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Primary Mental Health Care in Rural Greece: A Single Center Experience

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Abstract: Economic Indicators of the Situation of Rural Areas (as compared to city residents) such as average income, education, poverty, unemployment rates and employers who do not provide health insurance are some facts that making this population vulnerable. Factors that affect the "Health Condition" of "Rural Populations" are: disproportionately large numbers of young and elderly people, health risks, abuse, family violence and neglect, climatic (weather) Geographical isolation, lack of access to healthcare and lack of resources for mental health services The purpose of this retrospective study is to present dada from a Mental Health center of the Psychiatric Sector of a regional General Hospital in the 3-year period 2013-2015. Material and Methods: This is an epidemiological study. The collection of data was performed with a specially designed for the purpose of the study form that included the recording of data. In particular, race, age, gender, marital status were recorded. In addition, level of education, diagnosis according to ICD 10 and other clinical data. Results: Common mental disorders experienced by patients visiting the Mental Health Center were recurrent depressive episodes, schizophrenia, depressive disorder, obsessive compulsive disorder and bipolar disorder. Conclusions: This Mental Health Center, have treated both Greeks and foreigners, as well as patients residing outside of his sector. The main diagnoses for patients were recurrent depressive episodes, schizophrenia, depressive episodes, obsessive compulsive disorder and bipolar affective disorder. Most patients were instructed and suggested a follow up examination. About half of the patients were stable, one third had an improvement, and only 15% had deteriorated their condition. Patients who were aggravated were significantly younger and had a follow up examination.

Keywords: Mental Health, Primary Mental Health Care, Rural Areas

1. Introduction

According to the World Health Organization (WHO) mental health is a level of psychological well-being, or an absence of mental illness. It refers as the state in which a person has a satisfactory level of functioning, emotional and behavioral adjustment. In addition, mental health can also include the ability that one has on enjoying life and can achieve psychological resilience [1].

Economic Indicators of the Situation of Rural Areas (as compared to city residents) such as average income, education, poverty, unemployment rates and employers who do not provide health insurance are some facts that making this population vulnerable. Factors that affect the "Health Condition" of "Rural Populations" are disproportionately large numbers of young and elderly people, health risks, abuse, family violence and neglect, climatic (weather) Geographical isolation, lack of access to healthcare and lack

of resources for mental health services [2]. Various comparative studies have been conducted which examine differences on mental health status between rural and urban residence. Some argue that the prevalence of mental illness is similar between rural and urban residents. While the accessibility in mental health care facilities is inadequate for rural populations [3]. While others argue that number of people suffering from mental illness in rural areas is increasing due to various factors such as economic crisis, unemployment, lack of social support and increasing insecurity [4].

Providing primary mental health care can be challenging in rural areas mostly because there many obstacles, like the fear of discrimination, that needs to overlapped. The importance of those kinds of services is widely recognized. Primary mental health care can contribute in timely identification and caring for people with mental illness in addition to early recognition, referral to specialists, and staying in their family environment. Moreover, WHO recommends integration of mental health services through primary care services as it can improve the quality of life of patients and to prevent stigmatization as well as optimize the management of resources [5].

Previous studies in Greece have indicated the benefits that derive from primary and community mental health care in rural populations. Primary mental health care offering public, free and accessible services [6]. Experts on health management suggesting that low-income countries and populations can rely on a community based primary mental health care, which can cover a certain demand on such services on rural regions. In addition, primary mental health care can help achieving continuity in the care of patients, which is considered to be an essential condition for the better outcomes of chronic mental illnesses, can reduce relapses and hospitalizations, saving significant funds [6-11].

Community Mental Health Centers (CMHC) constitutes the core mental health care action in a community level [12]. They providing primary mental health care and services for the detection of the mental health needs of the population emphasizing on vulnerable populations, such as children and adolescents, elderly people and people with disabilities. In addition, it provides psychosocial rehabilitation and long-term care for seriously ill patients. The main goal of a CMHC is the early prevention, diagnosis and treatment of the full range of psychiatric and psychological problems as well as psychosocial support in order the individual not to depart from the community or from his physical networks (family, work etc.). It, also, focus on transitional hospitalization of mental patients who are going to reintegrate into the community [13].

The purpose of this retrospective study is to present dada from Mental Health Center of the Psychiatric Sector of a regional General Hospital in the 3-year period 2013-2015. Moreover, this study exams the correlation of mental disorders with the demographic data of the patients (gender and age) and the investigation of the course of the disease.

