Universidade do Minho
Escola de Medicina

Aníbal Neves Anube

Diagnostic Stability of Psychotic Disorders in Clinical Practice – A Retrospective Study

Estabilidade Diagnóstica das Perturbações Psicóticas na Prática Clínica- Um Estudo Retrospetivo

junho de 2017

Diagnostic Stability of Psychotic Disorders in Clinical Practice – A Retrospective Study
Estabilidade Diagnóstica das Perturbações Psicóticas na Prática Clínica- Um Estudo Retrospetivo
Aníbal Neves Anube
UMinho|2017

Universidade do Minho
Escola de Medicina

Aníbal Neves Anube

Diagnostic Stability of Psychotic Disorders in Clinical Practice – A Retrospective Study

Estabilidade Diagnóstica das Perturbações Psicóticas na Prática Clínica- Um Estudo Retrospetivo

Dissertação de Mestrado
Mestrado em Ciências da Saúde

Trabalho efetuado sob a orientação do
Professor Doutor Pedro Morgado
e do
Professor Doutor António Pacheco Palha

junho de 2017

“For my wife, Sandra Jorge Rádio Macauzo and my brother Luís Anube Rubaine”

Dedicatory

The work presented in this thesis was done in the neurosciences research domain of the life and Health Science Research Institute (ICVS), School of Medicine, University of Minho, Braga, Portugal (ICVS/3b's - pt Government Associate Laboratory, Braga/Guimarães, Portugal).

Agradecimentos

Ao ministério de Saúde de Moçambique (Departamento de Saúde Mental), pelo financiamento ao curso de mestrado;

À Dra Lídia Gouveia que pela sua dedicação tornou possível frequentar o curso de mestrado.

Ao Professor Doutor Pedro Morgado pela orientação científica e apoio na tradução desta tese;

Ao Professor Doutor António Pacheco Palha pela orientação científica e apoio inesgotável em todos vertentes durante a estadia em Portugal;

Às Professoras Joana Palha e Paula Ludovico pelo apoio científico e integração na universidade;

Ao Carlos Portugal Nunes, pela disponibilidade e apoio inesgotável no decurso da aprendizagem;

À minha esposa Sandra Jorge Rádio Macauzo pelo amor e carinho e motivação, 2 anos de privação não é fácil;

Ao meu irmão Luís Anube Rubaine por me alimentar forças na vida académica

Aos meus sobrinhos Saulino e Chelcia por terem suportado 2 anos da minha ausência, o momento que mais me precisavam;

Aos meus pais Anube Rubaine e Auema Sabite, que tão cedo partiram e que deixaram me um "conselho luz" que me guiou desde aos 6 anos de idade;

Aos meus colegas Janny, Rogério e Domingas pela amizade que construimos;

Ao Eduardo Gomes, amigo sempre disponível;

Às irmãs hospitaleiras da Casa de Saúde do Bom Jesus de Braga, especialmente a enfermeira Paula e a Madalena pela disponibilização flexível dos processos clínicos;

À Casa de Saúde de S. João de Deus em Barcelos, especialmente a Dra Emília e Dr Victor pelo tempo dedicado a recolha de dados e acesso ao arquivo clínico;

A todos que direta ou indiretamente tornaram possível a concretização desta tese, o meu muito obrigado.

Abstract

The diagnostic stability is an indicator used in clinical practice to validate the diagnosis in psychiatry. Previous studies show that about 20.7% to 25% of patients with psychotic disorders change their initial diagnosis in the subsequent clinical evaluations. However, there are no studies in Portugal reporting diagnostic stability and its determinant factors for psychotic disorders. This study was designed to evaluate the diagnostic stability and main influential factors for psychotic patients in a 10-year period in Portugal.

The objective of this study was to determine the diagnostic stability and identify factors predicting diagnostic instability of patients who were admitted with psychotic disorder in Casa de Saúde de Bom Jesus (CSBJ) and Casa de Saúde de S. João de Deus (CSSJD) in Braga, Portugal.

This was a retrospective longitudinal study based on review of medical records of patients who were admitted for first time for psychotic disorder to CSBJ and CSSJD hospitals during the period from 1996-2000. The diagnoses were identified using the ICD-9 and updated to DSM-5

A total of 1324 patients had first admission for psychotic disorders in the both hospitals. 273 patients fulfilled criteria for this study. 215 (78.8%) were from females admitted to CSBJ hospital and 58 (21.2%) were males admitted to CSSJD. The average age was 37 years old. The most frequent psychotic disorders were schizophrenia 85 (31.1%), and delusional disorder 57 (20.9%). The overall diagnostic stability was 74.0%. The most stable diagnoses were schizophrenia (87.1%), bipolar disorder (76.8%). Schizoaffective disorder was the most instable diagnosis (48.1%). All assessed variables in this study we only found urban residence as predictor of diagnosis change for delusional disorder. We did not find other factor predicting for diagnoses changes having statistically significant.

The diagnostic stability of patients under psychotic disorder is low. Although there are risks of changing diagnosis for some variables, they do not give us trust to predict the diagnostic instability. The diagnosis of mental disorders based only on symptoms and signs is the key point for a diagnostic change. However, the absence of biomarkers it makes more critical to understand the psychopathology and the longitudinal observation of psychiatric patients.

Keywords: Psychotic Disorders, Diagnostic Stability, Diagnosis changes, Predictors of changes

Resumo

A estabilidade diagnóstica é o indicador mais usado na prática clínica para validar os diagnósticos psiquiátricos. Muitos estudos mostram que cerca de 20,7% a 25% dos pacientes com perturbação psicótica mudam dos seus diagnósticos iniciais em hospitalizações subsequentes. No entanto, verificámos que não existem estudos que reportam estabilidade diagnóstica e fatores preditores de instabilidade diagnóstica em doentes com perturbações psicóticas em Portugal. Este estudo pretende avaliar a estabilidade diagnóstica e fatores determinantes de instabilidade diagnóstica nos doentes com perturbação psicótica num período de 10 anos em Portugal.

O objetivo deste estudo foi determinar a estabilidade diagnóstica e identificar fatores preditores de instabilidade diagnóstica nos doentes admitidos por perturbação psicótica na Casa de Saúde do Bom Jesus (CSBJ) e na Casa de Saúde de S. João de Deus (CSSJD) em Braga, Portugal.

Este foi um estudo retrospetivo longitudinal baseado em registos médicos dos doentes com perturbação psicótica, admitidos pela primeira vez nas CSBJ e CSSJD, durante o período de 1996 a 2005. Os diagnósticos foram identificados usando o CID-9 e atualizados para DSM-5.

Num total de 1324 doentes foram admitidos pela primeira vez por perturbação psicótica nos dois hospitais. Dos quais 273 doentes tiveram critérios para o presente estudo, dos quais 215 (78.8%) foram mulheres admitidas na CSBJ, e 58 (21.2%) foram homens admitidos na CSSJD. A idade média foi 37 anos. A perturbações mais frequentes foram perturbação esquizofrenia com 85 (31.1%) doentes e perturbação delirante 57 (20.9%). A estabilidade diagnóstica em doentes com perturbação psicótica foi de 74.0%. A perturbação mais estável foi a esquizofrenia com 87.1%, seguida de perturbação bipolar com 76.8%. Perturbação esquizoafetiva foi a mais instável, 48.1% destes mudaram o seu diagnóstico inicial. Residir no meio urbano foi mestrado como preditor de mudança de diagnóstico para apenas perturbação delirante estatisticamente significativa.

A estabilidade diagnóstica dos doentes com perturbação psicótica foi baixa. Embora hajam variáveis de alto risco para instabilidade diagnóstica, elas não são totalmente preditores para mudança de diagnóstico. O diagnóstico psiquiátrico baseado em sintomas e sinais é o ponto mais importante na instabilidade diagnóstica. Ausência de biomarcadores torna ainda mais crítico o bom domínio da psicopatologia e a observação longitudinal dos doentes com perturbação psicótica.

Palavras Chaves: Estabilidade diagnóstica, Perturbação Psicótica, Fatores Preditores, mudança de diagnóstico

Index

Tables' index

Figure Index

Abbreviations list

BD	Bipolar Disorder
CSBJ	Casa de Saúde do Bom Jesus
CSSJD	Casa de Saúde de S. João de Deus
DD	Delusional Disorder
DSM	Diagnostic and Statistical Manual of Mental Disorders
ICD	International Classification of Diseases
LOS	Length of Stays
MDD	Major Depressive Disorder
OPD	Other Personality Disorder
SAD	Schizoaffective Disorder
SCH	Schizophrenia

1. Introduction

1.1.1. Definition of Diagnostic Stability

Psychotic disorders, as other mental illnesses, have a chronic course[1]. Physicians need to have a reliable diagnosis for adequate treatment and follow-up of patients as well as for a successful scientific research over the course of the disease[1]. Unfortunately, some psychiatric diagnoses change over time, even after their validation[1]. The diagnostic stability over time is considered as one of the most important criteria for validation of psychiatric diagnoses[1], and can be useful for : (I) in the evaluation of the effects of the interpretation of any diagnostic instrument or system used in a certain time[1], (II) in the drawing attention for the medical personnel in the handling and treatment of patients[2], (III) and spending attention about administrative implications[2]. Diagnostic changes, still remain as important aspects to take into account in the follow-up process of patients with mental disorders[1,3,4]. Several studies have shown that some diagnoses in psychiatric clinical practice are not stable; they can change from one diagnosis to another which makes the target diagnosis very unpredictable[1,5,6].

The lack of diagnostic tools and absence of biomarkers in psychiatry to validate diagnoses, make same researchers feel a need to study the stability of psychiatry diagnoses[7,8]. So, diagnostic stability is defined as the degree of diagnostic to maintain clinical characteristics over time, allowing its confirmation in the subsequent reviews[1]. Moreover, the diagnostic stability is sorted into prospective and retrospective[1]. The retrospective, is known as a proportion of patients whose diagnosis does not change since the beginning to the end of the study in a given past period[1]. While the prospective diagnostic stability when we collect data on the presence of the patient in a certain period[1].

The diagnostic stability is considered an indicator of sensitivity and validity of psychiatric diagnosis — when it is lower, it means unreliability of the diagnosis in the period under study[1]. In other words, the patients were treated based on symptoms and signs and not on specific diagnoses[1]. For several years, studies have drawn attention to diagnostic instability[3]. One of those reminders was when Cooper et al, reported in their study the overall stability of psychiatric diagnoses estimated about 54% in 1967[3], and another was in 1974, when Kendal et al, found 58% of diagnostic stability in psychiatric illness[3]. The interest in studying the diagnostic stability increased and news researches started to come out in this area, and some of them mainly directed to certain diseases such as the psychotic disturbances[3,5,9].

A prospective study used Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV) and reported that about 20.7% of psychotic disorders changed their initial diagnosis within 2 to

10 years of follow-up, only half of sample of psychotic disorders retained their diagnosis after 10 years[5]. A recent retrospective study used International Classification of Diseases 10th edition (ICD-10) as a diagnostic tool, and showed that diagnostic instability of patients with psychotic symptoms and signs ranges from 20.7% to 25% in the period of one year[9].

Furthermore, diagnostic stability is not constant, its value may vary according to the study time (short or long), the type of service under study (outpatient or inpatient)[10], diagnostic instrument used (ICD or DSM), the type of study (prospective or retrospective) and the type of psychotic disorder[11,12], in addition to the variables described later in this work. Although most studies showed that the diagnostic stability decreased over the follow-up time[11,13], in some variables there is no consensus. Two studies showed that diagnostic stability in hospitalized patients is greater than in outpatients units[1,10]. Other study reported the opposite result showing that the diagnostic stability in hospitalized patients was low than in outpatients[14]. Another variable in discussion is about the type of study, in which some studies showed retrospective diagnostic stability in hospitalized patients tended to be lower[14], but on the other hand other studies showed that there is no significant difference between prospective and retrospective diagnostic stability when comparing the inpatients and outpatients[14,15]. In addition to the diagnostic stability this result was confirmed by some studies later by reporting that the retrospective and prospective studies of psychotic disorder were found to be similar[16].

Schizophrenia (SCH) was reported by several studies as a more stable psychotic disorder[17]. This result was also advocated by a meta-analysis study of 42 articles that reported schizophrenia as the most stable disorder with 90%, followed by affective psychotic disorders with 84% and schizoaffective with 72%[12]. But there were also studies that reported major depressive disorder (MDD) as a more stable disturbance than other psychotic disorders with 84.4%,[1] Another study showed bipolar disorder as the most stable[1,13]. Several studies show how the diagnostic stability varies in some psychotic disorders. The prospective studies using DSM-IV showed that the diagnostic stability of SCH can range from 80% to 96.1%[12,13]. About a quarter or 21.9% of patients with schizophrenic disorder changed their diagnosis during the follow-up time[1,13]. Diagnostic stability of delusional disorders (DD) in a retrospective and prospective study using ICD-10 and DSM-IV ranged from 50% to 60%[16]. MDD was reported in the retrospective studies, using DSM-IV that its diagnostic stability ranged from 66.7% to 84.4%[1,10]. Two diagnostic stability studies of bipolar disorders showed different values, one presented diagnostic stability of 50.3% during 10 years of follow-up[2]. Another study found 89.3% in 2 years of follow-up[1]. Currently, in a retrospective study,

using DSM-IV, is estimated that 30% to 49.7% of patients with bipolar disorder change their diagnosis over the follow-up time[1,2]. While the patients with Other Non-organic Psychotic Disorders it was estimated that 30% of them maintained their diagnosis during the follow-up time[18].

The survival time to start the diagnostic changes is not uniform in all psychotic disorders, these changes can happen sooner or later after the initial diagnosis[19]. Although we do not know the factors that make some patients with psychotic disorders change their diagnosis early and others late, studies showed that this change in diagnosis can start from the first month of follow-up and is expected to take place throughout time of follow-up[5,19,20].

1.1.1. Trends of Diagnostic Change

The diagnostic change is a reality in clinical psychiatric practice and it is a challenge for the clinical psychiatric staff everyday[1,3,4]. About 75% of diagnostic changes occur from a diagnostic category to another, but some patients can change within the same category[3]. Most patients with psychotic disorder tend to develop into schizophrenia[16]. Among psychotic disorder, the bipolar disorder and manic disorders have lower risk, to develop into schizophrenia[16].

A 10-year prospective study showed that 8.9% of patients with major depression switched to bipolar disorder, and 16.4% progressed to schizophrenia or schizoaffective disorder[21]

A further four-year prospective study of patients with first psychotic episode used DSM-IV it is shown in table 1.

