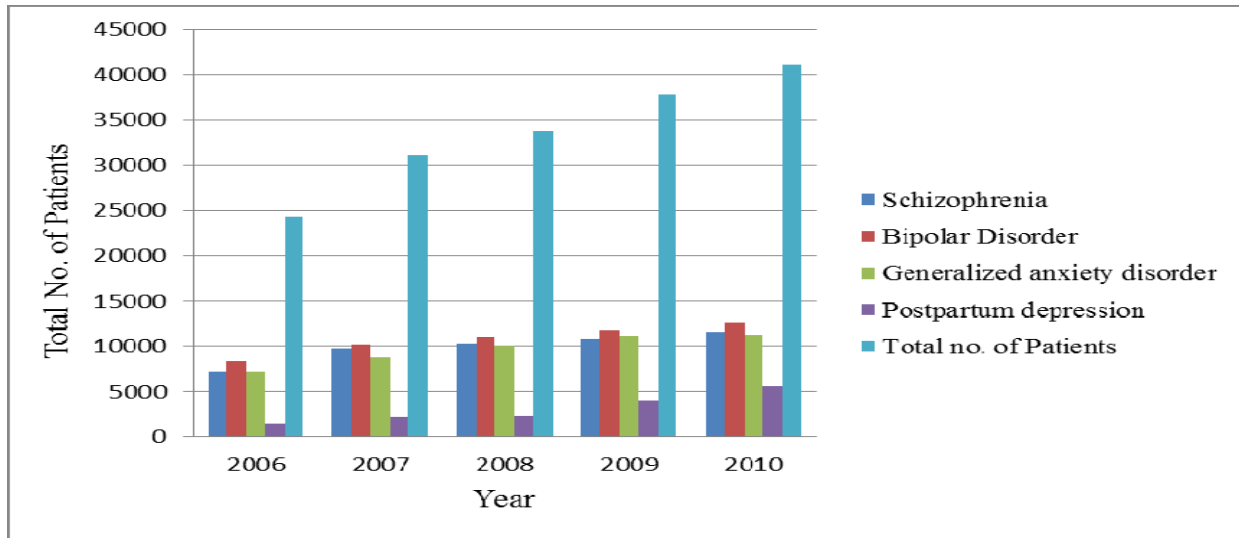


Figure 1: Year wise Prevalence of Psychiatric Disorders.

Schizophrenia

The data of patients having schizophrenia has been categorized according to gender, socio economic status, locality, family history, marital status and age. Analysis of the data on the basis of gender reveals that schizophrenia is more prevalent in males than in females (Figure 2).

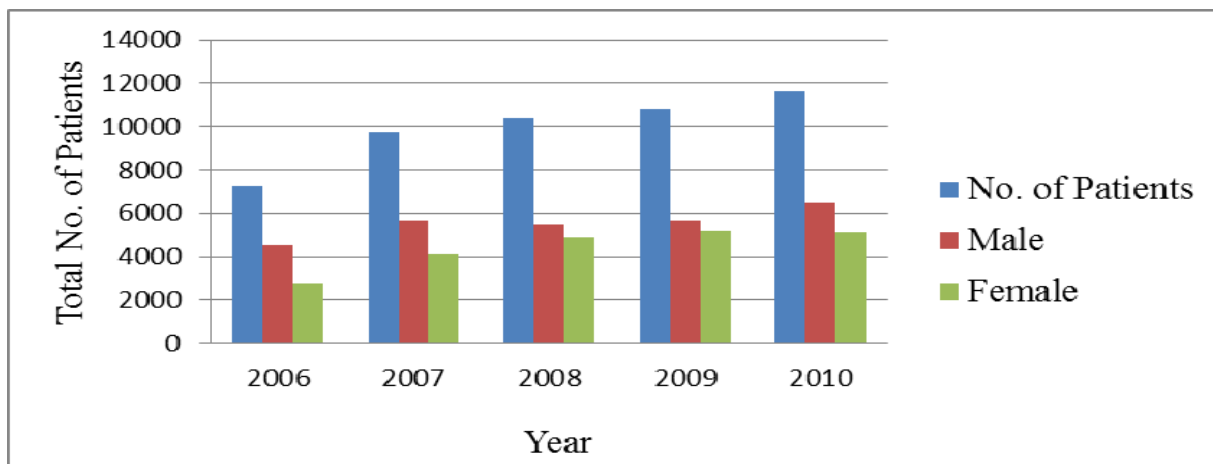


Figure 2: Gender wise Occurrence of Schizophrenia in Karachi.

Data collected was also analyzed on the socioeconomic basis results reveal that schizophrenia was most common in middle class and lower middle class respectively (Figure 3).

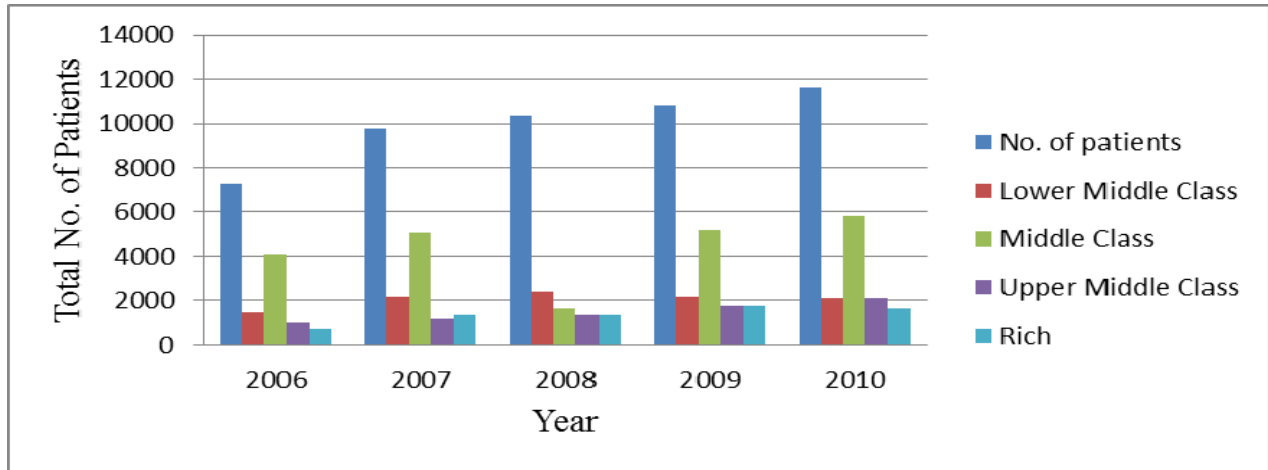


Figure 3: Socioeconomic Status of Schizophrenic Patients in Karachi.

Karachi is a metropolitan city divided into five districts, east, west, south, central and malir. Present study reveals highest frequency of schizophrenia in the district central as compare to other districts (Figure 4).

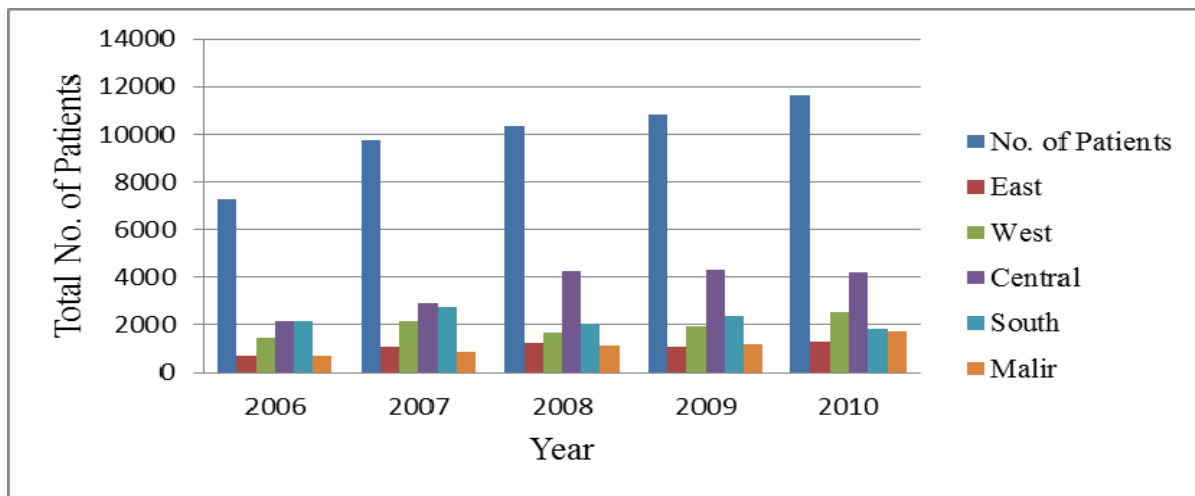


Figure 4: Prevalence of Schizophrenia according to Locality in Karachi.