2. Material and Methods

This is an epidemiological study. The collection of data was performed with a specially designed for the purpose of the study form that included the recording of data. In particular, race, age, gender, marital status were recorded. In addition, level of education, diagnosis according to ICD 10, reexamination (Yes, No, Inconsistent), instructions (Yes, No), disease course (passed away, inconsistent with medication, improvement, steady state, aggravation), insurance coverage (Yes, No) and, finally, the type of patient attendance (urgent, regular) were recorded to. All selected patients were 18 years old or more and had completed their medical records. Patients under the age of 18 years and those whose file was incomplete were excluded from the study.

The tenth version of World health organization's international classification of diseases (ICD-10) was used in order to achieve the best possible analysis and processing of medical diagnoses worldwide. The classification of ICD diseases classifies only the diseases and not other parameters, such as the reason why patients are brought to the hospital or their outcome. The Hellenic Ministry of Health [14] made the Greek translation from the English version.

Ethical considerations

The scientific committee of the Hospital approved the research protocol of this study. Gathered data were used exclusively for the purposes of this study. In addition to demographic data, no personal data of the patients included in the study will be published. For reasons of anonymity, the name and surname of the patients were not recorded.

3. Statistical Analysis

Statistical analysis was performed with the SPSS for Windows version 21. In all analyzes a statistical significance level was set to $p = 0.05$. Descriptive and inferential statistical methods were used.

4. Results

The study sample consisted of 314 patients, of whom 120 (38.2%) were men with a mean of age 53.1 ± 15.9 and 194 (61.8%) were women with a mean age of 55.9 ± 14.6 years old. Age of the participants did not differ significantly depending on their sex ($p = 0.097$). Of the total sample, 18 (5.7%) patients were foreigners, 228 (72.6%) were from the same region and 68 (21.7%) from another region. In total, 163 (52.9%) patients were married, 122 (39.6%) were single, 17 (5.5%) divorced, and 6 (1.9%) were widowed. In addition, 15 (5.2%) patients were illiterate, 124 (42.6%) were primary school graduates, 132 (45.4%) were secondary school graduates and 20 (6.9%) patients were higher education graduates.

Regarding the diagnoses of patients were recurrent depressive episodes (20.7%), schizophrenia (18.2%), depressive episode (16.3%), obsessive compulsive disorder (16.3%), bipolar disorder 7%), unspecified organic or

symptomatic mental disorders (3.2%), mental disorders and behavioral disorders due to alcohol use (1.9%), other mental disorders caused by brain injury and dysfunction and by natural illness (1,6%), persistent delusional disorders (1,6%), mental disorder (1%), schizoaffective disorders (1.3%), acute and transient psychotic disorders (1%) and severe stress response and adaptability disorders (1%).

In addition, a follow up examination was proposed in 250 (82.8%) patients, 46 (15.2%) were not considered necessary, while 6 (2%) patients were inconsistent. In total, 1 (0.4%) patient died, 6 (2.3%) patients didn't adhere to the prescribed medication, 87 (33.2%) patients were improved, 127 (48.5%) remained stable and 41 (15.6%) deteriorated. Finally 292 (93%) of the patients had insurance coverage.

Correlations

The Greek patients had a significantly greater proportion of insurance against foreigners (94.6% vs 66.7%, p = 0,001). Follow up examination was differed significantly with respect to patient age. In particular, follow up examination was recommended in patients aged 53.7 ± 14.2 years, not in patients 60.6 ± 18.2 years of age, and inconsistent patients were 57.8 ± 13.5 years.

The majority of the patients suffering from schizophrenia (F20) were significantly men ($p < 0.05$), immigrants ($p < 0.05$) and single ($p < 0.05$). The were no records of immigrant patients suffering by bipolar disorder. Patients with a depressive episode were married (significantly $p < 0.05$). Patients with recurrent depressive episodes were significantly more Greeks ($p < 0.05$). Patients with obsessive compulsive disorder were significantly older ($p < 0.05$). The results of correlations with diagnosis are shown in Table 1.