Table 1 - Trends of diagnostic changes[13]

The First Diagnosis	SCH	MDD	BD	DD	U. P	SCHFORD	SAD	D-IP
Schizophrenia (N-75)	96.1%	1.3%	1.3%	-	-	-	1.3%	-
Major Depressive Disorder (N-11)	18.2%	72.0%	9,8 %	-	-	-	-	-
Bipolar Disorder (N-20)	15.0%	-	80.0%	-	-	-	5.0%	-
Delusional Disorder (N-12)	41.7		8.3%	41.7%				8.3%
Unspecified Psychosis (N-3)	100%	-	-	-	-	-	-	-
Schizophreniform Disorder (N-15)	66.7%	-	-	-	-	33.7%	-	-
Drug-Induced Psychosis	54.5%	-	18.2%	9.1%	-	-	-	18.2%

This table shows that schizophrenia is the most stable diagnosis with 96.1%, the remainder 3.9% changed to other diagnoses. Followed by Major Depressive Disorder with 80.0%, and another 28%

of them changed to SCH and BD [13]. While drug-induced psychosis (D-IP) is more unstable with 18.2% followed by schizophreniform disorder (SCHFORD) with 33.7%[13]. All diagnoses of this table had diagnostic instability, whose tendencies were for more than one diagnosis. It is not clear what determines this tendency to be more for some diagnoses than others[13,16]. Moreover, Bromet's study on diagnostic changes showed that 32% of all patients who initially diagnosed non-schizophrenic changed to schizophrenia[5], and 10.7% of all patients changed to bipolar disorder during the follow-up time[5]. In addition, some studies argue that a part of the diagnostic instability is due to misdiagnosis from the first admissions[5,6].

1.2. Some Factors that Affect the Diagnostic Stability

When we talk about diagnostic stability we need to look at diagnostic changes[5]. The factors that we are going to describe below can take the diagnosis to two possibilities. It means that some factors make the diagnosis keep or change its features over time[5]. So that, when we are speaking of diagnostic changes, we must take into account aspects related to pathology, the variation of clinical information obtained over time in the same patient, source of information, aspects of the methodology or the instruments used to validate diagnosis[1,5]. Some variables already are known for their negative influence to promote the diagnostic change such as: to be black African, late diagnosis of psychosis, delusional symptoms, to be single, living alone, less contact with friends every week, negative symptoms in case of schizophrenia[16], and lower level of education and substance abuse[13].

1.2.1. Demographic Aspects

Several factors, such as gender (male), age (of first admission below 30 years for men and under 35 for women, lower age of onset of mental disorder), marital status (single), occupation (unemployment), low level of education, living alone, less contact with family and friends, were reported as being at high risk for change of diagnoses[16,22]. This high risk is, in fact, not generalized for all psychotic disorders[22]. So that, it was reported that in patients who suffered from acute and transient psychosis, men had in average very short time from the first admission to change their initial diagnoses[22], while women with the same disorder had in average a longer time[22]. Moreover, it was also verified in the same study that there was more diagnoses instability in men under 30 years and in women under 35 years[22].

1.2.2. Family History

Same studies showed the family history of mental disorder and somatic comorbidities as predictive of diagnostic instability, although there was not a statistically significant relationship[10,21].

1.2.3. Urban and Rural Residence

Mental disorders are ranking second as the most debilitating disease worldwide[23]. Several studies showed the difference of prevalence of mental disorders between urban and rural areas[23,24]. Rural area is vulnerable to mental health problems so that there is an increased risk of mental disorders and its prevalence is higher than in urban area[23,25].On the other hand, studies diverge about the prevalence of psychotic disorders between urban and rural areas[26,27]. Some studies argued that psychotic disturbances are more frequent in urban areas than rural areas, but the causes are still unclear[26]. Other studies did not find the rural area as a higher risk of mental health problems arguing that the high prevalence of mental disorders depends on geographic location and population density, the important and sudden changes in economic opportunities and family structure[24,28]. And there were some studies that showed that there was no significant difference in the prevalence of psychotic disturbances between urban and rural areas[27]. But all studies found the poor socioeconomic conditions, low academic level, disorganized suburban areas, malnutrition and traditional values as essential factors for the increasing number of psychosis cases[26,27]. Although it is known that these factors favor diagnostic instability, it is still not clear how urban and rural areas influence diagnostic stability[16,22].

1.2.4. Problems of Diagnoses Reliability, ICD and DSM

The lack of etiological knowledge on the classification of psychiatric diseases favors diagnostic instability over time[16]. Some studies argue that diagnostic stability depends fundamentally on three factors, namely the source of information, the quality of information collected and the system used to define the diagnostic criteria[3].

Nowadays psychiatry experts know that the classification systems of the diseases such as ICD and DSM are very flexible on the changing of editions, but the reliability of the diagnoses in psychiatry remains poor[3]. The study by Ray R. et al, reported the speed of change in diagnostic criteria as important factors for diagnostic instability[3]. On the other hand, a study that dealt with the transition of some mental disorders, from ICD-9 to ICD-10 and its impact on diagnostic stability, found that psychiatric disorders with a high level of stability in ICD-9 also had high diagnostic stability in ICD-

10, and was cited as an example schizophrenia and mental retardation[29]. The childhood disorder and personality disorder showed lowest diagnostic stability in both systems[29]. Thus the problem of reliability and validity of diagnoses in psychiatry still remains a challenge[29]. Neither system proved useful in solving problems of diagnostic instability[29]. Because the diagnostic stability remains unchanged in both diagnostic instruments[29].

In the comparison between the ICD-10 and the DSM-IV, a ten-year study found similarity between retrospective and prospective diagnostic stability of both diagnostic tools[16]. There were also similarities of the variables that led the diagnostic changes to schizophrenia, as well as to other mental disorders in general[16].

1.2.5. Failure of Information Provided in the First Interview

Information collected at the first interview or first admission is one of the key points for diagnostic instability[3]. But diagnostic shift over time can indicate a disease evolution as well as the presence of new information for another disease and can lead to unreliable diagnostic measurements[6]**.** That is why for the first interview in psychiatry it is recommended that the interview time should be longer and may reach 15 minutes to an hour or a little longer[30]. Although most studies argue that the first interview of psychotic patients should be brief, as this prevents the patient to feel stressed[31]. Bearing in mind that the goal of clinical staff in the first interview is to use the available knowledge and skills to alleviate the suffering of the patient, the validation of psychiatric diagnosis is divided into three phases[30]: Phase I and Phase II allows the clinician to seek all symptoms and clinical signs to use for deal treatment to reduce the suffering of the patient[30]. Phase III the clinicians collect more evidence over time on the initial diagnosis[30]. The course of the disease and the response to treatment may give new information that confirms or indicates the change in the initial diagnosis[30]. Other investigators report that there were two phases to make diagnosis[31]: The first and second interview[31]. The second interview is a very important step for the diagnostic process in psychiatry especially for psychotic patients because the clinical staff expects that the patient will correct the information errors from the first interview[31].

1.2.6. The Changing in Clinical Manifestations and Treatment

The symptoms and signs form the basis of the diagnostic process in psychiatry[5]. The changes in clinical manifestations and treatment are considered by some studies as important determinants of diagnostic instability[5].

The reduction of depressive symptoms, an increase in negative and positive psychotic symptoms and the initiation of antipsychotic medication were more related with the change of diagnosis to schizophrenia[5].The increase of the depressive symptoms, the decrease the negative and positive psychotic symptoms were more associated with the change of diagnosis to psychotic mood disorders[5].The restitution of mood stabilizers promoted the change of diagnosis to bipolar disorder while the discontinuation of antidepressants and mood stabilizers was linked to a change in diagnosis of MDD[5].Although the studies do not show the trajectory of the diagnosis changes in psychiatric patients, it is already visible in the clinical practice that the electroconvulsive therapy has impact on the symptoms changes and in the course of the disease[6].

1.2.7. Readmissions

The rate of readmission is considered as an indicator of the quality of hospital care and the key to control the costs of health systems[32,33]. But in psychiatry, there are still problems about the readmission definition[32,34]. There is no consensus about readmission definition[34].Thus, there are several definitions of readmission, such as readmission within 30 days[33,35], readmission in the period of 6 months, readmission within 90 days, readmission within 3 years, three or more admissions within 30 months, three or more readmissions within 2.5 years[34].This leads to serious difficulties in standardizing the readmission rate[34]. So the readmission rate ranges from 14% to 53%.[34] On the other hand, it is estimated that one-third of patients with psychiatric disorders are readmitted within a year after the first admission[34].

A study on the readmission of patients with psychiatric disorders using DSM-IV found BD followed up by MD, SCH and DD as the most diagnostic psychiatric with psychotic disorder that had more readmission than other psychiatric disorders[6,34]. Other studies have shown that neurotic disorders have more contacts with clinical staff followed by personality disorder, schizophrenia and psychoses by substance abuse[11]. Moreover, several factors such as being male, single, unemployed, retired, old age, young age, the financing of the poor health system, non-adherence to treatment, inadequate follow up after discharge, the unfavorable patient's individual environment, the short hospitalization time, the involuntary first admission, alcohol and drug abuse favor the readmission[11,32,34].

Although some studies found that there is no relation between the number of readmissions and the diagnostic changes[5,34], male, single, unemployed, and inadequate treatment are mentioned as risk factors of diagnostic changes[16,22]. Also it is mentioned that the first admission patients with

psychiatric disorder are at risk of changing the diagnosis due to misclassification during the early stages of the illness course[5].

1.2.8. Type of Mental Disorder

The studies show that there are psychotic disorders that have a higher risk of diagnostic changes such as delusional disorder, acute and transient psychosis, schizoaffective disorder, major depression with psychosis, unspecified psychosis and brief psychotic disorder[16]. The studies do not show some concrete factors that lead for the psychotic disorders to have higher stability than others, for example, a prospective study for a period of 5 years using ICD-9 showed that schizophrenia stability was 75%, the manic mood disorder was 77.5% and 45% for depressive disorder[3]. Other retrospective studies using ICD-10 showed that psychotic disorders such as major depression and bipolar disorder had diagnostic stability approximately 69.4% and schizoaffective disorder had 83.4% of stability[6].

On the other hand, other studies showed the stability of schizophrenia ranged from 85% to 100%[13,16], major depressive disorder may range from 45% to 55% [16], bipolar disorder can range from 49.7% to 100%[6]. These variations in diagnostic stability not only depend on the factors we are describing in this session, but also on the type of study, whether it is retrospective or prospective, and patient follow-up duration[16].

1.2.9. Duration of Hospital Stay

There is no consensus on the minimum and maximum of hospital length of stays (LOS)[36]. The time of LOS depends on the level of socio-economic development of each country. In the developed countries, the average, of LOS range from 10.5 to 43 days[36]. A 2-year retrospective study found that mean of hospital length stays was 21.4 days[6]. In South Africa, a study showed that the mean of LOS of psychiatric hospital was 219 days and of the general hospital was 11 days[36]. Some studies argue that the shorter psychiatric hospital stays are therapeutically beneficial and saves the costs of psychiatric care[36,37]. Other studies argue that the shorter psychiatric hospital stays may lead to poor treatment results and increase readmission rates[36,37]. On the other hand, some studies reported that the longer LOS may result by inadequate mental health care in hospitals[36]. The shorter of first length hospital stays, for example, when is less than 7 days, makes that the next readmission occurs in a short time, and may be within 6 months, and when the length first admission is longer than 14 days, re-admission occurs within 1-2 years[6,36]. Moreover some factors

was reported as predictors of the longer LOS, such as severe mental disorders, schizophrenia, non-affective psychoses, associated non-psychiatric illness, substance use, involuntary admission and previous readmissions[36,37]. Socio-demographic factors such as male, older age, single or not married, low level of educational qualification and rural residence, increased hospital LOS[36,37]. There is no clear information on the relationship between the duration of the first hospitalization and the diagnostic stability although some studies argue that the longer length of hospital stays is the higher risk exists for diagnostic instability[38]. As the case of acute transient psychotic disorder that has been proven that hospitalization over 2 weeks tends to shift to schizophrenia[22].

1.2.10. Number of Medical Personnel Assistant

The patients with the highest number of medical contacts or hospitalizations, have the largest number of attending clinicians and have a greater variation of diagnosis than patients with fewer medical assistants[11]. The shortcomings in the diagnostic process of psychiatry sometimes make the treatment of patients to be less effective and consequently an increase the frequency of re-hospitalization or psychiatric consultations[11].

1.2.11. Comorbidity

The definition of comorbidity is very complex[39,40]. The term comorbidity was firstly used by Feinstein in 1970 to designate cases in which a "distinct additional clinical entity" that occurs during the course of the patient's initial illness[39]. The patients with mental disorders have an increased risk of morbidity and mortality from physical illness[39,40]. Several studies reported that about 33% to 68% of patients with mental disorders have comorbid physical illness[39,40]. The main physical illness that was found in patients with mental disorders are: diabetes mellitus, septicemia, liver disease, accidents, respiratory diseases, human immunodeficiency virus (HIV), myocardial infarction, and hypertension to name a few[39]. Although comorbidity is known in about half of the cases[39], 84.4%[40] of comorbidities of physical illness are not recognized by clinicians[39,40]. Morbidity creates problems of diagnosis, treatment, and complicates the course of mental disorders as well as physical illnesses[40], or can lead to the worst of existing symptoms[39]. The presence of physical illnesses in patients with psychiatric disorder besides increasing the rate of readmission[39], it also is strongly associated with diagnostic instability[10]

1.2.12. Substances Use

Patients with mental disorders have a higher rate of substance use than patients with other physical illness[41]. Moreover, it is estimated from 32% to 56% of the patients with psychiatric disorder are substance users[41]. These studies showed that substance use is associated with poor adherence to treatment, increased relapse, and readmission rates[41,42], and it was associated with psychotic symptoms[42]. Some studies reported that a third to more than half of the hospital admissions of psychotic patients was due to substance use[42].

Substances use is not only related to the inadequate treatment for patients with mental disorder, but it also contributes to diagnosis instability[6]. But some studies found that withdrawal of substances or drug from patients with drug-induced psychosis improves the diagnostic stability[16].

1.2.13. Psychotic Disorders and the Classification Changes

Initially, mental illness belonged to the group of diseases of the nervous system called neurosis[43]. In the mid-19th century the term psychosis was introduced to separate psychiatric disorders from neurological disorders[43]. The DSM-II published in 1968[43], based on ICD-8, divided mental illness into two classes[43]. The first class was of the psychotic disorders and second class was composed by neurotic disorders, personality disorders and other non-psychotic mental disorders[43].The progressive changes of diagnostic tools have important implications on the gradual changes of diagnostic criteria for psychoses[43]. While in the past the term psychosis was used to designate psychiatric disorders, currently it is used to describe the psychophysiopathological symptoms present in mental disorders and not as a pathological entity[43]. Thus, psychosis is defined as a pathological state of mind characterized by "loss of contact with reality"[44]. In other words, is a clinical syndrome characterized by hallucinations, delusions and thought disorder[44].