Data of present study was also analyzed on the basis of family history since genetic and environmental factors both play equally important role in the development of psychological disorders. Results of present study reveal 50% correlation in schizophrenia and family history (Figure 5).

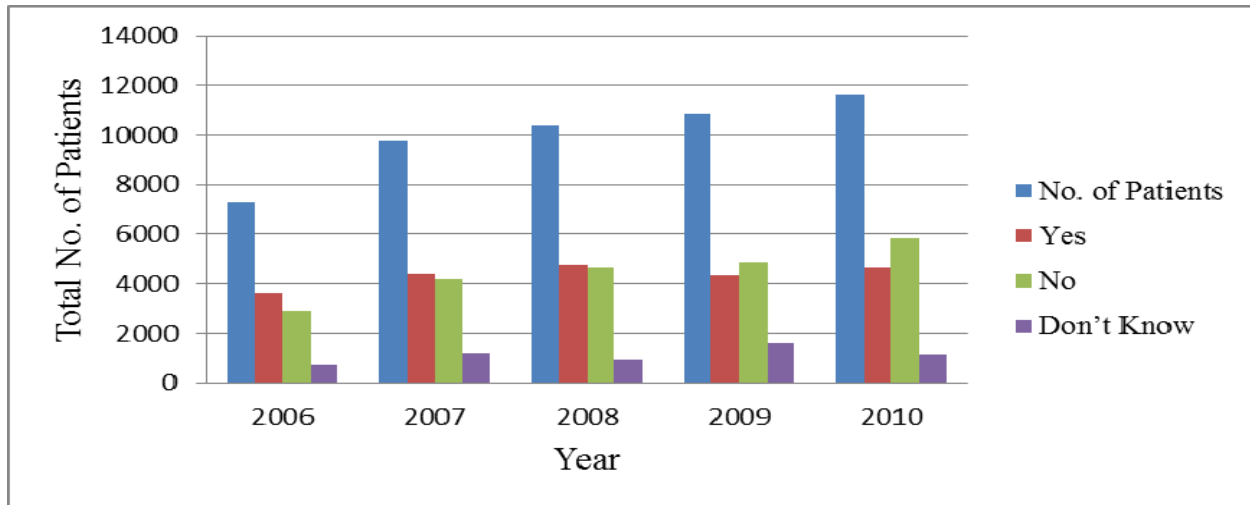


Figure 5: Incidence of Schizophrenia according to Family History.

Results of present study reveals that usually singles had higher frequency of schizophrenia then as compared to married couples However incidence rate was higher in married couples in the year 2008 (Figure 6).

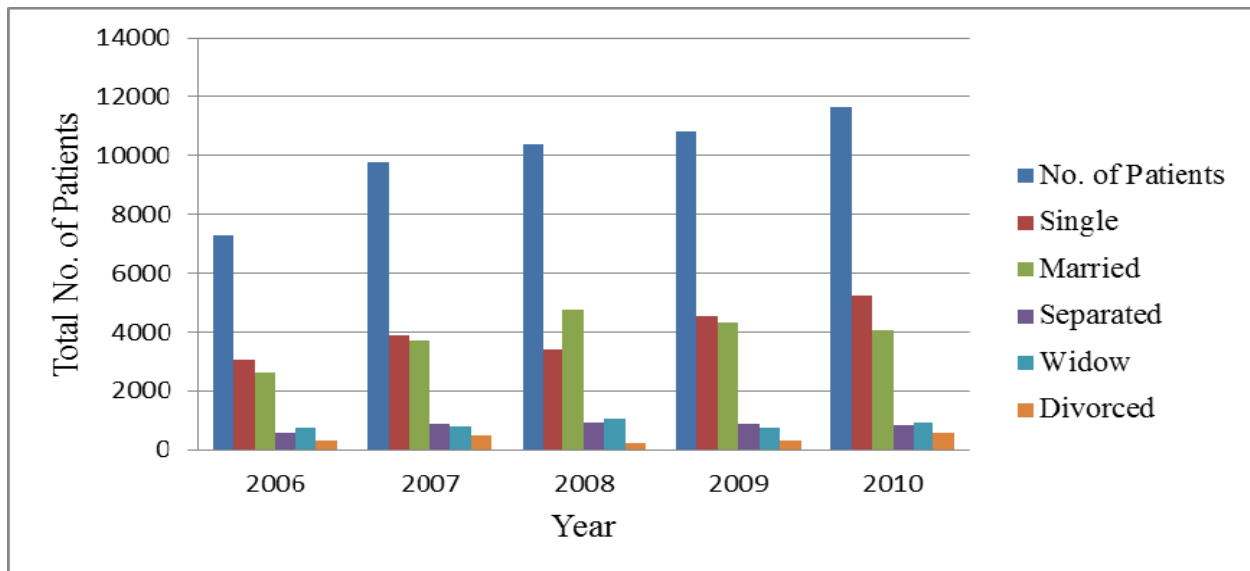


Figure 6: Occurrence of Schizophrenia according to Marital Status.

Data collected in present study reveals that the onset of schizophrenia typically occurs in young adulthood between the ages of 15-25. Women in general may have later age of onset than males. The incidence of schizophrenia was higher in women after 30 years of age. The average age of

onset in men is 18, while in women it is 25. Schizophrenia was quite rare in the people below 15 years age, or over 40 years and above (Figure 7).

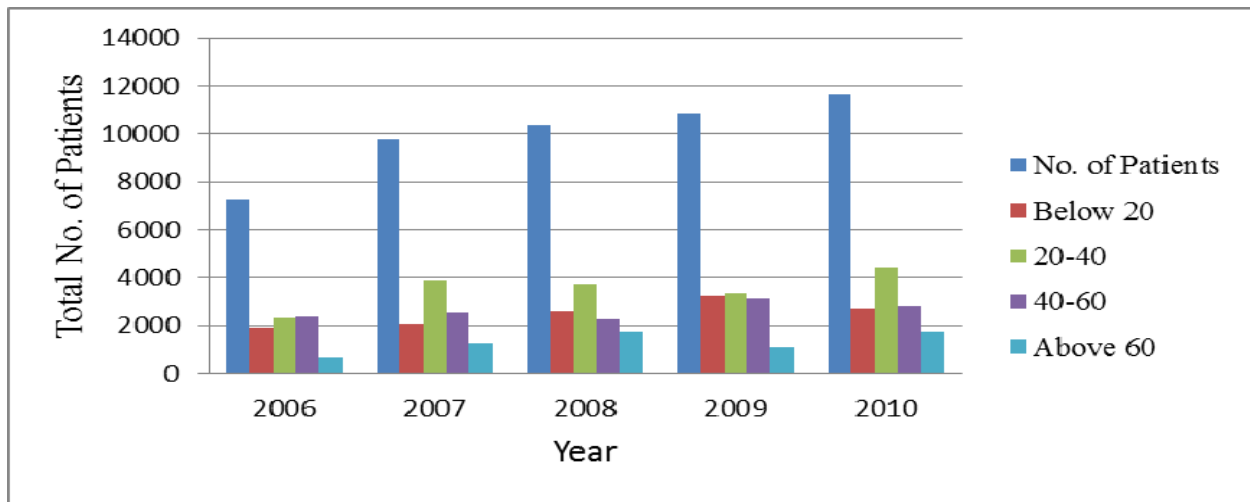


Figure 7: Incidence of Schizophrenia in Different Age Groups.