Table 1. *Correlations between demographic characteristics and diagnosis.*

	F20	F31	F32	F33	F42	P
Gender, Men	35 (61,4%)	6 (27,3%)	15 (29,4%)	17 (26,2%)	14 (27,5%)	0,001
Age in years	51,5±12,9	51±12,1	57,9±16,6	57,3±12,4	58,8±15,7	0,021
Origin, immigrants	5 (8,8%)	0	3 (5,9%)	3 (4,6%)	4 (7,8%)	0,028
Marital status, Single	39 (69,6%)	9 (42,8%)	8 (16%)	19 (29,2%)	14 (28,6%)	0,001

F20, Psychoses, F31, Bipolar Disorder, F32, Depressive disorder, F33, Recurrent depressive episodes, F42, OCD

Course of disease

Patients whose condition was aggravated were significantly younger than those who improved or remained stable (49.2 ± 13.5 vs. 54.2 ± 14 and 55.3 ± 14.8, $p < 0.05$, respectively). Patients who remained stable were significantly older than those who were inconsistent or exacerbated (55.3 ± 14.8 vs. 51.8 ± 12.9 and 49.2 ± 13.5, $p < 0.05$, respectively). All patients who were aggravated had a follow up examination (100%), while half-patients (50%) of those that did not adhere were re-examined. The results of the correlations according to the outcome of the patients' disease are presented in Table 2.

Table 2. *Correlations depending on the course of patients' disease.*

	Non Adhered	Improvement	Stable	Aggravation	P
Age (years)	51.8±12.9	54.2±14	55.3±14.8	49.2±13,5	0.043
Follow up	3 (50%)	83 (97.6%)	121 (96%)	41 (100%)	0.001

5. Discussion

The purpose of this study was to present common mental health issues that are experienced by residents of a rural region and their possible relation to their demographic variables such as age, marital status and their outcome. The present study found that the common mental disorders experienced by patients visiting the Mental Health Center, that this study conducted, were recurrent depressive episodes, schizophrenia, depressive disorder, obsessive-compulsive disorder and bipolar disorder.

Despite the fact that primary health care is very important both in the prevention and management of mental illness, there are many issues that needs to be resolved in Greece, the development of more settings in addition to executives, strategic goals, horizons, and inspiration. Mental Health care Centers have been exploited to a minimum in this area. Staff shortages result in further burden on other mental health professionals. For the successful integration of Mental Health in the primary care, priority should be given to training health professionals in the bio-psychosocial health model, organizing, and promoting certified training programs and adequate psychiatric education. Significant changes should be made to the attitude of the mental health team to understand that mental health and illness are a continuous one. Moreover, patient's needs are not only covered by the prevention and treatment of mental disorder but also need to be cared for Re-education to recover the lost social skills of the patient and training for his / her professional rehabilitation [15]. Regardless if the prevalence of psychiatric disorders in rural areas are the same like in urban areas, the current epidemiological study captured the mental health care demand of rural residents. A large proportion of the population of this study is suffering from severe mental illnesses, as is suggested and by other studies in rural areas there is an urgent need to provide a a comprehensive psychiatric care [16]. In order for this to be achieved in a rural area the collaboration between various mental health care settings is necessary. The inpatient psychiatric facility and the community based services must have a continue care plan for people suffering by mental disorders [17].

Research so far is providing clear indications that the onset of depressive symptoms are not only caused by biological or

psychological factors but are influenced by a wide range of social risk factors as well. Yet, the way that social context influence people with depression, as well as the difference in the prevalence between countries or regions in international studies, have not been sufficient understood. Depression is more common among women and elderly [18, 19] and compared to men (and regardless of the cultural context), women are twice as likely to suffer from a depressive disorder [20]. This is also consistent with the current study, according to which about 70% of the patients who visited the mental health center were women aged 57 years or more. If the sample was larger, the age of patients with depressive disorders similar to the age of the elderly would probably be different. The mean age at which depression occurs for the first time ranges from 40 to 45 years for unipolar depression and between 30 and 35 years for bipolar depression [20]. Patients' medical records where data were obtained for the study, didn't include if depression occurred for the first time or patients had a history of depression.

In addition, marital and occupational status, educational and economic level as well as lifestyle and geographical factors are all related to different dangers for depression [18, 21]. The results of the present study support the existence of a social etiology in depressive symptoms [22] as patients in our study that are suffering by depression had increased rates of divorce and widowhood, which contributes to disturbing the emotions of individuals. Moreover, widowed and divorced people report higher rates of depressive symptoms, followed by those who have never married or who cohabit [18]. Some researchers argue that the strong correlation between marriage and psychological well-being is partly due to the outcome of choice, as (psychologically) healthy are more likely to find a husband [23]. Finally, is worth to be mentioned that previous studies [24], are reporting that the prevalence of depression is slightly but significantly higher in residents of rural areas compared to urban areas, possibly due to differing population characteristics this can explain why depressive patients were the majority of our sample.