Hallucinations is false sensory perception not related to real external stimuli. It can be auditory, visual, olfactory and gustatory[31]. Delusions is defined as false belief characterized by a triad of falsity, convection and incorrigibility[45]. Thought disorder is characterized by disturbance of speech, of communication or content of thought[31].

Psychosis etiology is not known yet, and the current research has a consensus that psychosis should be considered as a sign of psychiatric disturbance because it is a sign that can appear in any mental illness [44]. The studies currently show that the psychosis is associated with genetic and environmental factors[44], and was also reported that there is no gender differences in first episode of psychosis[46]. Moreover, dopamine is considered the most important neurotransmitter which can

be found as a consequence of the events cascade in the etiopathogenesis of psychosis, characterized by increased dopaminergic activity[44].

1.3. The Diagnostic Tools and Classifications of Some Mental Illnesses

The contradictions of different diagnostic criteria to designate the same disease in different schools of psychiatry, led the World Health Organization (WHO) and the American Psychiatric Association (APA) to create the instruments of standardization of diagnosis terms[43]. Thus the WHO published the International Classification of Disease (ICD) and the APA published Diagnostic and Statistical Manual of Mental Disorders (DSM)[43]. In this our work, we are going to talk more about ICD-9, published in 1977[43], because it was a diagnostic system used for a longer period time than the previous editions[43]. And it was used by many countries of the world[47]. Moreover, even though the ICD-10 publication in 1992, some countries such as the United States of America, Italy continue to use until today the International Classification of diseases, 9th Revision, Clinical Modification (ICD-9-CM)[47].

In ICD-9, SCH, MDD, BD and paranoid state disorders are classified as psychotic disturbances[48]. The ICD-9, based on the DSM-II[43] , divides the psychotic disorders into two groups: organic psychoses and nonorganic psychoses or other psychoses[48]. The group of other psychoses is composed by SCH encoded by 295, Episodic Mood Disorders encoded by 296 in which BD and MDD are included[48], DD encoded by 297 contains the paranoid[48], Other nonorganic Psychoses (298) and Pervasive Developmental Disorders (299)[48].

The International Classification of Diseases 10th edition (ICD-10) was published in 1992[43] to replace ICD-9, although it continues to use the term neurotic to describe the largest group of mental disorders coded from F40 to F48, while the definition of the term psychosis is lost[43,49]. The group of mental disorders that ICD-9 described as psychotic diseases, we can find them in ICD-10 encoded in the following classification: from F.20 to F.29, F.30, F.31, F.32.1, and F.32.2[44,49]. The mental illnesses coded from F20 to F29 are called Schizophrenia, Schizotypal and Delusional Disorders[49]. In this group the schizophrenia disorder is encoded by F20[49], Delusional disorder (F22 and F23)[49], Schizoaffective Disorder (F25)[49], Other nonorganic psychotic disorders (F28)[49]. The paranoid state from ICD-9 corresponds to paranoid schizophrenia (F20.0) in ICD-10[48,49]. The Manic (F30), Bipolar (F31) and depressive (F32) disorders in the ICD-10 classification have different codes although they are part of the group of mental disorders coded from F30 to F39 that are called Mood Disorders[49].

The first Diagnostic and Statistical Manual of Mental Disorders(DSM) was published in 1952[43,50], and was followed by new editions. In this work, we are interested in Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV), dated 1994[51], and published in 1998[50]

The Classification of mental illnesses that ICD-9 has called psychotic disorders has some similarities[43,51,52] that make easy to identify these diseases in DSM-IV and DSM-5[43]. This classification has been adapted from the Diagnostic and Statistical Manual of Mental Disorders 2nd edition (DSM-II) published in 1968[43]. Moreover, this group of mental illnesses are clearly separated[51,52]. Thus, in DSM-IV, schizophrenia, delusional, schizoaffective disorder are inserted into the subgroup called Schizophrenia and Other Psychotic Disorders[51]. MDD, bipolar I and bipolar II disorders are in the Mood Disorders[51].

The Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) was published in 2013[50,52]. SCH, DD and SAD are contained in the group of diseases that DSM-5 classifies as Schizophrenia Spectrum and Others Psychotic Disorders[52].

The term mood disorder that linked bipolar and depressive disorders almost disappears in DSM-5. This separation makes bipolar and depressive disorder to be separately treated in DSM-5[52].

1.4. Summary of Some Psychotic Disorders

1.4.1. Schizophrenic Disorder

The concept of schizophrenia remains unstable[53]. Moreover, SCH concept so far is based on the symptoms but is not through etiology[53]. SCH initially was called Dementia Praecox a concept that comes from the psychosis disorder[53]. Systematic study and classifications led to the separation of schizophrenia from Dementia, whose main characteristic of schizophrenia was psychosis[54]. It is now well known that psychosis is not typical of schizophrenia because the psychosis can appear in any mental illness as well as induced by substance use[54].

Schizophrenia is a chronic and debilitating mental illness characterized by severe functional and social weakness[55]. Today is the general consensus of all diagnostic instruments and researchers that a schizophrenic disease must have two or more symptoms, most of the time during a month or more period[49,52]. These symptoms are hallucinations, delusion, disorganized thinking, grossly disorganized or Catatonic behavior as well as negative symptoms such as diminished emotional expression or marked apathy and paucity of speech[49,52].

Thus in the DSM-5 classification the paranoid disorder was changed to delusional disorder[51,52].While the Simple schizophrenia is embedded in Personality Disorder in the DSM-5 even with much controversy over this position[52]

Many studies support that the etiology of schizophrenia is associated with genetic susceptibility and environmental factors[56]. It is estimated that is affects about 1% of the population worldwide[57]. The schizophrenia disorder is more common in the men than in the women[58]. It can start at any age, in the most cases between 15 and 54 years of age[58]. In men schizophrenia starts very early between 18-25 years of age while in women it has late onset between 25-35 years of age[58].

The schizophrenia classification is not uniform[43], it varies according to the WHO or APA diagnostic instrument and the launch of new editions[43,49,52]. The DSM-IV subtypes of schizophrenia were eliminated in DSM-V for limited diagnostic stability[52]. The Schizophreniform Disorder considered in ICD-9 as a type of schizophrenia disorder, in ICD-10 is not defined as a disorder and is inserted in Other Schizophrenia Disorder that is coded by F20.8[48,49]. The schizoaffective disorder has a F25 code and is treated independently, but it is part of the mental illnesses group coded from F20 to F29 called Schizophrenia, schizotypal and Delusional Disorders[49].

In DSM-5 classification, the schizoaffective and schizophreniform disorders are treated separately from schizophrenia although they are part of the Schizophrenia Spectrum and Other Psychotic Disorders group[51,52].

1.4.2. Bipolar Disorder

BD is a severe, chronic and disabling mental disease with negative impacts for the own patient, society and the economy[59]**.** Some researchers believe that the bipolar disorder is a more disabling disease than other diseases such as cancer, epilepsy, diabetes mellitus and is responsible for shortening the life span for starting very early in the lifetime[60]**.** On the other hand, the WHO argues that bipolar disorder is the sixth cause debilitating lifelong condition in the age group of 14 to 44 years of age[59]**.** Several studies report BD as mental disorder that affects about 1% to 2% of the population worldwide[60,61]. It can start from infancy to adulthood[61]. On average the BD begins at 18 years of age[61]. It often affects more men than women with a prevalence ratio of 1.1: 1[52]. The bipolar I disorder is more common in men and bipolar II disorder is more common in women[31,52,60]. The classification of bipolar disorder is not uniform in all diagnostic systems as we seen in annex 4 and 5[48,49,52].

The bipolar disorder is part of a large group on ICD-9 classification, called non-organic psychoses[48]. And within this group, the bipolar disorder is included in the Group of mood disturbance encoded by 296[48]. In ICD-10 although BD is part of mood disorders, it is separated from the psychoses group and other disturbances of mood and is encoded by F31[49]. Some studies argue that there is no difference in classification of bipolar disorder between DSM-IV and DSM-V[62]. Both describe three main types of bipolar disorder: bipolar I disorder, bipolar II disorder and cyclothymia[51,52,62]. The main features of BD is the change of mood in most cases of mania to depression[49,52,63].

1.4.3. Major Depression Disorder

The depression is the most common mental illness with daily impacts in the life of patients[64], and it is the main debilitating condition of life worldwide[65].

The major depressive disorder is characterized by depressed mood for at least two weeks with five or more of the following symptoms: depressed mood, insomnia, loss of pleasure and interest, sadness, feeling of emptiness and unhappiness, thoughts of death, suicide attempt, weight loss, fatigue, loss of energy; in children and adolescents can be associated with irritability[31,49,52].

The major depressive disorder affects approximately 16% of the population worldwide[64]. The prevalence of major depression in adolescence is estimated to reach up to 20% before the age of 18 years[66]. Moreover, major Depressive disorder is twice higher in women than in men[64]. This mental disorder may be presented by single or recurrent episodes[49].

The ICD-9 placed in the same group with bipolar disorder and is encoded by 296.2[48], while the ICD-10 keeps on mood disorder group and separates from bipolar disorder so that it is inserted into depressive disorders and is coded by F32 for single episode and F33 for recurrent episodes[49]. The classification of the MDD is similar in ICD-9 and DSM-IV[48,51]. As in ICD-10, DSM-5 separates the major depression from bipolar disorder[52].

1.4.4. Delusional Disorders

DD is defined as fixed and false beliefs that a person with mental disorder presents and are of difficult access to change[67]. The beliefs of this mental disorder involve various themes such as persecutory, religious, grandiosity, referential, erotomanic and nihilistic delusional[49,52] . The DD is more common in women than men[68].

In ICD-9 the delusional disorder belongs to the large group of non-organic psychotics within which it is coded by 297[48]. In ICD-10 DD is encoded by 22.0 is part of the group of persistent delusional disorders[49].

DSM-IV places DD in a large group of mental disorders called Schizophrenia and Other Psychotic Disorders whose main characteristic was to present non-bizarre delusional for at least one month without being associated with other schizophrenic symptoms such as hallucinations[51]. Although the DSM-5 removed the term bizarre, the definition and classification of DD remained very close to DSM-IV[52].

1.5. Diagnosis in Psychiatry

Diagnosis is a process of disease identification a through its symptoms and signs[29]. Although signs and symptoms lead to diagnosis, they are not sufficient or safe to define as reliable diagnosis[29]. So that the laboratory tests or biomarkers are indispensable in the search of reliable diagnosis[29].

Diagnosis is the key point in medical practice[1]. The diagnostic validation so far remains a major challenge in clinical practice in psychiatry[14].

It is different from other medical areas in which the diagnosis is validated by auxiliary means of diagnostic, that's laboratory confirmation. The diagnostic process in psychiatry is (I) based on clinical signs and symptoms[2,7,20]; (II) there are no pathognomonic clinical manifestations or biological markers to confirm the diagnosis [7,14]; (III) it is based on the opinion of each experts[14]. Moreover, the psychiatric disorders have a chronic evolution[1].

This lack of specific manifestations and biological markers for each diagnostic add chronic course of mental disorders create conditions that make the diagnosis not being the same over time, even without therapeutic additional action[1].

The difficulty to define about reliable diagnosis in psychiatry, makes the clinical staff to consider the diagnosis as provisional, requiring diagnosis evolution over time for validation, so that some researchers recommend 6 months to validate the diagnosis[31].

As expected, the diagnosis process of psychiatric disorders in children is more complicated than in adults[11]. A study of a group of children and adolescents under 19 years of age with manic and bipolar disorder showed that 59.3% of them was necessary 1 or 2.5 years to make definitive diagnosis [11]. In the first contact with psychiatric services the diagnosis rate of other psychotic categories was very low[11], and found the following rate: depressive disorder 21.4%, acute and

transient psychotic disorder and other nonorganic psychoses 19.2%, and schizophrenia disorder below 10%[11].

1.6. Impact of Diagnostic Instability

The studies showed that diagnostic stability is beneficial to patients and their caregivers, provides important guidance for clinical psychiatric decisions, and is the important key to produce new treatment guidelines[12]. Thus, the diagnostic instability is an important challenge in the psychiatry area[12,13]. Moreover, regardless of age, mental disorders have negative influences on the development of personality, intellectuality, school achievement and social competences[11].

The diagnostic shifts that occur in psychiatry not only affects above mentioned areas but also they have an impact on the planning of treatments, clinical interventions and psychosocial support[13]. In some situations, the impact of diagnose changes may be worse, induced iatrogenic effects as a result of inadequate management, compromising the patient's prognosis and leading to elevated administrative expenses[5,10].

Therefore, scientific research, treatment and appropriate follow-up of chronic patients' mental disorder requires a concise diagnosis throughout the course of the disease. We believe that identification of diagnostic stability rate and the main predictor factors of diagnostic instability, will help the medical staff to identify high-risk patients to diagnostic instability and make ideal conduits. We hope that the forthcoming investigations seek possible strategies to reduce the impact of these factors improving the rate of diagnostic stability.

2. Research Objectives

2.1. General Objectives

To determine the diagnostic stability and identify factors predicting diagnostic instability of patients who were admitted with psychotic disorder in Casa de Saúde de Bom Jesus and Casa de Saúde de S. João de Deus hospitals in Braga, in a 10-year period

2.2. Specific Objectives

- To determine the diagnostic stability and the diagnostic instability of psychotic disorder of the 10-year follow-up period.
- To determine the relationship between diagnostic stability and diagnostic instability with sociodemographic, clinical and substance use variables:
- To identify variables predicting diagnostic instability for psychotic disorder patients.

3. Material and Methods

3.1. Type of Study and Target Population

A retrospective, longitudinal, descriptive and quantitative study was made using medical records of patients who had the first admission for psychotic symptoms and signs from 1996 to 2005 period and completed 10 years of follow-up from CSBJ and CSSJD in Braga district.

3.2. Diagnoses

We used ICD-9 to identify and collect the diagnoses of the folders of the clinical records. Then the diagnoses were updated for DSM-5 and ICD-10. The ICD-9, ICD-10 and DSM-5 were used to verify whether the diagnoses changed during the 10- year period. For this study, we used DSM-5 as the main tool of diagnoses. In all admissions, we used the hospital discharge diagnoses for the present study, considering that discharge diagnoses were already investigated and discussed by the experts.