Bipolar Disorder

The data of patients having bipolar disorder has been categorized according to gender, socio economic status, locality, family history, marital status and age.

Analysis of the data on the basis of gender reveals that bipolar disorder is more prevalent in males than in females (Figure 8).

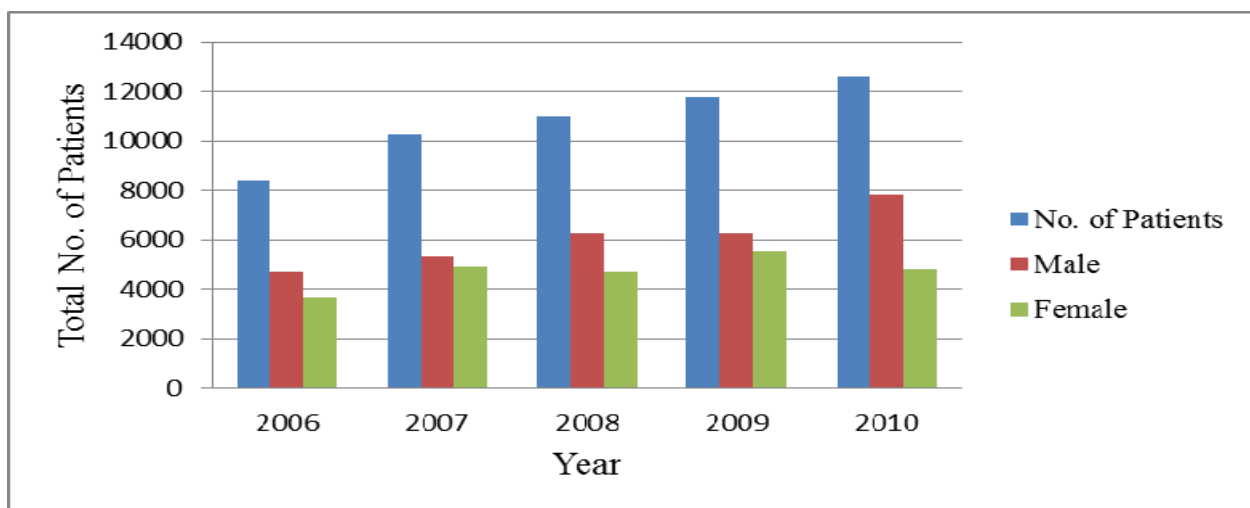


Figure 8: Prevalence of Bipolar Disorder on Gender Basis.

Data collected was also analyzed on the socioeconomic basis results reveal that bipolar disorder was most common in middle class (Figure 9).

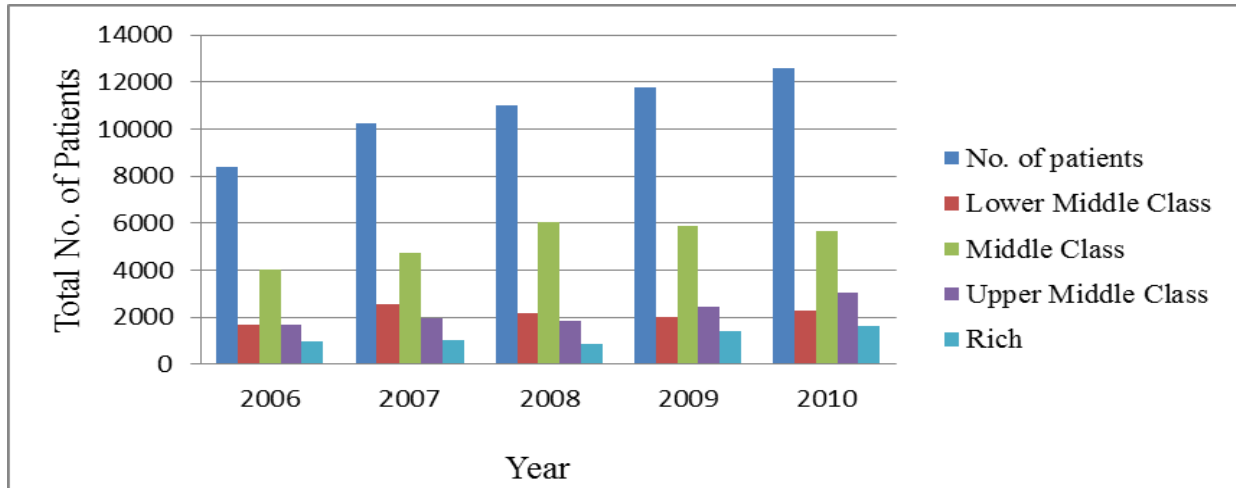


Figure 9: Socioeconomic Status of Patients with Bipolar Disorder.

Present study reveals highest frequency of bipolar disorder in the district central as compare to other districts (Figure 10).

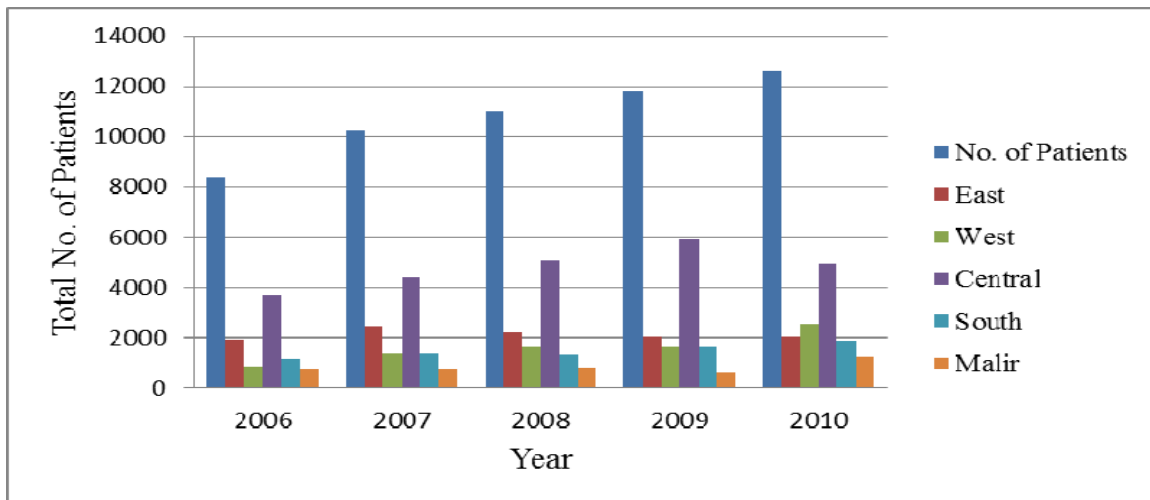


Figure 10: Incidence of Bipolar Disorder According to Locality in Karachi.

Data of present study reveals frequency of bipolar disorder more than 50% in relation to family history in 2010 which seems to be highest, while in years 2006 to 2009 correlation of bipolar disorder to family history is less than 50% (Figure 11).