In the present study, it was found that patients with psychoses (ICD diagnosis, F20) were significantly more men, immigrants and single. Our results are consisted with those in the international literature on the prevalence of sex in psychoses. Some authors consider that men have a slightly higher risk of developing schizophrenia than women in the 1.3-1.4.1 [25], while others came to the conclusion that gender doesn't [26]. However, it is well established that men suffering from a form of psychoses like schizophrenia have more severe forms and worsen outcomes than women [26]. Usually the onset of Schizophrenia occurs between the ages of 15 and 45 [27], most commonly at the end of adolescence or early adulthood [28]. In the present study it was found that the average age of patients with schizophrenia was 51 years, but it was probably not the first time they had schizophrenia, but as mentioned earlier, this was not shown in patients' medical records. In addition the mental health center is a primary health care facility that patients attended for follow up and not for acute and emergency mental health issues. Nonetheless, our findings are supporting other studies in primary mental health care that found that many immigrants are facing mental health problems and psychoses is one of them [29].

Furthermore, despite the fact that bipolar disorder is a frequent mood disorder, in our study only a small proportion of our sample was diagnosed by it. Bipolar disorder, is the major part of the spectrum of emotional disorders combined with major depressive disorder characterized by either a mania or depression episode or both. In the present study, bipolar disorder was found to be more common in women with a female to male ratio of about 1.3, a result which is in contrast to bibliography, which states that bipolar disorder affects men and women at a similar rate [30]. The onset of bipolar disorder is usually between the ages of 18 and 22 years, but symptoms such as hypersensitivity, emotional dysfunction, and episodic mood instability may occur almost a decade before disease progression. In the present study it was found that patients with bipolar disorder were younger than the others, which is consistent with that of corresponding studies [31].

Depression is a major cause of morbidity in worldwide level and it has been estimated that about 121 million people are affected throughout the world. Major depression is the fourth most significant disturbance in the burden from global diseases in 1990 and it is estimated that will be the second leading cause of morbidity after ischemic heart disease by 2020 [32, 33]. According to the National Institute of Mental Health, 5% of the adult population each year suffers from major depressive disorder 5-12% of men and 10-25% of women of a major depressive episode [33]. Luppa et al. (2013) showed that depression is associated with increased unexplained physical symptoms, such as headaches and gastrointestinal problems, which further increase the use of health care services [35]. Obviously this is the reason why the recurrent depressive episodes were the most prevalent among the patients in this study.

Concerning the outcome of the patients, most patients were given guidance in this study and a follow up examination, was proposed. Improvement was seen in 1/3 of patients, while in about half the health condition deteriorated. Psychiatrists working in secondary care have long recognized that depression often end up as chronic situations with poor prognosis. Kraepelin believes that if left untreated, major depressive episodes will tend to last about 6 to 8 months in most cases. Studies show that 12% to 40% of patients with depression will never recover from their illness. Of those recovering, 60% - 90% will then recur for the next 5-10 years, and only 25% of patients will not relapse the disease [36]. On the other hand, Posternak (2006) found relatively high recession rates in a group of 130 patients who had previously experienced a depressive episode and then relapsed. Forty-six people visited health facilities to receive medication. About half of the patients in this study had a steady state, one-third improved, and only 15% had deteriorated their condition [37].

6. Conclusions

The Mental Health Center, in which the present study was conducted, have treated both Greeks and foreigners, as well as patients residing in a county outside Arcadia. The main diagnoses for patients were recurrent depressive episodes, schizophrenia, depressive episodes, obsessive compulsive disorder and bipolar affective disorder. Most patients were instructed and suggested a follow up examination. About half of the patients were stable, one third had an improvement, and only 15% had deteriorated their condition. Patients who were aggravated were significantly younger and had a follow up examination.

This study is the first attempt to capture the epidemiological profile of patients with a mental health disorder at a regional mental health center, as well as mental health needs in rural populations attending primary mental health care. It is proposed to create an electronic patient file and to fully record the history and all patient data from which future epidemiological studies can be carried out in order to perceive the local community as well as the healthcare professionals the needs of these people and to provide more quality and effective care.

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