3.3. Diagnostic Changes

In this work, diagnostic change was considered any kind of change both within the same category or from a category of disease to another category. The patients with major depressive disorder and bipolar disorder who had delusion and hallucinations at the first admission were considered as patients with psychotic disturbance. Although DSM-5 describes these two pathologies separately, the changes from bipolar I disorder to bipolar II disorder or vice versa were not considered as diagnostic changes, because these changes are expected by psychiatric doctors from day-to-day of clinical practice. The changes from major depressive disorder to dysthymia were considered as normal evolution after two years of major depressive disorder[52]. The terms instability were used to refer to change in diagnosis.

3.4. Inclusion Criteria

- Patients with first admission from 1996 to 2005 period.
- Patients admitted for the first time as psychotic disorder or diagnosis encoded from 295 to 298 in ICD-9.
- Patients admitted in the first admission having psychotic symptoms and signs.
- Patients who completed 10 years of follow-up.
- Patients who have hospital admissions in CSBJ and CSSJD of Braga district.
- At least one readmission within the 10-year after the first admission.
- Clear registration of diagnoses.
- Clinical processes with appropriately recorded and understandable clinical and demographic data

3.5. Exclusion Criteria

- Patients diagnosed the drug addiction and dementia were the first excluded.
- Other diagnoses of organic psychoses
- Admissions outside of period from 1996 to 2005.
- Patients with only one admission
- Patients who did not complete 10 years of follow-up
- Incorrect and doubtful clinical records

3.6. Procedures

We firstly identified the variables to be studied and organized into 3 groups in a data collection questionnaire. These groups of variables were sociodemographic, clinical and related to the substances use variables.

The second step was the identification of all first admissions regardless of pathology from the study period. In CSBJ we used electronic database and CSSJD was manually collected from clinical file. Then we identified all patients whose diagnoses were coded from 295 to 298 using ICD-9, or which was part of psychotic disorder. We verified and collected the necessary data for study from the folders of patients' clinical records one by one.

We determined the diagnostic stability and diagnostic instability. Than we determined the relationship of diagnostic stability and instability with:

- Sociodemographic variables (age, sex, marital status, household, education level, occupation and residential location)
- Clinical variables (type of hospitalization of the first admission, number of readmission, length of stays of first admission, comorbidity, family history of mental disorder, number of assistant doctors, information source in the first interview)
- And finally, the substances use variables (antipsychotics, antidepressants, mood stabilizers, tobacco, alcohol, illicit drugs).

3.7. Statistical Analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS), Version 24. The sample was made Kolmogorov-Sminorv and Shapiro-Wilk test to verify the normality of the sample distribution. The subjects with stable diagnoses were compared with those with unstable diagnoses in terms of sociodemographic, clinical and substance use variables. Moreover, those subjects were divided into

smaller groups according to their initial diagnosis from first admission. Chi-square test was used to determine the diagnostic stability and to analyze all categorical variables, whereas Mann-Whitney test was used to analyze continuous variables namely age, length of stays, number of admissions and number of assistant doctors.

Survival analysis of the time of follow-up before the diagnosis changes was analyzed by Kaplan-Meier and Cox regression method. Binary logistic regression was conducted to identify any predictor variable of diagnostic instability. $P<0.5$ was the level of statistical significance set for this study.

The study was approved by the Subcommittee of Ethics for Life and Health Sciences, Braga Hospital and Ethics Committee of Minho University

4. Results

A total of 1324 patients were identified under psychotic disorder for first time in both hospitals from the 1996 to 2005 period. Among these, only 273 patients fulfilled the criteria for this study. Most patients with criteria 215 (78.8%) were female admitted to the CSBJ and 58 (21.2%) were male admitted to CSSJD, according to figure 1, whose ratio of male-to- female was 1: 3.7.

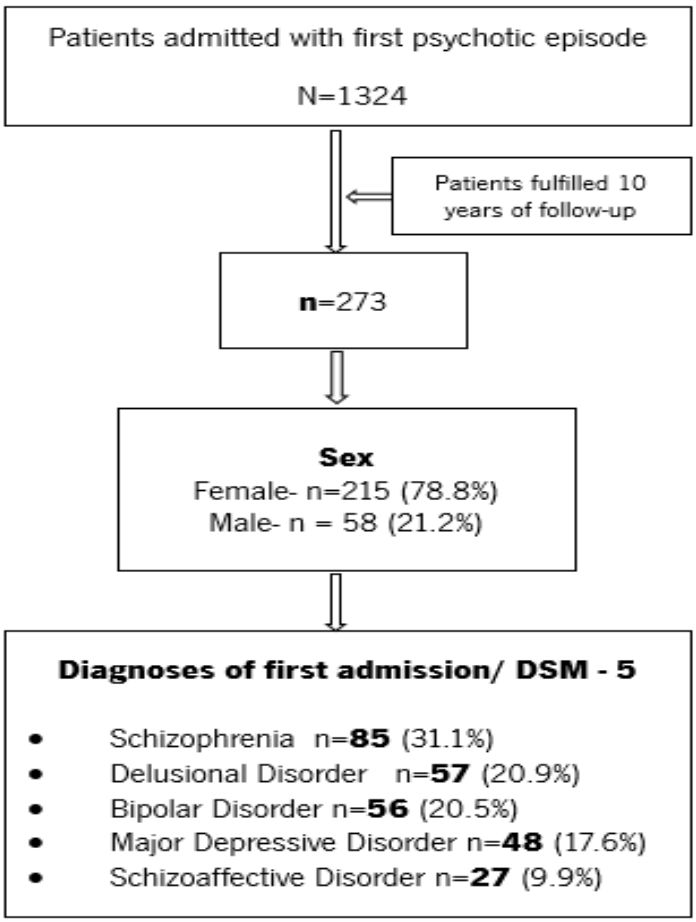

Figure 1 – Number of patients under psychotic disorder and sample size

The most frequent psychotic disorder was SCH (n=85; 31.1%) and DD 57 (20.9%), (Figure 1).

This sample consisted mostly of young adults with mean age of 37.53 (SD=12.72), table 3, 134 were single (49.1%) but living with more than one person, with primary level (n=145; 45.8%) unemployed (n=124; 45.5%) and residing in the urban area (n=167; 61.2%) (Table 2).

Table 2 - Demographic variables in the first admission

Variable	n	%
Marital Status		
Married	104	38,1
Single	134	49,1
Divorced	23	8,4
Widow(er)	12	4,4
Household		
Alone	27	9,9
Two or more	236	86,4
Education		
Primary Education	125	45,8
Basic Education	74	27,1
Secondary Education	44	16,1
High School	24	8,8
Occupation		
Employee	69	25,3
Retired	79	28,9
Unemployed	124	45,4
Residence		
Rural	99	36,3
Urban	167	61,2

During the 10-year follow-up the patients were admitted on average 3 times (mean= 3.23; SD= 1.76), 233 patients had voluntary admissions and each patient was assisted by a psychiatrist (mean= 1.4; SD=0.71) and changed diagnosis on average once (mean=1.21; SD=0.56) and the hospital length of stays mean was 36.87 (SD=58.76), (Table 3 and 4).

Table 3 - The means of clinical variables and age from first admission

Variable	N	Min	Max	Mean	SD	Median
Age in the first admission	273	18	79	37,53	12,719	36,28
Number of Admissions (10 years)	273	2,0	11,0	3,231	1,7641	3,23
Number of Doctor (10 years)	272	1,0	5,0	1,434	,7105	1,00
Length of Stays of First Admission	273	1	745	36,87	58,756	25,00
Number of Changes (10 years)	85	1,00	4,00	1,2118	,55836	1,00

Although without significant differences schizoaffective disorders had on average more years of age than other psychotic disorders. Schizoaffective disorder had on average more number of admissions than other psychotic disorders. While the delusional disorder took on average more length of stays in the hospital than other diseases (Table 4).

Table 4 - The variable means of each disorder

Variables	SCH (n=85)	DD (n=57)	BD (n=56)	MDD (n=48)	SAD (n=27)
Age	32.7±11.7	39.8±13.3	39.6±11.5	39.4±13.5	40.6±12.1
N° of Admissions	3.5±2.0	2.8±1.4	3.1±1.4	2.9±1.4	4.0±2.2
N° of Doctor	1.6±0.8	1.2±0.5	1.3±0.7	1.5±0.5	1.6±0.9
N° of Changes	1.0±0.0	.1.3±0.6	1.2±0.6	1.1±0.3	1.4±0.9
LOS First Admission	45.3±45.4	50.9±112.4	26.3±13.5	24.9±13.2	24,0±12,6
Minimum of survival time	2.0	4.0	2.0	2.0	6.0

Of the 273 patients, 240 (87.9%) provided their own clinical history to the psychiatrist, refusing a family history of mental illness (n=154; 56%) and comorbidities (n=193; 70.7%), (Table 5).

Table 5 - Clinical variables at first admission

Variable	n	%
Type of admission		
Voluntary	233	85,3
Compulsive	40	14,7
Source of Clinical Information		
Patient	240	87,9
Caregiver	9	3,3
Both	14	5,1
Family History of Mental Disorder		
No	154	56,4
Yes	114	41,8
Comorbidity		
No	193	70,7
Yes	80	29,3

At discharge from the first admission 253 patients (92.7%) were prescribed antipsychotic, 90 (33.0%) received antidepressants and 73 (26.7) only was administered the mood stabilizers. A small proportion of patients 83 (30.4%) were smokers and 29 (10.6%) were drinkers, while 18 were illicit drugs users, (Table 6).

Table 6 - Substance use variables at first admission

Variable	n	%
Antipsychotics		
No	20	7,3
Yes	253	92,7
Antidepressant		
No	183	67,0
Yes	90	33,0
Mood Stabilizers		
No	199	72,9
Yes	73	26,7
Tobacco		
No	176	64,5
Yes	83	30,4
Alcohol		
No	230	84,2
Yes	29	10,6
Illicit drugs		
No	241	88,3
Yes	18	6,6

The 10-year follow-up and further updating the diagnoses into the DSM-5, observed that 71 (26.0%) changed their diagnoses and the most of them 202 (74.0%) unchanged their diagnoses. The mean time ellapsed to change the diagnoses was 67 months (n=80; mean=67.0; SD=36.4). The Number of patients that changed their diagnoses was similar between ICD-9 and ICD-10 (n=83; 30.4%), (Table 7).

Table 7 - Diagnostic Stability using three Diagnostic Tools

	ICD-9		ICD-10		DSM-5	
	Stable	**Instable**	**Stable**	**Instable**	**Stable**	**Instable**
N	190	83	190	83	202	71
%	69,6	30,4	69,6	30,4	74.0	26,0
χ^2	62.35		59.40		19.25	
***p*-value**	<0.001		<0.001		<0.001	

The SCH was the most stable diagnosis, of the 85 patients 74 (87.1%) maintained their initial diagnosis, followed by BD in which from the 56 patients 43 (76.8%) had the same diagnosis on subsequent admissions. The DD was the third stable psychotic disorder from the 57 patients, 42 (73.7%) had the same diagnosis throughout the study period. The schizoaffective disorder (SAD) was the most instable diagnostic, where almost half of patients, 13 (48.1), changed to other diagnoses, (Table 8).

Table 8 - Diagnostic stability of each diagnosis (according to DSM-5)

	SCH	DD	BD	MDD	SAD
Stable	74	42	43	29	14
%	87.1	73.7	76.8	60.4	51.9
Instable	11	15	13	19	13
%	12.9	26,3	23.2	39,6	48.1

Table 9 shows that all psychotic disorders had diagnostic instability. From the total of 71 patients with diagnostic instability, 22 (39.9%) changed to SAD, 18 (25.4%)- changed to SCH, 7 (9.9%) switched to delusional disorder and same number changed to bipolar disorder, finally 16 (22.5%) switched to other non-psychotic diagnoses.

Table 9 - The final diagnosis after the first admission

Diagnosis of First Admission (DSM-5)	n	%	Diagnosis at the end of 10 years (DSM-5)	n(news)	%
Schizophrenia	85	31.1	Schizophrenia	74(18)	33.7
Delusional Disorder	57	20.9	Delusional Disorder	41 (7)	17.6
Bipolar Disorder	56	20.5	Bipolar Disorder	43 (7)	18.3
Major Depressive Disorder	48	17.6	Major Depressive Disorder	28 (3)	11.4
Schizoaffective Disorder	27	9.9	Schizoaffective Disorder	14(22)	13.2
			Other diagnosis	16	5.8
Total	273	100		273	100

As we see in table 10, the destination of change was unpredictable. Of the 71 patients who changed the diagnosis 55 (77.5%) changed into psychotic disturbances, 16 (22.5%) changed to other psychiatric and neurological disorder. The main destination for the diagnostic change of SCH and BD was SAD with 63.6% and 53.8% respectively of patients with diagnostic instability. While SAD and DD had as main target the SCH with 46.2% and 33.3% respectively of instable patients.

Table 10 - Trends of diagnoses changes

First Admission \ Last Admission	SCH	DD	BD	MDD	SAD	Dementia	Dysthymia	Paranoid Personality Disorder	Other Personality Disorder	Alcohol Use Disorder	Adjustment Disorder	Unspecified Depressive Disorder	Intellectual Disability	Epilepsy
SCH (n=85)	74	0	2	1	7	0	0	0	0	0	0	0	1	0
DD (n=57)	5	41	0	0	3	1	0	2	0	1	0	3	0	1
BD (n=56)	3	1	43	0	7	1	2	0	0	1	0	0	0	0
MDD (n=48)	4	3	5	28	5	1	0	0	0	0	0	0	0	0
SAD (n=27)	6	3	0	2	14	0	0	0	1	0	1	0	0	0
Total	**92**	**57**	**56**	**48**	**27**	**3**	**2**	**2**	**1**	**2**	**1**	**3**	**1**	**1**

According to the survival curve (Figure 2), diagnosis changes may occur over the entire follow-up period. This diagnostic instability can begin within the first two months of follow-up.