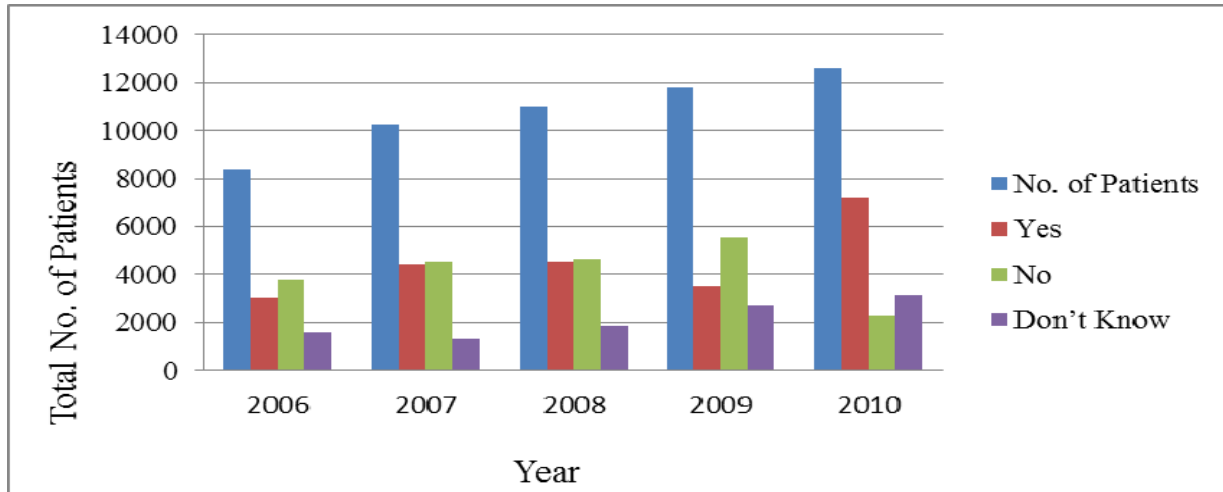


Figure 11: Incidence of Bipolar Disorder on the Basis of Family History.

Results of present study reveal that married couples usually had higher frequency of bipolar disorder then as compared to singles, however in the years 2008 and 2010 frequency of bipolar disorder was highest in widows (Figure 12).

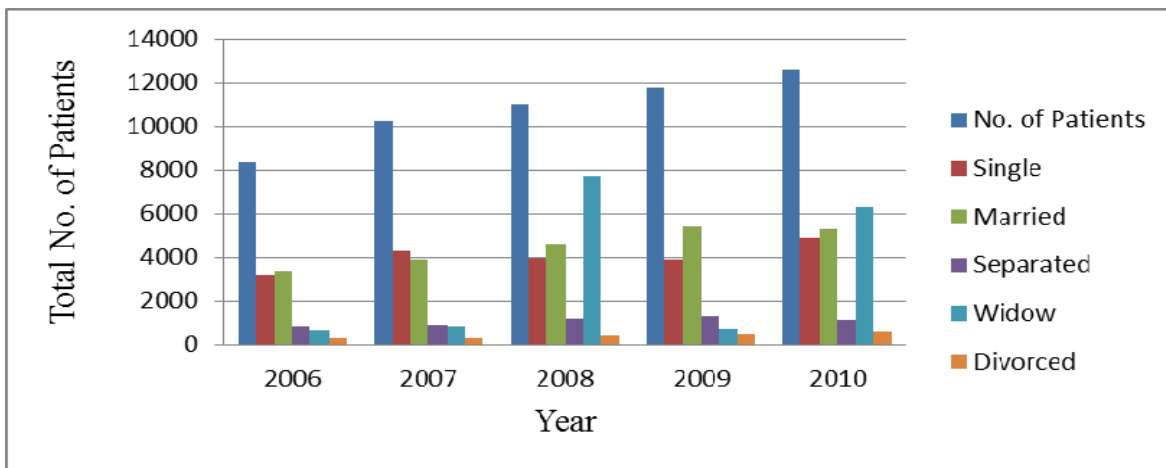


Figure 12: Occurrence of Bipolar Disorder According to Marital Status.

Data collected in present study reveals that the onset of bipolar disorder was in late adolescence or early adulthood. However it was found to be highest in the ages between 20 to 40 years (Figure 13).

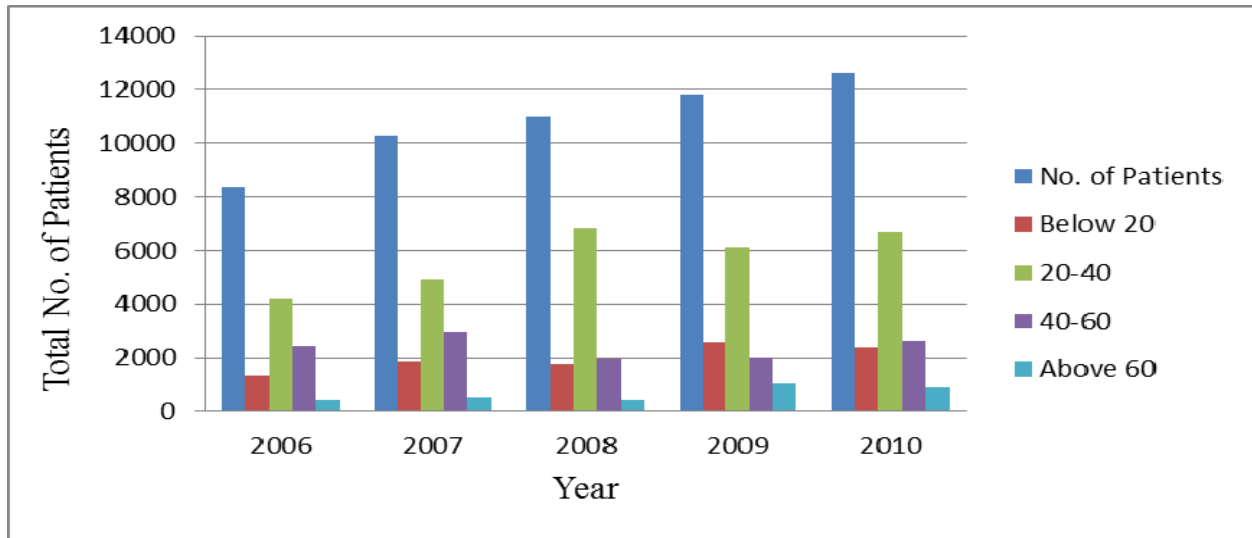


Figure 13: Incidence of Bipolar Disorder in Different Age groups.

Generalized Anxiety Disorder

There has been increasing trend for GAD over the years from 2006 to 2010. In the year 2006, prevalence of GAD was 10% and in the year 2010, 14% cases of bipolar disorder were reported. Percentage of patients having GAD has been categorized according to gender, socio economic status, locality, family history, marital status and age.

Data collected in present study reveals that men are more susceptible to GAD then women (Figure 14).

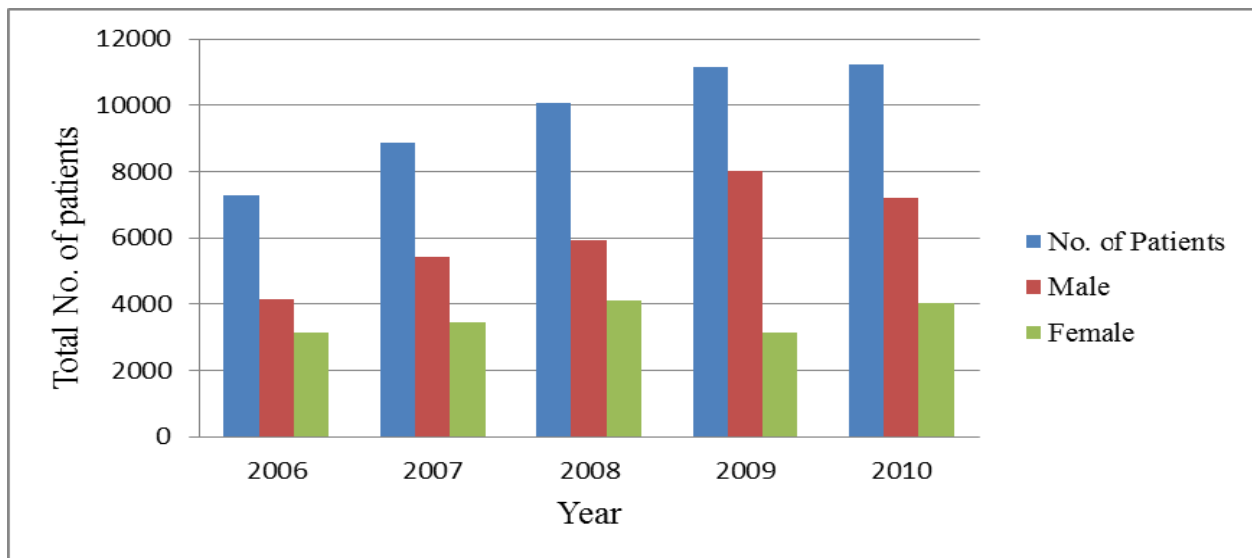


Figure 14: Gender wise Occurrence of GAD in Karachi.

