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Epidemiological study of mental disorders in Gharb Region (North-West) of Morocco

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Abstract

Survey of Moroccan Health Ministry found that 48.9% of 5600 persons in the general population had a mental disorder and 26.5% were depressed. Objectives: The objective of this epidemiological study is to identify the socioeconomic and neuropsychiatric profiles of patients examined at the Hospital Moulay El Hassan of Kenitra city (Northwest of Morocco) for psychiatric disorders. Subjects and Methods: This research is a retrospective study conducted between February 2010 and December 2013, among 5618 patients (between 1 and 90 years of age). The study is realized on the basis of social and clinical data existing in patients’ records. Results: The most important obtained results show that in 5618 cases studied, about 50% of women and about 50% of men patients had suffered from psychiatric disorders. Moreover, mood disorders were the most common reasons for hospitalization (38.24%). The other psychiatric disorders were schizophrenia and psychotic disorders (17.55%), followed by anxiety disorders (13.65%). In addition, 71% of patients don’t have parents alive and 51.62% of patients suffering from mood disorders are married and 51.61% are divorced. The proportion of illiterate patients is 42.98% and inactive or unemployed patients (85.87%). Conclusion: The prevalence of mental disorders in the Gharb region is important. It affects both men and women and are more developed in some socioeconomic categories. However, deeper investigations are needed in order to identify the factors that contribute to raising of these disorders in the society.

Keywords: Mental disorders, Hospital, Kenitra, Morocco.

INTRODUCTION

The World Health Organization (WHO) defined quality of life related to health as, “an individual's perception of his position in life in the context of culture and value systems in which he lives in relation to his goals, expectations, standards and concerns. It is a complex concept, largely influenced by the physical health of the subject, psychological state, level of independence, his social relations as well as his relation to the essential elements of the environment” (Harper, 1998). Although epidemiologist working in the field of psychiatry were
among the first to speak of social epidemiology in the 1960s (Jako, 1960), the knowledge in this field is still few and sometimes prone to controversy (Wittchen 2004, Lahelma and al., 2005, Kohn and al., 1998). However, some research found that the quality of life is directly affected by some mental disorders as depression, schizophrenia. (Salomé et al., 2004; James et al., 2010; Mond et al., 2013). A well diagnosis and treatment of these disorders could help the patient to regain his good quality of life; this could not be realized without intervention of psychiatric or psychological intervention in schizophrenia. (Salomé et al., 1999).

Mental disorders are real public health in our society, but the studies related to this field are still few to help determining all the factors contributing to raising of these disorders. A national survey of the prevalence of mental disorders, completed in 2003 but only made public in 2007, represented a watershed for psychiatry in Morocco: 48.9% of a sample of 5600 persons representative of the general population were found to have a mental disorder, and 26.5% of respondents were depressed (Moussaoui, 2007).

The aim of our epidemiological study is to identify the socioeconomic and neuropsychiatrical profiles of patients examined at the Hospital Moulay El Hassan of Kenitra city (Northwest of Morocco) for psychiatric disorders.

METHODS

Our research is a retrospective study conducted between February 2010 and December 2013, with 5618 cases aged between 1 and 90 years, living in the region of Gharb- Cherarda Beni-Hsen, and consulting the Health Center “Moulay El Hassan” located in Kenitra city (Capital of Gharb Region). This Health center receives patients from all the villages and cities of the Gharb region (North-West of Morocco). The study is interested in the determination of social and clinical data through the patients’ records. This research includes the following variables: sex, age, ethnicity, household size, rank in siblings, parents, marital status, educational level, occupation and income.

Mental explored disorders in this study are summarized in the DSM IV (Diagnostic and statistical manual, 4th revision, 2012).
- Disorders usually diagnosed during the early childhood.
- Delirium, dementia, amnestic disorder and other cognitive disorders.
- Substance-related disorders.
- Schizophrenia and other psychotic disorders.
- Mood disorders.
- Anxiety disorders.
- Personality disorders.
- Other situations that may be a clinical examination.

Sexual disorders are not presented here due to lack of data in the patients’ records.

Statistical analysis is based on a calculation of both the prevalence of disorders and the sociodemographic variables.

RESULTS

In a total of 5618 patients affected by psychiatric disorders in the psychiatric sector of Moulay El Hassan Hospital / Kenitra city, mood disorders come first with (38.24%). Other psychiatric disorders are the schizophrenia and psychotic disorders (17.55%), followed by anxiety disorders (13.65%). The disorders usually diagnosed in infancy represent (3.38%), and substance-related disorders represent about (3.31%) of cases studied. The prevalence of personality disorders is (2.68%) and the delirium, dementia, amnestic disorder and other cognitive disorders are rare (0.49%). Moreover, about (20.65%) are cases related to other situations that might be submitted to clinical examination (Figure 1 below).