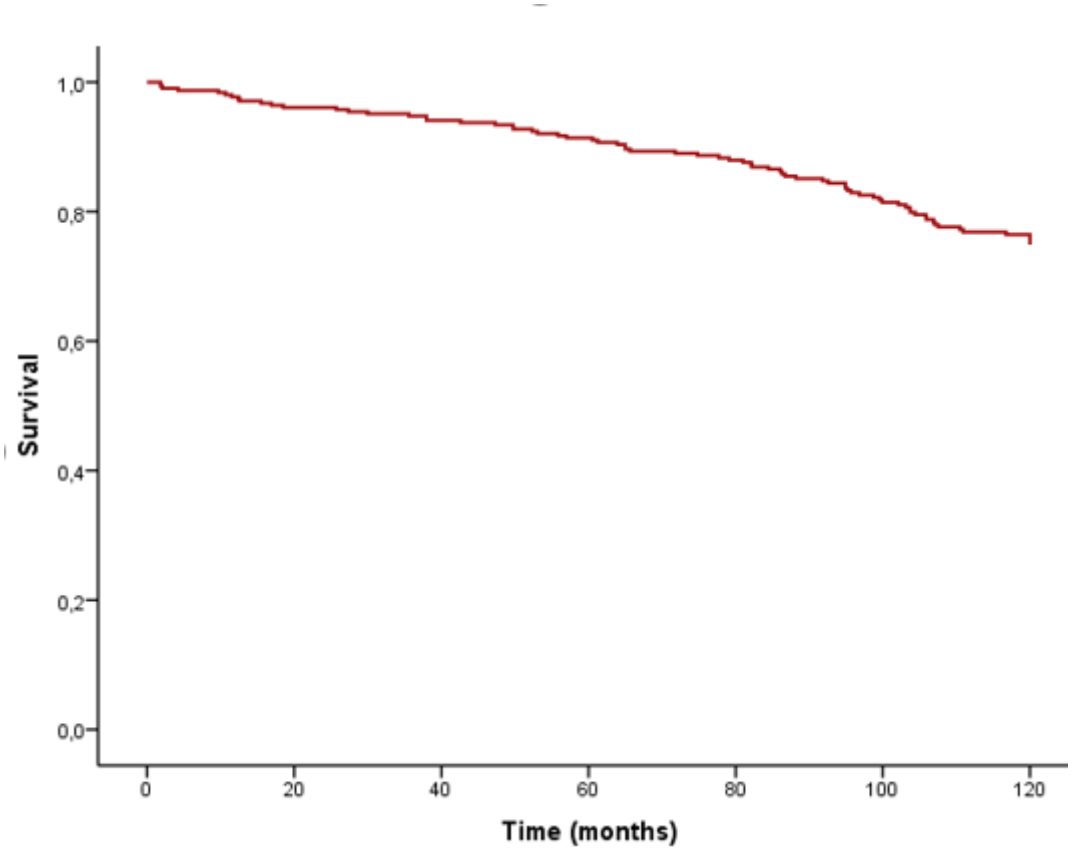

Figure 2 – Global survival.

The SAD had most survival time, about 6 months followed by DD which survived 4 months before diagnosis change. The other diagnoses survived less than 60 days (Figure 3).

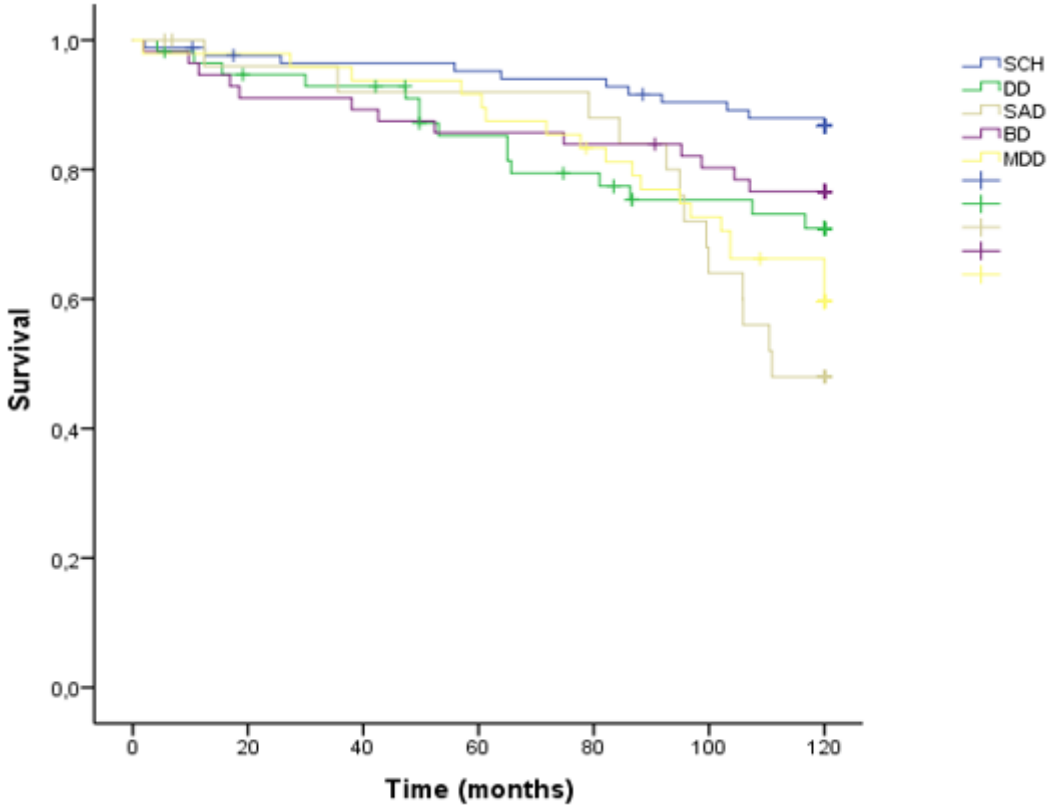

Figure 3 – Survival of each diagnosis.

When comparing groups of patients with diagnostic stability and diagnostic instability, it was found that patients with diagnostic stability had longest hospital length of stays (U=6307.0; *p*=0.01*)*, other variables did not have difference such as age (U=7722.5; *P*=0.93), number of admissions (U=7597,5; *P*=0.75), number of changes (U=267,0; *P*= 0.09) number of assistant doctors (U=7294,0; P=0.43), (Tables 11 and 12).

Table 11 - Comparison of mean

Variables	Status	n	U Mann-Whitney	Interquartile range	Median	*P*-value
Age	Stable	193	7722.5	20.0	39.52	0.93
	Instable	80		11.0	36.47	
LOS of First Admission	Stable	193	6307.0	23.0	24.00	0.01
	Instable	80		18.0	21.00	
Number of Admissions	Stable	193	7597.5	2.0	4.00	0.75
	Instable	80		2.0	2.00	
Number of Doctor	Stable	192	7294.0	1.0	1.00	0.43
	Instable	80		1.0	1.00	

Table 12 shows differences between two groups of patients in terms of demographic variables. There was no significant difference between patients with stable diagnoses and patients with unstable diagnoses as showed by following results: sex ($\chi 2_{(1)}$ =2.85: *P*=0.09), marital status ($\chi 2_{(3)}$ =1.22; *p*=0.75), household ($\chi 2_{(1)}$ =2.01; *p*=0.16), education level ($\chi 2_{(3)}$ =1.15; *p*=0.77), occupation($\chi 2_{(2)}$ =1.77; *P*=0.41), and residence($\chi 2_{(1)}$ =0.55; *P*=0.46).

Table 12 - Demographic variables comparing patients with stable and instable diagnoses

	Stable (%)	Instable (%)	Value (x^2)	df	*p-value*
Sex			2,846	1	,092
Female	146 (67,9)	69 (32,1)			
Male	46 (79,3)	12 (20,7)			
Marital Status			1,223	3	,747
Married	73 (70,2)	31 (29,8)			
Single	96 (71,6)	38 (28,4)			
Divorced	14 (60,9)	9 (39,1)			
Widow	9 (75,0)	3 (25,0)			
Household			2,013	1	,156
Alone	22 (81,5)	5 (18,5)			
Two or more	161 (68,2)	75 (31,8)			
Education			1,150	3	,765
Primary Education	89 (71,2)	36 (28,8)			
Basic Education	53 (71,6)	21(28,4)			
Secondary Education	29 (65,9)	15 (34,1%)			
High School	15 (62,5)	9 (37,5)			
Occupation			1,771	2	,413
Employee	45 (65,2)	24 (34,8)			
Retired	55 (69,6)	24 (34,8)			
Unemployed	92 (74,2)	32 (25,8)			
Residence			,553	1	,457
Rural	73 (73,7)	26 (26,3)			
Urban	116 (69,5)	51 (30,5%)			

The clinical variables also did not show to be strong for one of the groups of patients with stable diagnoses or patients with unstable diagnoses. Type of admission ($\chi2_{(1)}$ =2.10; p=0.15), source of clinical information ($\chi2_{(2)}$ =2.09; p=0.35), family history of mental disorder ($\chi2_{(1)}$ =0.02; p=0.88), and comorbidity ($\chi2_{(1)}$ =0.01; p=0.94), (Table 13).

Table 13 - Clinical variables comparing patients with stable and instable diagnoses

	Stable (%)	Instable (%)	Value (x^2)	df	*p*-value
Type of admission			2,100	1	,147
Voluntary	160 (68,7)	73 (31,3)			
Compulsive	32 (80,0)	8 (29,7)			
Source of Clinical Information			2,097	2	,350
Patient	166 (69,2)	74 (30,8)			
Caregiver	8 (88,9)	1 (11,1)			
Both	11 (78,6)	3 (21,4)			
Family History of Mental Disorder			,021	1	,883
No	108 (70,1)	46 (29,9)			
Yes	79 (69,3)	35 (30,7)			
Comorbidity			,006	1	,939
No	136 (70,5)	57 (29,5)			
Yes	56 (70,0)	24 (30,0)			

The antidepressants showed significant difference between the two groups. The antidepressants were strong for the influencing of the change of the diagnoses ($\chi 2_{(1)}$ =5.47; p=0.02). The remaining variables were not verified strong influence in these two groups of psychotic disorders. The antipsychotics ($\chi 2_{(1)}$ =0.01; p=0.97), mood stabilizers ($\chi 2_{(1)}$ =1.80; p=0.18), tobacco ($\chi 2_{(1)}$ =0.01; p=0.92), alcohol ($\chi 2_{(1)}$ =0.43; p=0.51), and illicit drugs ($\chi 2_{(1)}$ =0.15; p=0.70), (Table 14).

Table 14 – Substance use variables comparing patients with stable and instable diagnoses

	Stable (%)	**Instable (%)**	**Value (x^2)**	**df**	***p*-value**
Antipsychotics			,001	1	,973
No	14 (70,0)	6 (30,0)			
Yes	178 (70,4)	75 (29,6)			
Antidepressant			5,468	1	,019
No	137 (74,9)	46 (25,1)			
Yes	55 (61,1)	35 (38,9)			
Mood Stabilizers			1,802	1	,179
No	136 (68,3)	63 (31,7)			
Yes	56 (76,7)	17 (23,3)			
Tobacco			,011	1	,917
No	124 (70,5)	52 (29,5)			
Yes	59 (71,1)	24 (28,9)			
Alcohol			,427	1	,514
No	161 (70,0)	69 (30,0)			
Yes	22 (75,9)	7 (24,1)			
Illicit drugs			,149	1	,700
No	171 (71,0)	70 (29,0)			
Yes	12 (66,7)	6 (33,3)			

Table 15 shows male patients with MDD did not change the diagnosis over a 10-year follow-up. The remaining psychotic disorders had variables represented by at least one patient.

Table 15 – Diagnostic stability by demographic variables and diagnosis

	Sex		Marital Status		Residence	
	Female	Male	Single	Married	Rural	Urban
SCH						
Stable	40	34	60	14	34	39
Instable	10	1	7	4	5	6
DD						
Stable	36	6	22	20	20	22
Instable	13	2	12	3	2	12
BD						
Stable	37	6	23	20	12	30
Instable	12	1	5	8	2	10
MDD						
Stable	28	1	10	19	8	21
Instable	19	0	12	7	9	8
SAD						
Stable	12	2	10	4	5	8
Instable	8	5	9	4	2	11

In table 16, SCH did not have patient with comorbidity who changed diagnosis. Moreover, we did not find patients whit MDD who had compulsive admission and stable diagnosis.

Table 16 - Diagnostic stability by Clinical variables and diagnosis

	Family H. M. Disorder		Comorbidity		Type of Admission	
	Yes	No	Yes	No	Voluntary	Compulsive
SCH						
Stable	28	43	10	64	55	19
Instable	3	8	1	10	11	0
DD						
Stable	14	27	19	23	31	11
Instable	9	6	5	10	12	3
BD						
Stable	24	19	13	30	41	2
Instable	5	8	5	8	12	1
MDD						
Stable	13	15	11	18	29	0
Instable	9	10	6	13	18	1
SAD						
Stable	4	10	5	9	12	2
Instable	5	8	5	8	12	1

There was no patient with BD and SAD whose diagnosis was stable using illicit (table 17).

Table 17- Diagnostic stability by substance use variable and diagnosis

	Alcohol		Tabaco		Illicit Drugs	
	Yes	No	Yes	No	Yes	No
SCH						
Stable	10	62	26	46	10	62
Instable	1	9	2	8	2	8
DD						
Stable	4	38	6	36	1	41
Instable	2	13	4	11	1	14
BD						
Stable	6	33	16	23	0	39
Instable	2	11	6	7	1	12
MDD						
Stable	1	25	5	21	1	25
Instable	1	15	5	11	1	15
SAD						
Stable	1	12	4	9	0	13
Instable	1	12	5	8	2	11

The correlation between age and length of stays, number of change and length of stays, number of change and number of admissions were positive and statistically significant. Moreover, the correlation between age and number of admissions was positive, but statistically not significant. While correlation between number of change and number of assistant doctors was negative and statistically not significant (Table 18).

Table 18 - Correlations of the main variables (n=273)

Variables	***r***	***p*-value**
Age*Length of Stays	0.16	0.01
Number of Changes*Age	0.14	0.20
Number of Changes* Length of Stays	0.25	0.02
Number of Changes *Number of Admissions	0.33	0.02
Number of Changes* Number of Doctor	-0.16	0.15

Looking for which diagnoses would be predictors for diagnostic changes, we did not find statistically significant predictor diagnoses as is shown in the table 19: SCH (Exp B=0.77; 95% CI=0.17-3.47; p=0.73), DD (Exp B=0.30; 95% CI=0.07-1.29; p=0.10), BD (Exp B=0.48; 95% CI=0.11-2.09; p=0.33), MDD (Exp B=1.15; 95% CI=0.27-4.88; p=0.85) and SAD (Exp B=2.23; 95% CI=0.46-10.83; p=0.32).

Table 19 - Predictor Diagnoses

Diagnoses	B	dl	*p*-value	Exp(B)	95% C.I.	
					Lower	Upper
Schizophrenia	-,266	1	,730	,767	,169	3,467
Delusional Disorder	-1,182	1	,108	,307	,073	1,294
Bipolar Disorder	-,725	1	,332	,484	,112	2,093
Major Depressive Disorder	,137	1	,853	1,147	,270	4,876
Schizoaffective Disorder	,800	1	,321	2,226	,458	10,829

The same result was found for the predictor variables, none of the variables was predictor of changes in diagnoses for psychotic disorders except residence for DD that was statistically significant (Table 20).