Figure 15 shows the results of generalized anxiety disorders in subjects of different socio economic status. This reveals that subject in middle class and lower middle class respectively are more affected by GAD.

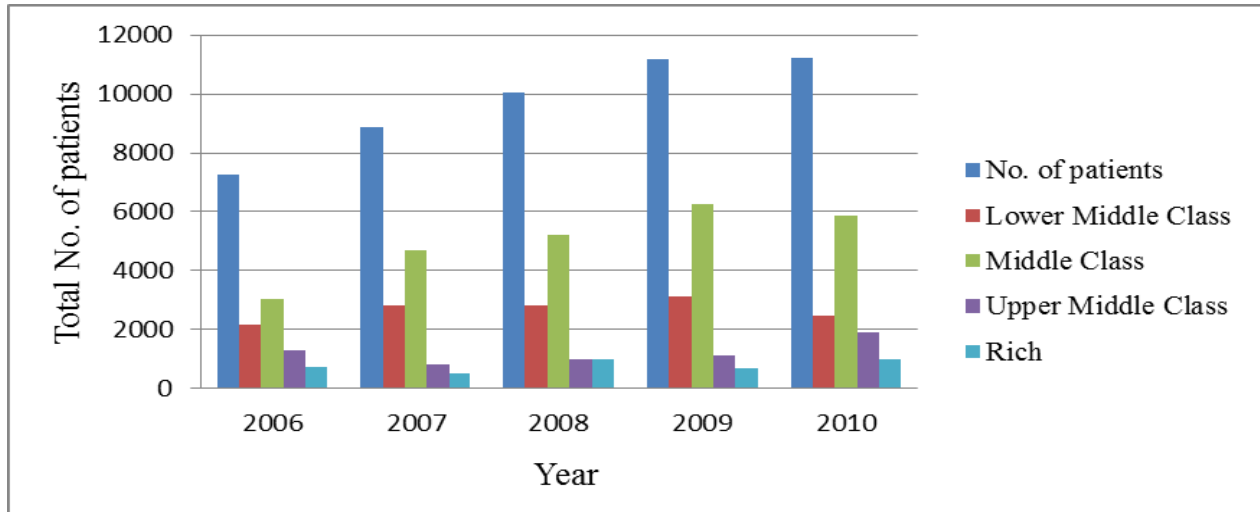


Figure 15: Socioeconomic Status of Patients with GAD.

Present study reveals highest frequency of GAD in the district central as compare to other districts (Figure 16).

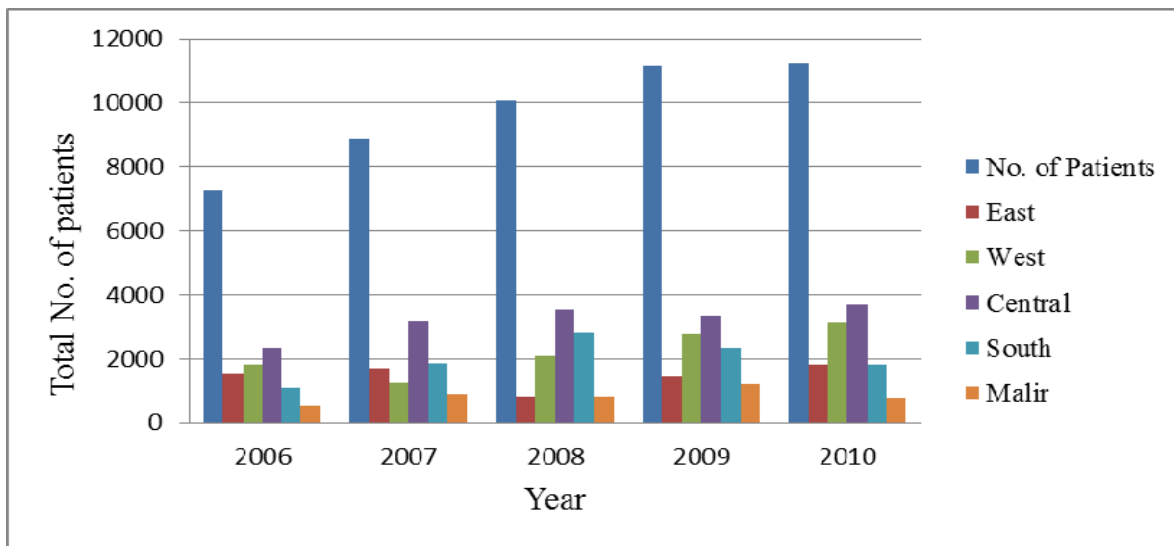


Figure16: Prevalence of GAD According to Locality in Karachi.

Data of present study reveals that frequency of GAD is not much influenced by family history and in all years from 2006 to 2010 the influence of family history on GAD was about 25% (Figure 17).

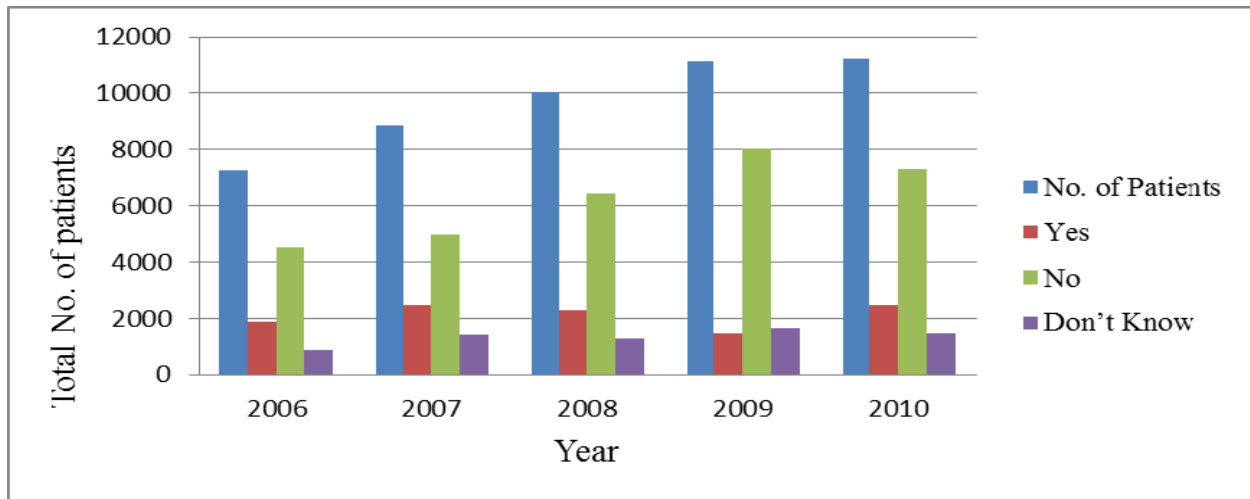


Figure 17: Prevalence of GAD According to Family History.

Data collected of present study reveals that married couples were more affected by anxiety disorders (Figure 18).