The results represented in the (Figure 2 below), demonstrate that (55%) of women and (45%) of the men patients suffer from psychiatric disorders. Mood disorders are also observed among women (52.15%) and men patients (26.30%). Moreover, the rates of schizophrenia and other psychotic disorders are important (28.63%) in men, but rare (0.92%) in women. As for delirium, dementia disorders, amnestic disorder and other cognitive disorders, the rates were (0.77%) and (0.24%) respectively in men and women. In addition to this, (2.50%) of women and (4.69%) of men are affected by disorders usually diagnosed in infancy and (4.82%) of women and (0.32%) of men suffer from personality disorders.

In the other hand, (0.70%) of women and (6.55%) of men are affected by substance-related disorders, and (18.24%) of women and (9.82%) of men suffer from the anxiety disorders. The category of other situations which can be a clinical examination is represented by (19.89%) of women and (23.46%) of men (Figure 2 below).

Moreover, in all subjects studied and who are aged from 1 year to 90 years, mood disorders is detected with (49.69%) of patient with the age between (40-60) years, and (48.57 %) with patients were between the ages of (60-80) years, also (36.34%) with patients were between the range of 20 and 40 years, whereas (23.98%) were between (80-100) years, and (13.48%) whose ages were less than 20 years.

Regarding schizophrenia and the other psychotic disorders, they have been observed with a total percentage of (29.79%) of patients aged between (80-100) years, 21.55% for 20-40 years; 15.58 % for patients of 60-80 years; 14.07% for those aged less than 20 years, and finally 11.87% were aged of 40-60 years.
As for anxiety disorders, they have been detected in (15.85%) of patients aged of (40-60) years, (14.79%) patients of (20-40) years, (9.61%) of (60-80) years, (7.11%) for patients aged less than 20 years, and (5.32%) for those aged of (80-100) years.

Disorders related to substance detected with the younger patients between (0-20) years were about (4.74%); (4.25%) for patients aged between 20 and 40 years, and (1.96%) for (40-60) years, whereas for patients aged between (60-80) years, (80-100) years were negligible. Disorders usually diagnosed in early childhood are, as the name suggests, patients whose have an age between (0-20) years and usually lasts no definitive cures. However, in the present study, the delirium, dementia, amnestic disorder, and other cognitive disorders have been observed only in older patients. While personality disorders affect all ages without significant difference, and also disorders classified in the category of other situations that can be a clinical examination presented with all ages (Figure 3 below).

Representative data from Figure 4 shows that, (58%) of patients have leaving fathers against (42%) who their fathers are died. In addition, (74%) of patients who have living mothers against (26%) whose the mothers are died. Whereas, (71%) of patients don’t have parents, only
Figure 3. Distribution of psychiatric disorders according to age group

Figure 4. The distribution of patients according to the parents' leaving status. AP: Absence of both parents; PP: Presence of both parents; PV: Father alive; MD: Dead Mother; PD: Dead Father; MV: Mother alive

(29%) have both parents alive. It is remarkable also that (77%) who are living with fathers and their mothers passed away, while (23%) with died fathers and living mothers (Figure 4 above).

Our results demonstrate that married patients (51.62%), and divorced ones (51.61%), are more people facing mood disorders. However, the rate of psychiatric disorders among widows patients, and the single ones are respectively (43.79%), and (21.68%). With regard to schizophrenia disorders, and other psychotic disorders, we observe that single patients (26.58%), were the most affected patients followed by divorced (s) (14.34%), while widows patients and married cases are (11.18%), and (10.15%) of detected cases respectively. Anxiety is presented with (16.68%) of married patients, (10.31%) single, while (9.32%) were divorced, otherwise (9.01%) were widows. Concerning disorders usually diagnosed in infancy firstly detected with single patients (7.79%), then with some married cases (0.25%), and negligible or absent with divorced or widows patients. But, for a substance-related disorders are noted that patients are single (28.5%) of detected cases, while those divorced represent (4.66%), meantime the married, and widows patients respectively represent only (1.67%) and (0.62%). Nevertheless, for personality disorders is noted that there is no significant difference of these psychiatric disorders for patients whatever their family situation even for the divorced (3.94%), or the groom (3.23%), while singles...
and widows, respectively represent only (1.96%) and (0.93%). Disorders of delirium, dementia, amnestic disorder, and other cognitive impairment, were detected in widows patients (19.88%), while other patients were rare and represent only (0.72%), (0.32%) and (0.04%) for the divorced, married, and singles respectively. Moreover, for problems in the category of other situations that can be a clinical examination in the DSM-IV-TR, is noted that single patients are about (26.36%) of the observed cases, whereas married patients represent (16.08%), divorced (15.41%), contrarily (14.60%) of widows patients (Figure 5 above).