Table 20 – Predictors variables

Diagnoses	Variables	B	df	Sig.	Exp(B)	95% C.I. for EXP(B) Lower	Upper
SCH	Sex	-1,836	1	,120	,159	,016	1,617
	Marital Status	,734	1	,353	2,083	,443	9,793
	Residence	,413	1	,589	1,511	,338	6,748
	Family History of Mental Disorder	-,464	1	,577	,629	,123	3,214
	Comorbidity	,252	1	,842	1,286	,108	15,250
	Alcohol	,257	1	,837	1,294	,111	15,113
	Tobacco	-,344	1	,702	,709	,122	4,133
DD	Sex	-,123	1	,917	,884	,087	9,032
	Marital Status	-1,021	1	,246	,360	,064	2,022
	Residence	2,029	1	,033	7,607	1,181	49,000
	Family History of Mental Disorder	1,275	1	,090	3,579	,819	15,636
	Comorbidity	-,120	1	,892	,887	,157	5,024
	Alcohol	-,191	1	,894	,826	,049	13,958
	Tobacco	,588	1	,497	1,800	,330	9,807
BD	Sex	-,596	1	,617	,551	,053	5,719
	Marital Status from first admission	,379	1	,599	1,460	,356	5,993
	Residence	,648	1	,475	1,911	,324	11,288
	Family History of Mental Disorder	-,636	1	,402	,529	,120	2,344
	Comorbidity	-,037	1	,961	,964	,221	4,208
	Alcohol	-,581	1	,561	,559	,079	3,960
	Tobacco	,443	1	,531	1,557	,389	6,233
MDD	Sex	-21,345	1	1,000	,000	,000	.
	Marital Status from first admission	-1,338	1	,102	,262	,053	1,303
	Residence	-1,346	1	,127	,260	,046	1,465
	Family History of Mental Disorder	-,060	1	,941	,942	,193	4,586
	Comorbidity	-,119	1	,882	,888	,184	4,282
	Alcohol	,323	1	,826	1,381	,078	24,396
	Tobacco	,813	1	,399	2,255	,340	14,936
SAD	Sex	1,325	1	,224	3,764	,445	31,858
	Marital Status	,227	1	,829	1,255	,159	9,929
	Residence	1,058	1	,365	2,880	,293	28,327
	Family History of Mental Disorder	,261	1	,807	1,298	,160	10,529
	Comorbidity	-,564	1	,545	,569	,092	3,529
	Alcohol	-20,372	1	1,000	,000	,000	.
	Tobacco	-,334	1	,742	,716	,098	5,229

Variable(s) : Sex, Marital Status, Residence, Family History of Mental Disorder, Comorbidity, Alcohol and Tobacco from first admission.

5. Discussion and Conclusions

5.1. Discussion

Our study was designed to show the diagnostic stability and predictor variables for diagnostic instability of the Braga district.

Our sample consisted of young adult patients with an average age of 37 years-old and did not have patients under 18 years-old. Most patients of this study were women, the ratio man-to-female was 1: 3.7. These variables foreclosed us to generalize the results of the diagnostic stability which was shown below because the most instable groups was not represented in the sample as the case of the children[11], and was poorly represented as the case of the men who are reported by studies that they are more instable than women[16,22], although there is no Gender difference for psychotic symptoms[46].

In this study, we updated the diagnoses into DSM-5 and we found 74.0% of the patients of our sample were stable during the 10 years of study. The remaining 26.0% of the patients were instable. When we compared this diagnostic stability with that was found into ICD-9 (69.9%), the diagnostic stability into DSM-5 was slightly higher but there was not significant difference. The overall diagnostic stability of patients with psychotic symptoms reported by the studies ranges from 75% to 80%[5,13], and we found a diagnostic stability below 75% even further updating the diagnoses. Several studies have shown different results of diagnostic stability in mental disorders particularly psychotic disorders[1,5,12]. Most studies reported SCH as more stable diagnosis than other psychotic disorders[12,17]. Other reported MDD as more stable diagnosis than other psychotic disorders[1], and few studies showed BD as more stable diagnosis than MDD[1,13]. Our study confirmed SCH as most stable psychotic disorder. BD was the second most stable. DD ranked third in terms of stability in this study. In our opinion the difference in diagnostic stability between studies and between psychotic disorders should be: first, the study period as is shown in the Kaplan-Meier curve (Figure 2) when is the shorter the study period, the greater is the diagnostic stability[2,13]. The decrease of diagnostic stability over the follow-up time of patients is not linear for all psychotic diseases[1,2]. Second, depends on the diagnostic tool used, this was the reason why DSM-5 abolished sub-classifications of SCH because these subtypes created greater instability for SCH[52]. Third, depends on the number of diseases included in the study as the case of study that found drug-induced psychoses as the most instable diagnosis[13], this group of psychoses we did not included in this study. Fourth, it depends also on the type of study - whether it is a prospective or a retrospective study[1].The most instable diagnosis of our study was schizoaffective disorder. The major depressive disorder was the second instable disease.

Unlike other studies which reported that many diagnoses changed to schizophrenia and major depressive disorder, our study showed that most diagnoses changed to schizoaffective disorder, the second destination of the changes was SCH. MDD was the psychotic disorder that received the lower number of patients. The novelty of our study, of the 71 patients who changed their diagnoses we found some who switched to other psychiatric disorders, and few switched to neurological disorders (dementia and epilepsy). In fact, the factors that make the diagnoses to change for a given diagnosis are not known[13]. Although some studies argue that one of the causes of diagnostic change in mental disorders is due to diagnostic failures at first admission[11], these diagnostic errors at first admission are determined by several factors that still have to be investigated[7,20]. Some of them are lack of biomarkers that would help to standardize the diagnoses[1,7], and the unreliability of the diagnostic instruments that are based only on symptoms and signs presented by the patient[1,7,20,43].

In this study, we confirmed that the changes of diagnosis can start too early. The other studies reported the minimum survival time of one month and the maximum survival time depends on the study time[5,19,20]. We found the minimum survival time of two months and the maximum survival time was 120 months. This means that changes keep happening and we do not know how many patients would be stable at 20, 30 or 40 years of follow-up[19,20]. Although some studies argue that the diagnostic changes over time may reflect a disease evolution, the emergence of new information about the disease, misdiagnosis at first admission, lack of reliability of diagnostic tools or diagnostic criteria and the differences of cultures [1], are factors that make some psychotic disorders change early and others change late are still unknown[5,19,20]. In our opinion there is no time limit from which we can be sure that the diagnosis is stable.

Regarding the correlations, we found the existence of a statistically significant positive correlation of age with length of stays of first admission, length of stays of first admission with the number of changes in diagnosis, number of changes in diagnosis with number of readmissions. This means that the elderly patients had longer length of stays of first admission than young adult patients and they often changed their initial diagnosis making them to have more readmissions. There was not statistically significant positive correlation of age with number of changes in diagnosis. We also found a negative and non-significant correlation of number of changes in diagnosis with number of assistant doctors. We also found a negative correlation between number of assistant doctors and number of changes in diagnosis, it means more assistant doctors for a patient would be a protective factor of diagnostic change, but statistically it was not significant.

There is no consensus on the predictor variables of diagnostic changes because some studies reported that some variables such as age, sex, family history of mental illness, duration of first admission, education level and living alone were related to changes in diagnoses[1,22] , mainly major depressive disorder and schizophrenia[1]. Other studies showed that there were no relation of these variables with diagnostic instability[10]. Despite the positive correlations that we found in this study, in our study we found urban residence as predictor variables os diagnosis change only for DD. There was no find other predictor variable of diagnostic instability for all of psychotic disorders.

5.2. Study Limitations

Being a retrospective study based on the medical record we had many limitations in this study. Therefore, as a retrospective study, it was possible to report only registered variables.

Our sample was small, so that some variables did not have instable or even stable patients. This constraint made the determination of predictors was not successful. This experience will be useful for future studies drawing attention to the sample size that the sample may be adequate if all variables are covered. We confronted with different administrative systems that made us to work in a hospital with electronic database and in another we manually worked with the clinical files. Although there was electronic database, not all patients from the same hospital were registered in the electronic database. Some patients did not have discharge diagnosis in the electronic database that forced us to review all first admissions of the study period.

Despite these limitations, our study was able to determine diagnostic stability and to verify whether variables would be predictor for psychotic disorders in Braga district.

5.3. Conclusion

The diagnostic stability of patients with psychotic disorder is low. This diagnostic stability leads us to think that despite the constant renewal of editions of international classification systems of mental illness there is still lack of mental diagnoses validation. Moreover, although there are risks of changing diagnosis for some variables, they do not give us trust to predict the diagnostic instability.

Etiologic and physiopathologic understanding of psychotic disorders is still a challenge nowadays. Psychotic disorders as all psychiatric disorders are often based on symptoms and signs lacking diagnosis reliability and stability. However, the absence of biomarkers in the process of psychiatric

diagnoses makes more critical to understand the psychopathology and difficult the longitudinal observation of psychotic patients

6. References

1. Kim W, Woo YS, Chae JH, Bahk WM. The Diagnostic Stability of DSM-IV Diagnoses: An Examination of Major Depressive Disorder, Bipolar I Disorder, and Schizophrenia in Korean Patients. *Clin Psychopharmacol Neurosci*. 2011;9(3):117-121.
2. Ruggero CJ, Carlson GA, Kotov R, Bromet EJ. Ten-year Diagnostic Consistency of Bipolar Disorder in a First-admission Sample. *Bipolar Disord*. 2010;12(1):21-31.
3. Ray R, Roychowdhury J. Stability of Psychiatric Diagnosis. *Indian J Psychiat*. 1984;26(2):164—168.
4. Shrivastava A, Rao S. Schizoaffective Disorder : Consistency of Diagnosis. *Indian J Psychiatry*. 1999;41(4):329-332.
5. Bromet EJ, Kotov R,. Fochtmann LJ, Carlson GA , Tanenberg-Karant M, Ruggero C, Chang S. Diagnostic Stability Revisited: Shifts During the Decade Following First-Admission for Psychosis. *Am J Psychiatry*. 2011:1186-1194.
6. Alavi F, Nakhaee N, Sabahi A. Diagnostic Stability of Psychiatric Disorders in Re-admitted Psychiatric Patients in Kerman, Iran. *Glob J Health Sci*. 2014;6(5):294-300.
7. Koola MM, Sebastian J. Perils of Pragmatic Psychiatry: How We Can Do Better. *HSOA J Psychiatry, Depress anxiety*. 2016;2(1):1-23.
8. Stein DJ, Lund C, Nesse RM. Classification Systems in Psychiatry: Diagnosis and Global Mental Health in the Era of DSM-5 and ICD-11. *Curr Opin Psychiatry*. 2013;26(5):493–497.
9. Hobbs M, Stanbrook R, Chakraborty N. Frequency of Change of Diagnoses in First-Episode Psychosis. 2017;21:6-8.
10. Jakobsen KD, Hansen T, Werge T. Diagnostic Stability Among Chronic Patients with Functional Psychoses: An Epidemiological and Clinical Study. *BMC Psychiatry*. 2007;7:41.
11. Kessing VL, Vradi E, Andersen KP. Diagnostic Stability in Pediatric Bipolar Disorder. *J Affect Disord*. 2015;172:417-421.
12. Fusar-Poli P, Cappucciati M, Rutigliano G, et al. Diagnostic Stability of ICD/DSM First Episode Psychosis Diagnoses: Meta-analysis. *Schizophr Bull*. 2016;42(6):1395-1406.
13. Whitty P, Clarke M, McTigue O, et al. Diagnostic Stability Four Years After a First Episode of Psychosis. *Psychiatr Serv*. 2005;56(9):1084-1088.
14. Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, et al. Diagnostic Stability of Psychiatric Disorders in Clinical Practice. *Br J Psychiatry*. 2007;190(438 622):210-216.
15. Mehta S. Diagnostic Stability of Acute and Transient Psychotic Disorders in Developing

Country Settings: An Overview. *Ment Illn*. 2015;7(1):13-15.

16. Heslin M, Lomas B, Lappin JM, et al. Diagnostic Change 10 Years After a First Episode of Psychosis. *Psychol Med*. 2015;45(13):2757-2769.
17. Guthrie W, Swineford LB, Wetherby AM, Lord C. Comparison of DSM-IV and DSM-5 Factor Structure Models for Toddlers with Autism Spectrum Disorder. *J Am Acad Child Adolesc Psychiatry*. 2013;52(8):797-805.
18. Veen ND, Selten JP, Schols D, et al. Diagnostic Stability in a Dutch Psychosis Incidence Cohort. *Br J Psychiatry*. 2004;185(DEC.):460-464.
19. Poon JYK, Leung CM. Outcome of First-Episode Acute and Transient Psychotic Disorder in Hong Kong Chinese: a 20-year Retrospective Follow-up Study. *Nord J Psychiatry*. 2017;71(2):139-144.
20. Pedrós A, Martí J, Gutiérrez G, Tenías JM, Ruescas S. Two-year Diagnostic Stability and Prognosis in Acute Psychotic Episodes. *Actas Esp Psiquiatr*. 2009;37(5):245-251.
21. Ruggero CJ, Kotov R, Carlson GA, Bromet T. Consistency of the Diagnosis of Major Depression with Psychosis Across 10 Years. *J Clin Psychiatry*. 2011;72(9):1207-1213.
22. Queirazza F, Semple DM, Lawrie SM. Transition to Schizophrenia in Acute and Transient Psychotic Disorders. *Br J Psychiatry*. 2014;204(4):299-305.
23. De Mola CL, Stanojevic S, Ruiz P, Gilman RH, Smeeth L, Miranda JJ. The Effect of Rural-to-Urban Migration on Social Capital and Common Mental Disorders: Peru Migrant Study. *Soc Psychiatry Psychiatr Epidemiol*. 2012;47(6):967-973.
24. Weaver A, Himle JA, Taylor RJ, Matusko NN, Abelson JM. Urban vs Rural Residence and the Prevalence of Depression and Mood Disorder Among African American Women and Non-Hispanic White Women. *JAMA Psychiatry*. 2015;72(6):576–583.
25. Rohrer JE, Borders TF, Blanton J. Rural Residence is not a Risk Factor for Frequent Mental Distress: A Behavioral Risk Factor Surveillance Survey. *BMC Public Health*. 2005;5:46.
26. Zammit S, Lewis G, Rasbash J, Dalman C, Jan-Eric Gustafsson;Peter Allebeck. Individuals, Schools, and Neighborhood. 2010;67(9):914-922.
27. Chiang C-L, Chen P-C, Huang L-Y, et al. Impact of Universal Health Coverage on Urban–Rural Inequity in Psychiatric Service Utilisation for Patients with First Admission for Psychosis: A 10-year Nationwide Population-Based Study in Taiwan. *BMJ Open*. 2016;6(3).
28. Weich S, Twigg LIZ, Lewis G, Weich ST, Wigg LIZT, Wis GLE. Rural / Non-Rural Differences in Rates of Common Mental Disorders in Britain : Prospective Multilevel Cohort Study Rural

/ Non-Rural Differences in Rates of Rommon Mental Disorders in Britain Prospective Multilevel Cohort Study. 2013:51-57.