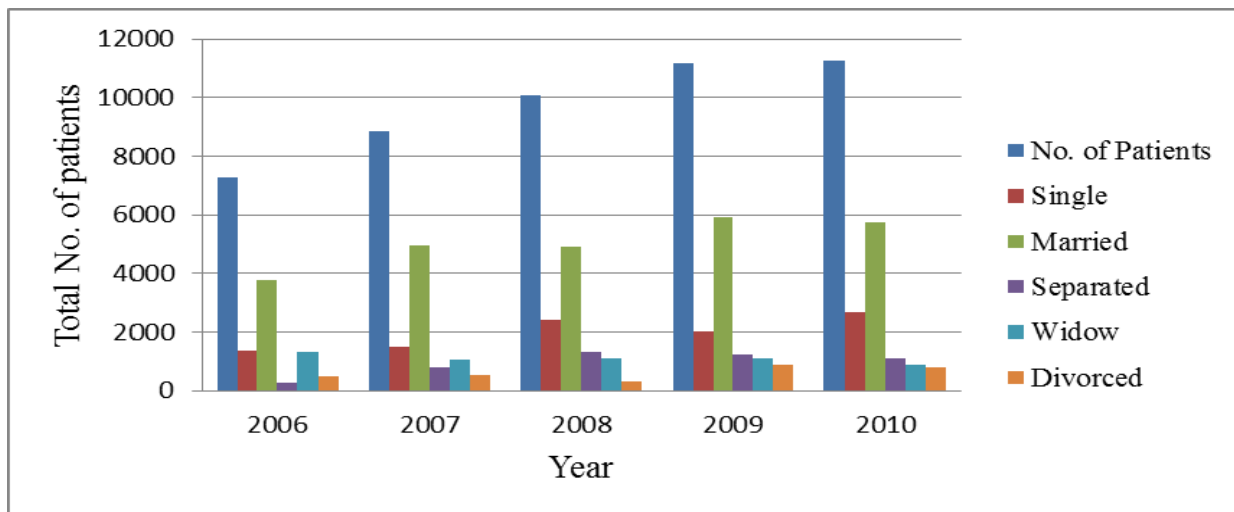


Figure 18: Occurrence of GAD According to Marital Status.

Data collected in present study reveals that GAD can affect people of all ages, and people may experiences it at a very early age, however it is more common in older people as compare to young (Figure 19).

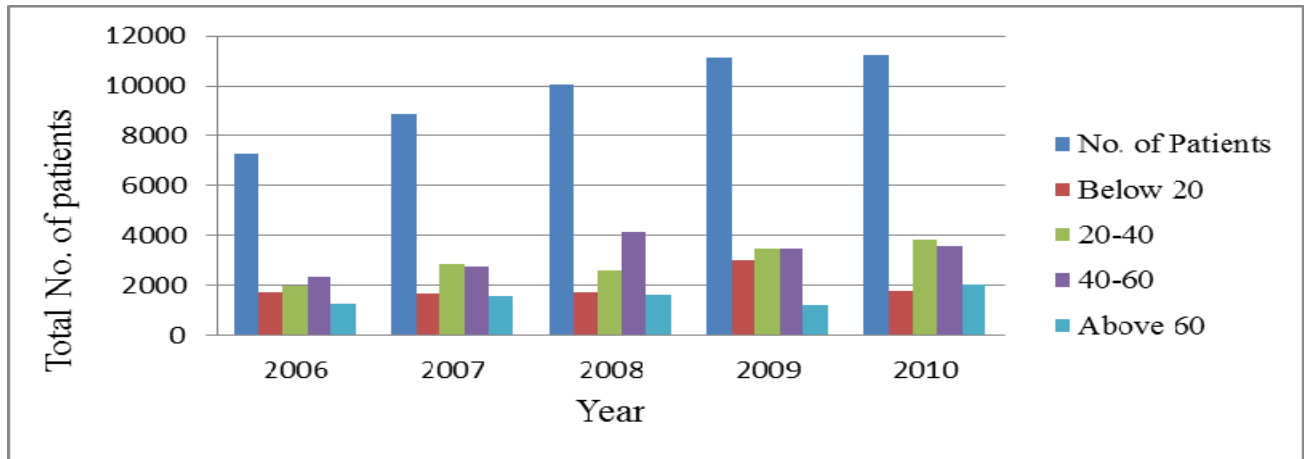


Figure 19: Prevalence of GAD in Different Age Groups.

Postpartum Depression

There has been increasing trend for PPD over the years 2006 to 2010. In the year 2006, prevalence of PPD was 2% (1456), in 2007; the prevalence was increased up to 3% (2217). In 2008, it was 3% (2322). While in 2009, the prevalence was 5% (3985) and in the year 2010, 7% (5621) cases of PPD were reported

Postpartum depression is a female disorder and men are rarely affected by it. Data collected in present study reveals that it has 100% female ratio as compared to male, moreover number of patients affected is increasing yearly (Figure 20).

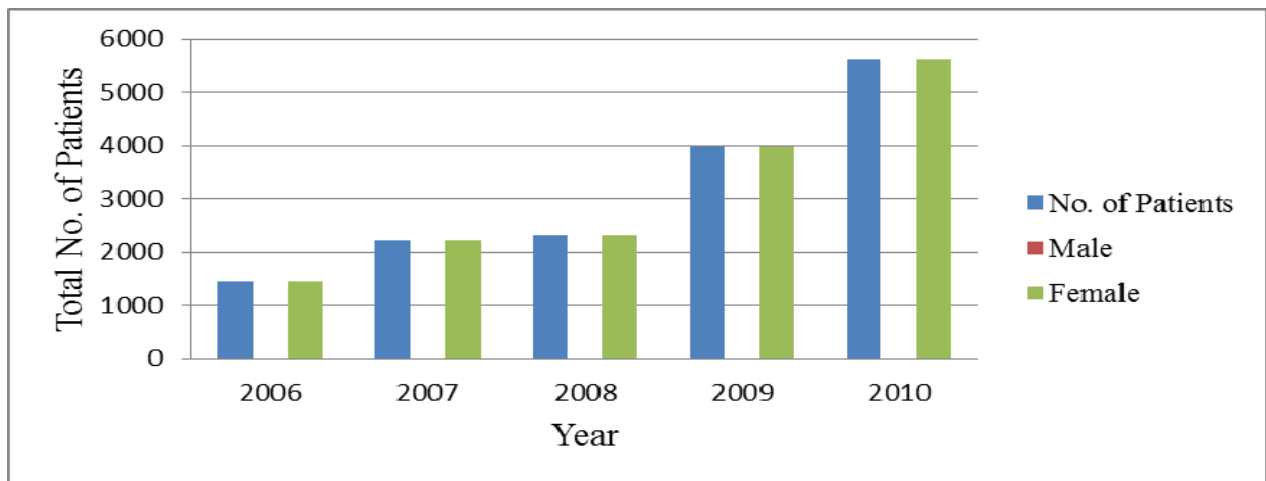


Figure 20: Gender wise Occurrence of PPD in Karachi.