The findings from our study show that, for mood disorders, it is noted that illiterate patients are (42.98%), while those with a primary or secondary education are (31.83%), whereas, (37.35%) are the proportion of cases with a higher educational level. Although, schizophrenia disorders and other psychotic disorders, is presented in patients with higher levels of education (27.74%), followed by (21.16%) patients with a primary or secondary level of education, and (14.21 %) are illiterate.

In the same way, anxiety has been detected in (14.38%) illiterate patients, while the remaining shares are allocated to patients with primary or secondary level of education (12.79%), and those with higher levels of education are (12.99 %). Regarding disorders usually diagnosed in infancy, they were detected among illiterate patients (4.15%), while those with a primary or secondary level education are (2.99%), these percentages are negligible compared with the one of patients with higher levels of education. Otherwise, for a substance-related disorders, is noted that patients with primary or secondary level education are in an order of (6.03%), while those with higher levels of education have a percentage of (3.48%), besides (1.33%) were illiterate. After all, for personality disorders, is noted that the proportions of patients are almost, equal with level of education, the percentages are in the range of (2.82%), (2.53%) and (2.55%) for illiterate who have a primary or secondary education and respectively, those who have a higher education. Concerning, disorders delirium, dementia, amnestic disorder, and other cognitive disorders, they were detected with low proportions, patients whom illiterates represent (0.80%), so, those with a primary or secondary education are about (0.14%), while (0.23%) of patients have a higher level of education. For the unrest the category of the other situations and that can be a clinical examination in the DSM-IV-TR, is noted that patients with primary or secondary level education are about (22.54%), while (20.65%) represent the patients of a higher level of education, and (19.33%) were illiterate (Figure 6 below).

The obtained results show that inactive or unemployed patients (85.87%), were more likely to have mood disorders, than retirees patients (46.94%), and assets (39.69%). For, schizophrenia disorders and other psychotic disorders, we observed that retirees patients (26.53%) were the most touching, followed by active patients (19.65%), while inactive or unemployed patients, represent only (3.86%); furthermore, anxiety was presented by (14.20%) of active patient cases, compared to retired patients (6.12%), whereas (3.09%) were inactive or unemployed. Regarding disorders usually diagnosed during childhood, they were detected in minor patients who are inactive. But, for disorders related to substance, we observe, that the active patients represent (5.45%) of detected cases, whereas those inactive or unemployed represent only (0.65%), if we compare it to this result the proportion of pensioners was negligible. However, for personality disorders, we note that there is no difference in occurrence frequency of these psychiatric disorders, for regardless patients whatever their employment status, we observe that (1.56%) were active, whereas (0.68%) were inactive or unemployed contrarily any retired is detected. Delirium, dementia, amnestic disorders and other cognitive disorders, were detected in retired patients (2.04%). So, the proportions of other patients were rare and represent

Figure 5. Distribution of psychiatric disorders according to the marital status
M: Married; C: single; D: Divorced; V: Widow
Figure 6. Distribution of psychiatric disorders according to the study level.
AN: illiterate; M: medium level (primary and secondary); SP: hold a university degree.

Figure 7. The employment status and psychiatric disorders.
Ac: active; R: retired; I: inactive or unemployed

only (0.29%), and (0.12%) respectively, for assets and inactive or unemployed. On the other hand as for problems in the category of other situations that can be a clinical examination in the DSM-IV-TR, we note that patients are active in (19.07%) of the observed cases, patients are retired (18.37%), while inactive or unemployed represent (4.79%) (Figure 7 above).

Mood disorders, were detected with high frequency in both patients with stable income “regular” (39.87%), and in those who have no income (37.77%). However, for schizophrenia disorders and other psychotic disorders , we observe that the proportion of patients who have a stable income “regular” represents (19.70%), while those who didn’t have income represent (17.01%). Moreover, for anxiety disorders, patients with stable income “regular” represent (14.13%) of detected cases, while those who didn’t have income represent (13.51%) cases. With respect to disorders usually diagnosed at early childhood, patients who didn’t have income, represent (4.13%) of observed cases, contrariwise (0.19%) of patients with a stable income “regular”. However, for a substance-related disorders, we noted that patients with stable income “regular” represent (5.20%), while those with no income represent only (3.08%) of cases studied. The obtained results with personality disorders, show that there are no differences in terms of occurrence frequency, of these psychiatric disorders either for patients with no income (2.97%), or those with a steady income “regular ”(1.49%). As expected, concerning delirium, dementia disorders, amnestic disorder and other cognitive disorders, we observed, that the detected proportions were rare, and also with patients not having income (0.53%), as compared with those who have a steady income “regular” (0.37%). It has to be noted that for the unrest of other disorders which can be a clinical examination in the DSM-IV-TR, patients who didn’t have
income represent (21.01%), of the checked cases contrariwise (19.05%) of cases with a stable income "regular" (Figure 8).