29. Ponizovsky AM, Grinshpoon A, Pugachev I, Nahon D, Ritsner M, Abramowitz MZ. Changes in Stability of First-Admission Psychiatric Diagnoses Over 14 years, Based on Cross-Sectional Data at Three Time Points. *Isr J Psychiatry Relat Sci*. 2006;43(1):34-39.
30. Aboraya A, France C, Young J, Curci K, Lepage J. The Validity of Psychiatric Diagnosis Revisited: The Clinician's Guide to Improve the Validity of Psychiatric Diagnosis. *Psychiatry*. 2005;2(9):48-55.
31. Kaplan HI, Sadock BJ. Pocket Handbook of Clinical Psychiatry, 5th ed. American Psychiatric Association, 2010, Washington DC.
32. Kalseth J, Lassemo E, Wahlbeck K, Haaramo P, Magnussen J. Psychiatric Readmissions and Their Association with Environmental and Health System Characteristics : A Systematic Review of the Literature. *BMC Psychiatry*. 2016:1-9.
33. Han K-T, Lee SY, Kim SJ, et al. Readmission Rates of South Korean Psychiatric Inpatients by Inpatient Volumes per Psychiatrist. *BMC Psychiatry*. 2016;16:96.
34. Barekatain M, Maracy MR, Hassannejad R, Hosseini R. Factors Associated with Readmission of Patients at a University Hospital Psychiatric Ward in Iran. *Psychiatry J*. 2013;2013:685625.
35. Kahlon S, Pederson J, Majumdar SR, et al. Association Between Frailty and 30-day Outcomes After Discharge From Hospital. *Cmaj*. 2015;187(11):799-804.
36. Addisu F, Wondafrash M, Chemali Z, Dejene T, Tesfaye M. Length of Stay of Psychiatric Admissions in a General Hospital in Ethiopia: A Retrospective Study. *Int J Ment Health Syst*. 2015;9:13.
37. Jacobs R, Gutacker N, Mason A, et al. Determinants of Hospital Length of Stay for People with Serious Mental Illness in England and Implications for Payment Systems: a Regression Analysis. *BMC Health Serv Res*. 2015;15:439.
38. Patel R, Lloyd T, Jackson R, et al. Mood Instability is a Common Feature of Mental Health Disorders and is Associated with Poor Clinical Outcomes. *BMJ Open*. 2015;5(5):e007504.
39. Šprah L, Dernovšek MZ, Wahlbeck K, Haaramo P. Psychiatric Readmissions and Their Association with Physical Comorbidity: A Systematic Literature Review. *BMC Psychiatry*. 2017;17(1):2.
40. Mahendru RK, Gupta AK, BahaL DK. Physical Illness in Psychiatric Patients. *Indian J*

Psychiatry. 1987;29(3):269-273.

41. Bagøien G, Bjørngaard JH, Østensen C, Reitan SK, Romundstad P, Morken G. The Effects of Motivational Interviewing on Patients with Comorbid Substance Use Admitted to a Psychiatric Emergency Unit - A Randomised Controlled Trial with Two Year Follow-up. *BMC Psychiatry*. 2013;13-93.
42. Caton CLM, Hasin DS, Shrout PE, et al. Stability of Early-Phase Primary Psychotic Disorders with Concurrent Substance Use and Substance-Induced Psychosis AUTHOR'S PROOF Stability of Early-Phase Primary Psychotic Disorders with Concurrent Substance Use and Substance- Induced Psychosis. Method. 2012:105-111.
43. Ban TA. Evolution of Diagnostic Criteria in Psychoses. *Dialogues Clin Neurosci*. 2001;3(4):257-263.
44. Gaebel W, Zielasek J. Focus on Psychosis. *Dialogues Clin Neurosci*. 2015;17(1):9-18.
45. Cermolacce M, Sass L, Parnas J. What is Bizarre in Bizarre Delusions? A Critical Review. *Schizophr Bull*. 2010;36(4):667-679.
46. Gonzánlez-Rodríguez A, Studerus E, Spitz A, et al. Gender Differences in the Psychopathology of Emerging Psychosis. *Isr J Psychiatry Relat Sci*. 2014;51(2):85-93.
47. Quan H, Moskal L, Forster AJ, et al. International Variation in the Definition of "Main Condition" in ICD-coded Health Data. *Int J Qual Heal Care*. 2014;26(5):511-515.
48. World Health Organization. The ICD-9 Classification of Mental and Behavioural Disorders. WHO,1977.
49. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders. WHO,1992.
50. Surís A, Holliday R, North CS. The Evolution of the Classification of Psychiatric Disorders. *Behav Sci (Basel)*. 2016;6(1):5.
51. Eroglu S, Toprak S, Urgan O,Onur OE, Denizbasi A, Akoglu H, Ozpolat C, Akoglu E. *DSM-IV Diagnostic and Statistical Manual of Mental Disorder*. Vol 33.; 2012.
52. American Psychiatric Association:Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.
53. Naqvi HA. Schizophrenia: A Concept. *J Pak Med Assoc*. 2008;58(3):133-137.
54. Tsuang MT, Stone WS, Faraone SV. Basic Research. *Basic Res*. 1999;1.
55. Eack SM, Keshavan MS. Foresight in Schizophrenia: A Potentially Unique and Relevant Factor to Functional Disability. *Psychiatr Serv*. 2008;59(3):256-260.

56. Ladea M, Prelipceanu D. Markers of Vulnerability in Schizophrenia. *J Med Life*. 2009;2(2):155-164.

57. Irfan M, De Almeida JMC, Irfan UM, Raza UA, Farooq S. Schizophrenia Diagnosis and Treatment by General Practitioners: A Cross-Sectional Study in District Peshawar, Pakistan. *J Pak Med Assoc*. 2015;65(9):937-942.

58. Qin W, Liu C, Sodhi M, Lu H. Meta-analysis of Sex Differences in Gene Expression in Schizophrenia. *BMC Syst Biol*. 2016;10(Suppl 1).

59. Najafi-Vosough R, Ghaleiha A, Faradmal J, Mahjub H. Recurrence in Patients with Bipolar Disorder and Its Risk Factors. *Iran J Psychiatry*. 2016;11(3):173-177.

60. Merikangas KR, Jin R, He J, et al. Prevalence and Correlates of Bipolar Spectrum Disorder in the World Mental Health Survey Initiative. *Arch Gen Psychiatry*. 2012;68(3):241-251.

61. Weinstein SM, Van Meter A, Katz AC, Peters AT, West AE. Cognitive and Family Correlates of Current Suicidal Ideation in Children with Bipolar Disorder. *J Affect Disord*. 2015;173:15-21.

62. Nusslock R, Frank E. Subthreshold Bipolarity: Diagnostic Issues and Challenges. *Bipolar Disord*. 2011;13(7-8):587-603.

63. Aminoff SR, Hellvin T, Lagerberg TV, Berg AO, Andreassen OA, Melle I. Neurocognitive Features in Subgroups of Bipolar Disorder. *Bipolar Disord*. 2013;15(3):272-283.

64. Paulus MP, Stein MB. Interoception in Anxiety and Depression. *Brain Struct Funct*. 2010:1-13.

65. Kuhn M, Höger N, Feige B, Blechert J, Normann C, Nissen C. Fear Extinction as a Model for Synaptic Plasticity in Major Depressive Disorder. *PLoS One*. 2014;9(12):1-18.

66. Rickhi B, Kania-Richmond A, Moritz S, et al. Evaluation of a Spirituality Informed e-Mental Health Tool as an Intervention for Major Depressive Disorder in Adolescents and Young Adults - a Randomized Controlled Pilot trial. *BMC Complement Altern Med*. 2015;15(1):450.

67. Christensen RC, Ramos E. The Social and Treatment Consequences of a Shared Delusional Disorder in a Homeless Family. *Innov Clin Neurosci*. 2011;8(4):42-44.

68. Morimoto K, Miyatake R, Nakamura M, Watanabe T, Hirao T, Suwaki H. Delusional Disorder: Molecular Genetic Evidence for Dopamine Psychosis. *Neuropsychopharmacology*. 2002;26(6):794-801.

7.Supplementary Data

Annex 1: Diagnoses updated into DSM-5 and ICD-10

DSM-5	ICD-9	ICD-10
Schizophrenia	295.0; 295.1; 295.2;295.3; 295.4; 295.5; 295.6; 295.6; 295.7	F20.0-3; F20.5-6
Delusional Disorder	295.3; 297.0-7	F22.0; F22.8-9;
Schizoaffective Disorder	295.7	F25.0-2
Bipolar I Disorder	296.0; 296.4	F31.2
Bipolar II Disorder	296.5	F31.5
Major Depressive Disorder	296.2; 296.3	F32.3; F33.3
Dysthymia	296.3;300.4	F34.1; F33.3
Paranoid Personality	301.0	F60.0
Other Personality	301.8	F60.8
Alcohol use	303	F10.0-9
Adjustment Disorder	309	F43.2
Unspecified Depressive	296.9	33.9
Intellectual Disability	319	F79
Psychotic Disorder Due to another medical condition (Dementia)	290.0-3	F00; F03
Psychotic Disorder Due to another medical condition (Epilepsy)	345	G40

FICHA DE MUTAÇÕES DIAGNÓSTICAS PARA ESTUDO RETROSPECTIVO

1. **Número de inquérito_____**
2. **Data de colheita dos dados_____/____/____**

3. **Dados sociodemográficos**

3.1.1. Idade atual (em anos) _____

3.2.Sexo

0- Feminino__
1- Masculino__
2- Outros__

3.3.1Estado civil no 1º diagnóstico

1- Solteiro __
2- Casado__
3- Divorciado__
4- Viúvo__
5- Outros__

4.3.2. Estado civil na 1ª mutação de diagnóstico

1- Solteiro __
2- Casado__
3- Divorciado__
4- Viúvo__
5- Outros

3.3.1. *Residência no 1º diagnóstico*

0- Rural __
1- Urbano__

1

3.3.2. ***Residência na 1ª mutação de diagnóstico***

2- Rural __

3- Urbano__

4.4.1. Anos de escolaridade no 1º diagnóstico

0-Nenhum__

1- 1º ciclo (1º ano- 4º ano) __

2- 2º ciclo (5º ano-6º ano)__

3- 3º Ciclo (7º ano-9º ano)__

4-Ensino Secundário (10º ano -12º ano) __

5-Ensino Superior__

4.4.2. Anos de escolaridade na 1ª mutação de diagnóstico

0-Nenhum__

1-Primário __

2-Secundário__

3-Pre-universitário__

4-Universitário__

4.5.1. Ocupação no 1º diagnóstico

0- Desempregado__

1- Empregado__

2- Reformado__

4.5.2. Ocupação na 1ª mutação de diagnóstico

1- Desempregado__

2- Empregado__

3- Reformado__

4.6.1. Agregado familiar no 1º diagnóstico

1- Sozinho__

3- Dois__

4- Três__

5- Quatro__

6- Mais__

4.6.2. Agregado familiar na 1ª mutação de diagnóstico

1- Sozinho__

2- Dois__

3- Três__

4- Quatro__

5- Mais__

4.7.1. Hábitos no 1º diagnóstico

1- Nenhum__

2- Tabaco__

3- Álcool__

4- Droga__

4.7.2. Hábitos na 1ª mutação de diagnóstico

1- Nenhum__

2- Tabaco__

3- Álcool__

4- Droga__

4.8.0. Hospital de Assistência ***no 1º diagnóstico***

0- Hospital de Braga__

1- Casa de Saúde de Bom Jesus__

2- Casa de Saúde de S. João de Deus__

3- Outro __

4.8.1. Hospital de Assistência ***na 1ª mutação de diagnóstico***

1- Hospital de Braga__

2- Casa de Saúde de Bom Jesus__

3- Casa de Saúde de S. João de Deus__

4- Outro __

5. Dados clínicos

5.8.0. Mutação

1- Sim

2- Não

5.8.1. Idade do 1º diagnostico___ anos – Data _____ (internamento/consulta - riscar o que não interessa)

5.8.2. Idade da 1ª mutação diagnostica ___ anos – Data _____ (internamento/consulta – riscar o que não interessa)

5.8.3. Número de mutações diagnósticas_____

5.8.4. Número de internamentos_____ (ao longo de 10 anos)

5.8.5. Número de internamentos_____ (até à 1ª mutação)

5.8.6. Duração do 1º internamento _____dia

5.8.7. Intervalo entre 1º internamento e a 1ª mutação diagnostica _____dias

7 - ***Sintomatologia predominante (CID-9-CM)***

7.1- No 1º diagnóstico (baseline)

Código CID-9_CM _____

7.2- Diagnóstico de mutação

Código CID-9_CM _____

8. *Sistema de classificação de doenças mentais*

0- CID-9__

1- CID-10__

2- DSM-IV__

3- DSM-V__

9. **Número de médicos assistentes** _____ médicos

10. **Doença orgânica associada**

1-Sim

2-Não

11. **As classes de medicação nas vésperas da mutação**

1- Anti psicóticos

2- Antidepressivos

3- Benzodiazepinicos

4- Antiepiléticos (estabilizadores do humor)

5- Anti parkinsoniano

6- Psicostimulantes

7- Medicação para demência

12. **Antecedente familiar**

1- Sim___

2- Não ___

5

Universidade do Minho

SECVS

Subcomissão de Ética para as Ciências da Vida e da Saúde

Identificação do documento: SECVS 011/2017

Titulo do projeto: *Estabilidade diagnóstica de perturbações psiquiátricas na prática clínica - Estudo Retrospetivo*

Investigador(a) responsável: Dr. Anibal Neves Anube, Médico Psiquiatra e aluno de Mestrado da Escola de Medicina (EM) da Universidade do Minho

Outros investigadores: Prof. Dr. Pedro Morgado, da Escola de Medicina (EM), do Instituto de Investigação em Ciências da Vida e da Saúde (ICVS), do ICVS/3B's - Laboratório Associado, e do Hospital de Braga; Prof. Dr. António Pacheco Palha, do Hospital de Braga

Subunidade orgânica: Escola de Medicina, Universidade do Minho

Outras Unidades: Casa de Saúde do Bom Jesus, Braga; Instituto São João de Deus, Casa de Saúde São João de Deus, Barcelos; Serviço de Psiquiatria, Hospital de Braga

PARECER

A Subcomissão de Ética para as Ciências da Vida e da Saúde (SECVS) analisou o processo relativo ao projeto intitulado *Estabilidade diagnóstica de perturbações psiquiátricas na prática clínica - Estudo Retrospetivo.*

Os documentos apresentados revelam que o projeto obedece aos requisitos exigidos para as boas práticas na experimentação com humanos, em conformidade com o Guião para submissão de processos a apreciar pela Subcomissão de Ética para as Ciências da Vida e da Saúde.