Data collected in present study reveals that middle class is most affected by PPD and occurrence is increasing over the year (Figure 21)

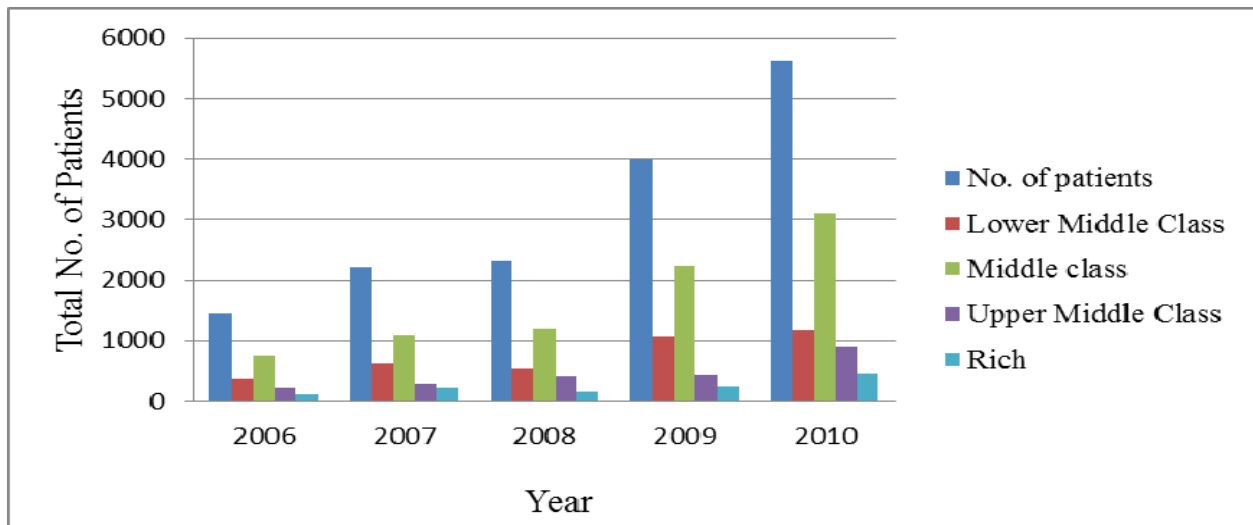


Figure 21: Socioeconomic Status of Patients with PPD.

Present study reveals high rates of PPD like other psychological disorders in the district central. The most probable reason could be the location of the hospital in district central and mostly the residents of this locality usually come to the hospital (Figure 22).

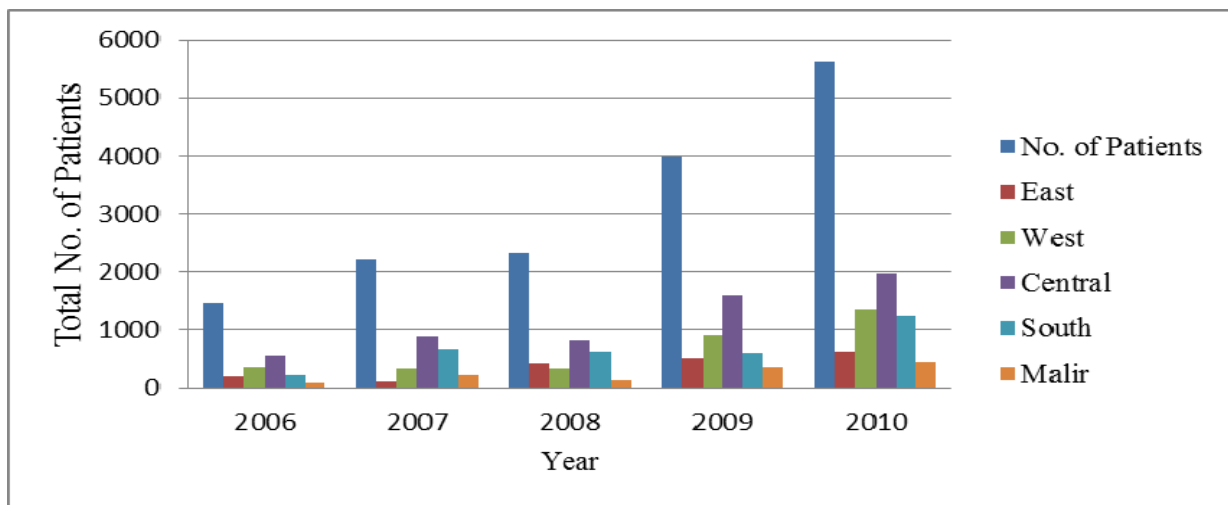


Figure 22: Prevalence of PPD according to Locality in Karachi.

Present study reveals that family history has insignificant role in PPD and it seems that environmental factors have great influence in developing of PPD (Figure 23).

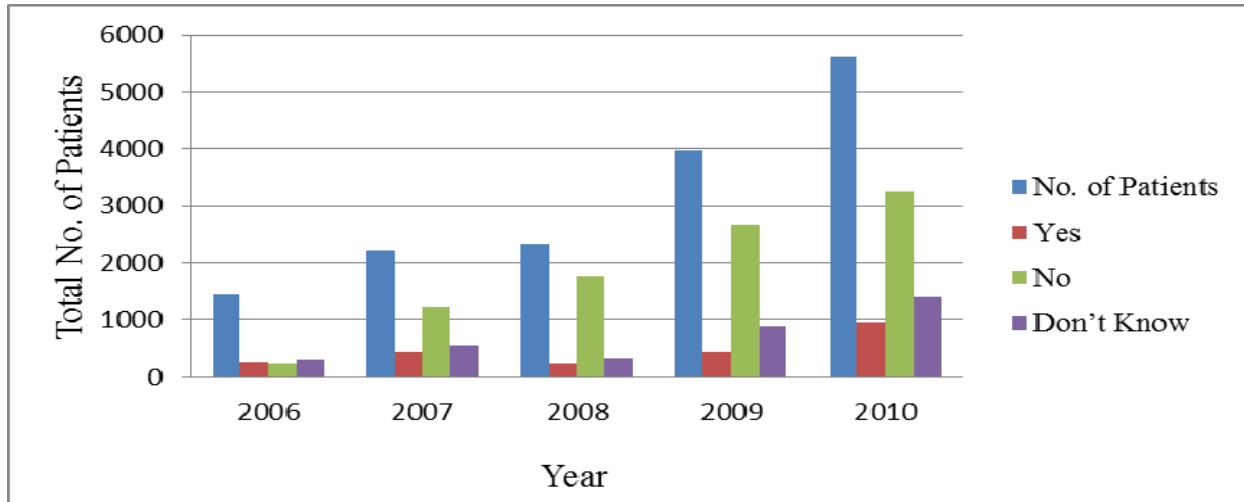


Figure 23: Incidence of PPD According to Family History.

Data collected in present study reveals that frequency of PPD is increasing yearly in married, women, while separated or divorced women also suffer from PPD (Figure 24).

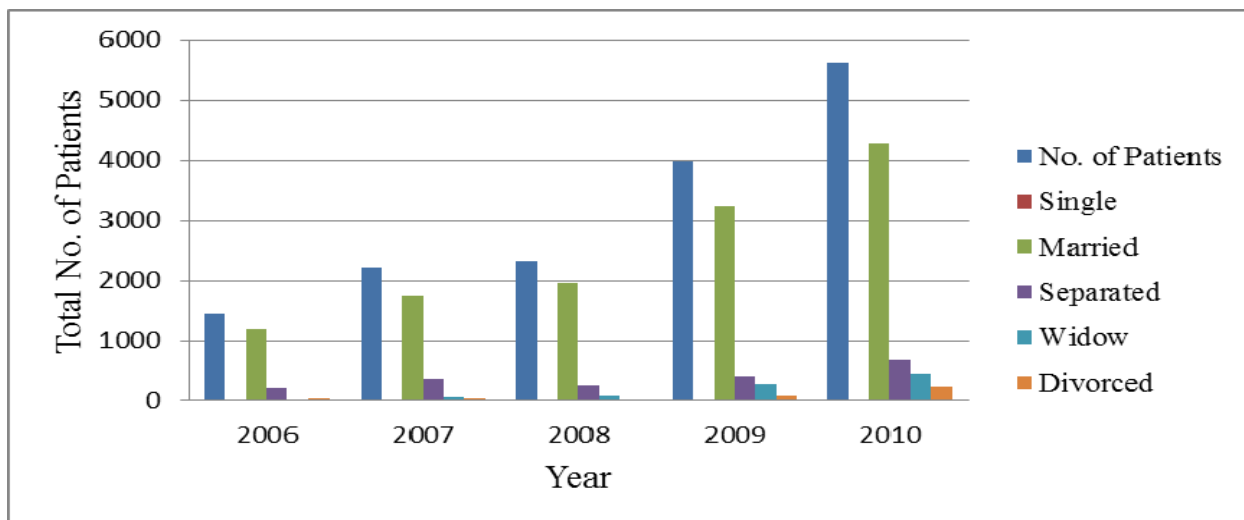


Figure 24: Prevalence of PPD According to Marital Status.