DISCUSSION

Our epidemiological study made the attempt to provide at least the prevalence of psychiatric disorders, or mental health in the region of Gharb in Moroccan Kingdom. It should also be noted that the results show strong social and professional differences between men and women, by marital status (married, single, divorced, and widows). Our analyses were taken to on social inequalities, according to urban or rural origin, the latter influence on household size and sibling rank whatever the nature of psychiatric disorders.

This result is in accordance with other international epidemiological studies (WHO International consortium in psychiatric epidemiology in 2000. Kessler et al., 2003; Fryers et al., 2003; Lorant et al., 2003), and European (European Commission 2004; Fryers et al., 2004), particularly, (ESEMeD), (Alonso et al., 2004). Overall, inactive or unemployed patients, were the most likely to have psychiatric disorders, especially mood and schizophrenia disorders, other psychotic disorders, anxiety disorders, and substance-related disorders. These findings, are completely similar to data reported from studies by (Fryers et al., 2003; Lorant et al., 2003). It is important also to note that poverty and unemployment in Morocco, touch many people, some of them remains vulnerable, and others are unemployed, (people in small casual birch). In fact, the risk of becoming unemployed and the chances of escape are uneven. This is also true for the findings according to the (Department of Statistics, National Survey of Employment, 2007). This indicator of poverty, and unemployment explains the high prevalence of mental disorders, (mood and anxiety disorders, schizophrenia disorders, other psychotic disorders, and substance-related disorders), in patients who have no regular income, and illiterates (55%), as compared with only (6%) of those having an university degree. Especially in light of the current discussion, our result might reflect the high frequency (39%) even among those with a medium level of education (primary and secondary), because the probability of being unemployed in the urban area, is four times higher than in the rural area, for patients without diplomas, according to the (National Survey on Employment, 2007), following the urbanization. While among the population disorders usually diagnosed at early childhood, and personality disorders, presented regardless of the social situation. Indeed, the clinical diagnosis in these patients and other diagnosed psychiatric cases as personality disorders, motivation disorders, impaired emotional reactivity disorders such as irritability, catastrophic reactions, pathological laughing and crying, impulse control disorders such as mania, and obsessive-compulsive behaviors, rarely observed isolated, but almost keep associated either with neurological symptoms, or behavioral and cognitive, which raise a brain dysfunction, or presence of brain damage. These results are consistent with the conclusion from other published studies (Gondim et al., 2004; Muzumdar et al., 2003; Parvizi et al., 2001). These behavioral diseases, are excessive in their expression, and frequent (Grinblat et al., 2004; Kim et al., 2000). There is also the anger phenomenon which involves social, cultural , physiological and multifactorial aspects, while some studies indicate, as a risk factor for stroke (Angelelli et al., 2004; Williams et al., 2002).

Although mood disorders « depression », are associated with neural correlates, according to studies (Carota et al., 2005; Pohjasvaara et al., 2002). However, several studies, reported the association between generalized anxiety disorder, and injury of the left hemispheric in cortical localization. Whereas anxiety as an isolated mood disorder, is associated with subcortical localization in left hemisphere according to (Semb et al., 1998;
CONCLUSION

Psychopathology and the study of mental disorders, still a very open field for epidemiological and clinical research, involving multidisciplinary cooperation between researchers, psychiatrists, neuropsychologists, neurologists, neuroradiologists, neurophysiologists and sociologists, to identify the socio-cultural, and physiological factors, or neurobiological implicated in the emergence of psychiatric disorders in the population. Again, presumably in major part due to the knowledge through scientific research and with regard to factors investigated in this study (urbanization, divorce, death of parents, early marriage, poverty and unemployment, illiteracy, cerebral vascular accidents, neuronal and cognitive injuries), there still seems to be a gap between one the one hand awareness of the disorder, for established treatment in the public and among health care providers, however, it is obvious that the treatment, the rehabilitation and reintegration of these patients in the population are major facts to overcome psychiatric disorders.

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