Data collected in present study reveals that PPD usually affected young age mothers between the age of 20 -30 years. The young mothers are at a high risk of having PPD. (Figure 25).

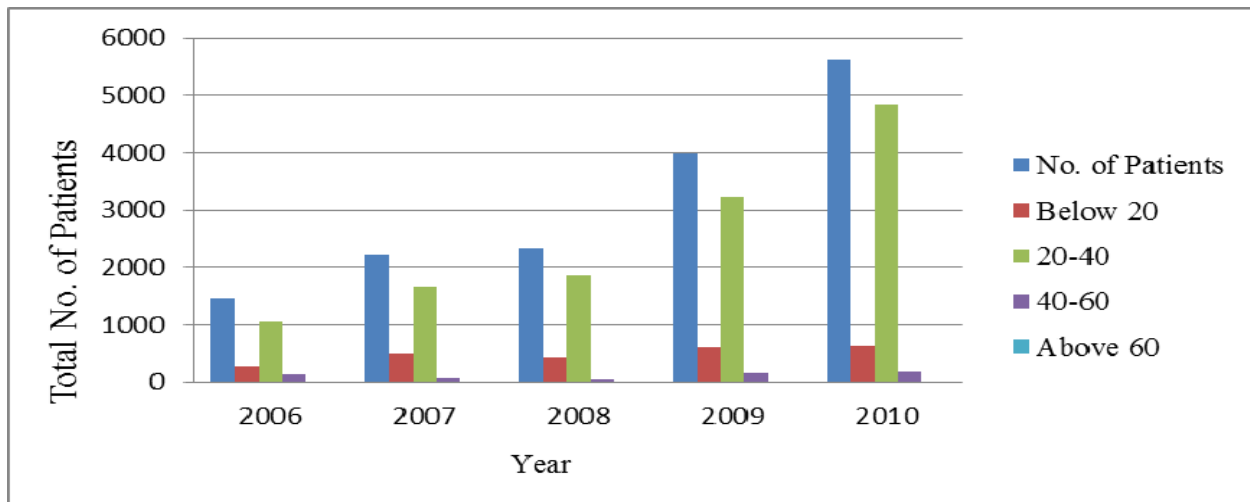


Figure 25: Prevalence of PPD in Different Age Groups.

DISCUSSION

Mental illness has reached an alarming proportion over the globe and has become a vitally important issue for the nations in the terms of morbidity, mortality and huge economic burden. There is worldwide shortage of mental health workers both in developing and developed countries (Gadit, 2007).

One of the major health care problems of Pakistan is mental illness. Some risk factors may be identified for psychiatric illness to define population with different levels of risks for example female sex, middle age, low level of education, financial difficulties, urban areas. The environmental risk factor associated with the urban life make individuals more vulnerable to the development of psychosis (Gilani et al., 2005; Os et al., 2001).

Prior to the onset of mental illness, mostly people are aware of stereotypes behavior of society about mental illness. Fear of society with mental illness has been increasing over the past 40 years resulting in a higher social distance of mentally ill people with society. Upon diagnosis, of mental illness, awareness of stigma may affect a patient's sense in at least two ways. First,

patients constrict their social networks in anticipation of rejection, which leads to isolation, unemployment and low income. Secondly, patients may consider and believe that they themselves are less valuable in the society because of their disorder (Corrigan et al., 2005).

The present study was a preliminary investigation in the Karachi city. The data collected was analyzed regarding prevalence of psychiatric illness on the basis of area, socioeconomic status, gender, age, family history and marital status. There was an overall increasing trend in psychiatric illness during the year 2006-2010, especially in bipolar disorders.

The probable reason for these high rates may be genetic risk factors, illiteracy, unemployment, low income, late marriages, high burden of work, drug abuse, traumatic brain injury, or exposure to virus or any chemicals during pregnancy.

In present study the frequency of bipolar disorder was highest during the years 2006-2010. Present study shows interesting result that patients with bipolar disorder have strong family history besides this other reasons include periods of high stress, drug or alcohol abuse, major life changes, such as the death of loved ones.

The second leading disorder in present study was found to be schizophrenia, which might be due to late marriages, prenatal exposure to maternal infection, various obstetric complications, adverse childhood events, childhood developmental abnormalities, and cannabis use in adolescence (Compton et al., 2008).

Gender distribution in our study reveals that males were usually more affected by psychiatric disorders than females; this may be due to more expectations from males not to express their emotions in the situation of sorrow. Similarly social and religious expectations on men to bear the sole responsibility being an earning member of a family may also add stress level to males. However previous studies suggest that women were more affected by bipolar disorders, GAD and PPD as compare to men, while schizophrenia was equal in both sexes (Thase et al., 2000, Canuso CM et al., 2007, Howell et al., 2001, Robertson et.al, 2004).

Females were usually more affected by PPD, however about 1% of males are also affected by this disorder. The high rate of incidence of PPD in females may be due to history of depression, life stress, poor marital relationship, single parent, low socioeconomic status, unplanned pregnancy and low social support (Paulson, 2010).

Present study also reveals that middle class people are more affected of psychiatric disorders it might be due to the fact that data is been collected from a hospital located in district Central where mostly middle class people are residing. Data did not reveals the situation of poor class since patients of this class do not come to the hospital for the treatment and mostly prefer to go to the religious healers.

Present study also reveals that genetic and environmental factors both play an equal role in the development of psychiatric disorders. Environmental factors such as prenatal or infancy exposure to virus, traumatic brain injury, substance abuse, early parental loss or separation, physical or sexual abuse in the childhood, stressful life event, marital and financial problems make the patient more susceptible for developing mental disorder.

Present study in general reveals that the most affected age group is between 20-40 years for almost all psychiatric disorders. Males are more affected in the young adult hood, while women were affected in the later ages then men; this may be due to the hormonal effects of estrogen and progesterone that act as a protective shield in women. The average age of onset of men is 18 years whereas in women is 25 years.

Generally young mothers between the ages of 20-40 were at a high risk of developing PPD, this may be due to history of depression, more concern about baby care and financial problems. Present study also reveals that late marriages were also one of the main reasons of psychiatric disorders in our society while other reasons include financial instability, marital discord and addiction of spouse or unemployment.

Pakistan is a developing country where mental disorders are widely perceived to have super natural cause i.e. influence of Jinn or black magic were stigmatized even by the educated masses. The traditional healers along with psychiatric services are the main mental health service providers and usually people approach first to traditional healer for treatment. The number of trained mental health professionals is small as compare to demand, thus seeking the help of faith healers as a first step in the management of mental illness that delays in seeking medicinal treatment for the mental illness (Zafar et al., 2008).

It seems probable that beliefs about causes could have important development in terms of social acceptance/social distance/stigma in the lay public and implications for treatment seeking among people affected by the illness. Lay misinformation presumably contributes to stigmatization of

mental illnesses. Therefore it has been suggested that if the public literacy is not improved, acceptance of evidence-based mental health treatments may be hindered (Compton et al., 2008).

CONCLUSION

Present study reveals that there are many misconceptions about mental illness and the stigma attached to it prevents the people seeking help from mental health professionals, which delays the treatment and results in worsening the patient condition. The situation in Karachi regarding mental health services is not at the pace to reach the satisfactory level. People are still at the mercy of quacks, although old traditional methods are also prevailing. This study indicates that we have to increase the awareness of psychiatric illness both at public and professional level so that misconception about these disorders may be removed.

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