Face ao exposto, a SECVS nada tem a opor à realização do projeto.

Braga, 09 de maio de 2017.

A Presidente

MARIA CECÍLIA DE LEMOS PINTO ESTRELA LEÃO

Assinado de forma digital por MARIA CECÍLIA DE LEMOS PINTO ESTRELA LEÃO
Dados: 2017.05.09 15:50:54 +01'00'

Maria Cecília de Lemos Pinto Estrela Leão

Universidade do Minho

SECVS

Identificação do documento: SECVS 011/2017

Título do projeto: *Estabilidade diagnóstica de perturbações psiquiátricas na prática clínica - Estudo Retrospetivo*

Investigador(a) responsável: Dr. Anibal Neves Anube, Médico Psiquiatra e aluno de Mestrado da Escola de Medicina (EM) da Universidade do Minho

Outros investigadores: Prof. Dr. Pedro Morgado, da Escola de Medicina (EM), do Instituto de Investigação em Ciências da Vida e da Saúde (ICVS), do ICVS/3B's - Laboratório Associado, e do Hospital de Braga; Prof. Dr. António Pacheco Palha, do Hospital de Braga

Subunidade orgânica: Escola de Medicina, Universidade do Minho

Outras Unidades: Casa de Saúde do Bom Jesus, Braga; Instituto São João de Deus, Casa de Saúde São João de Deus, Barcelos; Serviço de Psiquiatria, Hospital de Braga

Data de receção na SECVS: 20 de fevereiro de 2017

Grelha de Verificação

Processo submetido em suporte: [X] eletrónico [ ] físico (em papel)

Documentos	Sim	Não	Não se aplica
Requerimento e/ou ofício e/ou pedido de apreciação de projeto ««	X		
Informação do Responsável pela Unidade/Diretor de Serviço sobre apoio e/ou enquadramento/cabimento do projeto na Unidade/Serviço em que decorrerá ««	X		
Protocolo do estudo, incluindo, se aplicável, os instrumentos de recolha de dados e/ou informação para o participante ««	X		
Curriculum Vitae abreviado do Investigador Responsável ««	X		
Modelo de Consentimento Informado««			X
Modelo de Declaração de Compromisso de Confidencialidade	X		
Informação sobre financiamento para o cumprimento do projeto, incluindo, se aplicável, cabimento/inscrição no orçamento da Unidade/Serviço em que decorrerá e/ou com fonte de financiamento nacional/internacional			X
CESHB – Remitir processo: Sim [ ] Não [X]			
Requerimento dirigido ao Presidente da CESHB «		X	
Formulário da CESHB devidamente preenchido «		X	
Outros			
Autorizações e/ou Pareceres de (Sub)Comissões de Ética		X	
Acordo Financeiro		X	
Apólice de Seguro		X	

Informação do Orientador da Tese sobre apoio e/ou enquadramento do projeto		X	

* Documentos obrigatórios de acordo com as normas orientadoras para submissão de processos a apreciar pela SECVS em Anexo ao Despacho RT-76/2012 que estabelece as regras de atuação e funcionamento da mesma.
* Documentos obrigatórios de acordo com o funcionamento da Comissão de Ética para a Saúde do Hospital de Braga (CESHB).

Justificação do Parecer

O pedido de Parecer é solicitado procedendo de acordo com o âmbito da colaboração estabelecida entre a Subcomissão de Ética para as Ciências da Vida e da Saúde (SECVS) e a Comissão de Ética para a Saúde do Hospital de Braga (CESHB).

Trata-se de um estudo com o apoio do Serviço de Psiquiatria, Hospital de Braga, para a sua realização na(s) Unidade(s), com duração de 12 meses e com início previsto em julho de 2016. A recolha de dados está prevista entre agosto e dezembro de 2016.

O projeto recebeu parecer favorável pela comissão de ética da do Hospital de Braga a 21 de dezembro de 2016 (Refª CESHB 171/2016), pela Comissão de Ética da Casa de Saúde do Bom Jesus a 12 de setembro de 2016, e pelo Instituto São João de Deus, Casa de Saúde São João de Deus, Barcelos, a 16 de janeiro de 2017 (Refª D/CSSJD-B-554/2016).

Os IRs, Médicos, Psiquiatras, têm formação clinica e/ou académica e/ou técnica e experiência solidificada nas áreas de base do projeto, e/ou tem o apoio de uma equipa de investigação com experiência.

O objetivo geral do estudo é elucidar sobre a estabilidade diagnóstica e os principais fatores que nele influenciam no distrito de Braga. São objetivos específicos do projeto: i) determinar a taxa de estabilidade diagnóstica global em doentes com perturbação psiquiátrica; e, ii) determinar e descrever os principais fatores que influenciam a estabilidade diagnóstica no distrito de Braga.

Trata-se um estudo observacional, transversal, analítico, de coorte retrospetivo. Será a população alvo doentes com perturbação psiquiátrica seguidos nas consultas e internamentos no Hospital de Braga, na Casa de Saúde de Bom Jesus, e de São João Deus. Foram definidos critérios de inclusão e de exclusão.

A recolha de dados irá decorrer através da recolha de dados em processos clínicos de utentes pacientes admitidos nas consultas e internamentos no período de 1996 a 2005 nas instituições com serviços psiquiátricos nomeadamente Hospital de Braga, na Casa de Saúde de Bom Jesus, e na Casa de Saúde de São João Deus.

Os dados recolhidos incluem dados demográficos e clínicos. Variável, tipo de variável e/ou categorias da variável e descrição da mesma foram enumeradas/descritas no protocolo de investigação e/ou foi fornecido em anexo o Formulário de Recolha de Dados e/ou Guião da Entrevista.

O projeto não envolve a dádiva, e/ou colheita, análise laboratorial, e/ou processamento, e/ou preservação, e/ou armazenamento, e/ou distribuição e/ou aplicação de tecidos e células de origem humana. Serão, no entanto, analisados dados, e/ou analises, clinicas/laboratoriais de tecidos, e/ou células e/ou amostras, e/ou dados imagiológicos, e/ou óticos/oculares, e/ou auditivos, e/ou clínicos, e/ou outros, durante o período de realização do estudo, mesmo que que já previamente colhidos, obtidos e/ou registados.

Será salvaguardado o anonimato e a confidencialidade do participante (não haverá identificação nominal do titular, sendo aposto um código de participante no estudo).

Não estão previstos quaisquer custos, ou abuso de recursos institucionais, hospitalares e/ou outros, como aplicável, para a realização do projeto.

Não se declaram existirem conflitos de interesse.

Não se declara a investigação envolver diretamente indivíduos privados do exercício de autonomia (crianças, menores, pessoas com incapacidade temporária ou permanente do exercício de autonomia).

Considerações éticas

A realização de projetos de investigação deverá em consideração as regras de conduta e diretivas de boas práticas no âmbito da investigação clínica com seres humanos. Deverá ser solicitado Parecer e/ou Autorização, incluindo notificação de tratamento de dados pessoais à Comissão Nacional de Proteção de Dados, e seguir as diretivas nacionais e/ou locais, de cada lugar de recolha, como aplicável, incluindo de Unidades Hospitalares e/ou Unidades de Saúde onde será realizado o estudo, e/ou onde serão recolhidas as amostras e/ou dados e/ou aplicados os questionários, se aplicável.

Salienta-se o respeito pelas normas e as recomendações constantes da Declaração de Helsinquia (com as emendas de Tóquio 1975, Veneza 1983, Hong-Kong 1989, Somerset West 1996, Edimburgo 2000, Washington 2002, Tóquio 2004 e Seul 2008), da Directiva 95/46/EC do Parlamento Europeu e do Conselho, das Directrizes Sobre as Boas Práticas Clínicas da EMEA - Agência Europeia do Medicamento (Londres 2000), das Directrizes Éticas Internacionais para a Pesquisa Envolvendo Seres Humanos da Organização Mundial de Saúde (Genebra 2002), das Directrizes Éticas Internacionais para os Estudos Epidemiológicos do Conselho de Organizações Internacionais de Ciências Médicas (Genebra 2009) e da Resolução da Assembleia da República n.º1/2001.

Quando aplicável o Consentimento Informado recomendam-se as normas e/ou documentos-guia da Direção Geral de Saúde[1] e/ou da ARS Norte[2] na elaboração do mesmo. A inclusão dos participantes em qualquer um dos âmbitos de investigação considerados num Projeto de Investigação está subjacente o seu consentimento escrito (Lei n.º 12/2005, de 26 de janeiro; Lei n.º 46/2007, de 24 de agosto). O preenchimento e assinatura do formulário de consentimento informado, livre e esclarecido, deverá ser feito em duplicado, garantindo a privacidade e confidencialidade dos dados pessoais e o direito a recusar/abandonar o estudo sem sofrer qualquer penalização.

Indica-se que recolha de produtos biológicos deverá ter em conta os princípios para obtenção e conservação de material biológico (Art.º 18.º) da Lei n.º 12/2005, de 26 de janeiro. O tratamento das informações de saúde recolhidas terá em consideração os princípios aplicáveis aos tratamentos de dados pessoais efetuados no âmbito de Investigação Clínica, definidos pela Comissão Nacional de Proteção de Dados e decorrentes da Deliberação n.º 1704/2015.

Informações pessoais tratadas não deverão ser identificáveis, mas sim irreversivelmente anonimizadas (Art.º 3.º da LPDP), e todos os dados obtidos no âmbito de um Projeto de Investigação estão ao abrigo de medidas técnicas e organizativas adequadas que dão cumprimento ao disposto no Art.º 14.º e Art.º 15.º da LPDP. Aplica-se ainda o disposto no n.º1 do Art.º 17.º da LPDP relativamente ao sigilo profissional. Quando não for possível a anonimização dos dados, estes deverão codificados de acordo com uma chave específica, acessível apenas aos investigadores do estudo, e que dificulta a identificabilidade dos participantes, tal como especificado na Deliberação n.º 1704/2015 da CNPD. Os dados obtidos deverão ser conservados de forma a permitir a identificação dos seus titulares apenas durante o período necessário para a prossecução das finalidades da recolha ou do tratamento posterior, tal como definido no Art.º 5.º, n.º 1, alínea e), da LPDP.

O Modelo de declaração de compromisso e confidencialidade utilizado pelo IR deverá ser seguido e assinado por outros investigadores ou colaboradores na investigação, conforme aplicável, destinado a documentar o seu envolvimento nas garantias de confidencialidade e boas práticas dadas pelo(a) IR Sempre que necessário, os membros da equipa de investigação deverão assinar uma Declaração de Interesses e Incompatibilidades de acordo com o Decreto-lei n.º 14/2014, de 22 de janeiro.

Neste contexto, assume-se que os investigadores que trabalham com amostras humanas, ou com a análise de dados, estão obrigados a manter sigilo profissional sobre os dados pessoais e sobre os resultados ou demais

[1] http://www.dgs.pt/directrizes-da-dgs/normas-e-circulares-normativas/norma-n-0152013-de-03102013.aspx

[2] http://portal.arsnorte.min-saude.pt/portal/page/portal/ARSNorte/Comiss%C3%A3o%20de%20%C3%89tica/Ficheiros/Consentimento_Informado_Doc_Guia.pdf

obtidos, segundo a ética profissional, nunca devendo, por isso, fazer uso dos mesmos a não ser para o fim a que se destinam. Esta obrigação mantém-se em efeito após término do projeto de investigação.

Documentos recebidos na SECVS

O processo foi acompanhado por requerimento dirigido à Presidente da SECVS.

A SECVS recebeu os documentos comprovativos que incluem:

- Protocolo de investigação e/ou caderno de recolha de dados e/ou guião da entrevista;
- Curriculum vitae abreviado do(s) investigador(es) responsável(eis);
- Parecer do(a) diretor(a) do centro de investigação e/ou unidade;
- Cópia do(s) formulário(s) de recolha de dados a utilizar e/ou enumeração dos dados que serão colhidos.

Foram ainda recebidos (outros documentos):

- Modelo de declaração de compromisso a utilizar pelo(a) PI e por outros investigadores ou colaboradores na investigação destinado a documentar o seu envolvimento nas garantias de confidencialidade e boas praticas dadas pelo(a) PI (Termo de Responsabilidade).

Os documentos enviados estão em conformidade com o Guião para submissão de processos a apreciar pela Subcomissão de Ética para as Ciências da Vida e da Saúde (SECVS).

Braga, 09 de maio de 2017

A Presidente

MARIA CECÍLIA DE LEMOS PINTO ESTRELA LEÃO

Assinado de forma digital por MARIA CECÍLIA DE LEMOS PINTO ESTRELA LEÃO
Dados: 2017.05.09 15:51:29 +01'00'

Maria Cecília de Lemos Pinto Estrela Leão

Hospital Braga

Comissão de Ética para a Saúde

N/Refª: CESHB -171/2016

Relator: Sara Barroso

Parecer emitido em reunião plenária de 18 de outubro de 2016

Nos termos dos Nº 1 e 6 do Artigo 16º da Lei Nº 21/2014, de 16 de Abril, a Comissão de Ética para a Saúde do Hospital de Braga emite o seguinte parecer sobre o projeto de investigação ***"Estabilidade Diagnóstica de Perturbações Psiquiátricas na Prática Clínica - Estudo Retrospetivo"***, de que é investigador principal o Dr Anibal Neves Anube, médico e aluno do mestrado em Ciências da Saúde da Escola de Ciências da Saúde (ECS) da Universidade do Minho (UM), sob a orientação do Professor Doutor Pedro Morgado, médico psiquiatra no Hospital de Braga (HB) e professor na ECS da UM e Professor Doutor António Pacheco Palha:

Trata-se de um estudo retrospetivo que se realizará no internamento e consulta de Psiquiatria do HB, Casa de Saúde do Bom Jesus e Casa de Saúde de São João de Deus. Pretende elucidar quanto à estabilidade diagnóstica e os principais fatores que a influenciam, permitindo desenvolver estratégias que visem a diminuição do impacto da baixa estabilidade diagnósticas como tratamento inadequado, efeitos iatrogénicos e comprometimento do prognóstico do paciente;

O estudo não representa qualquer risco para os participantes e atendendo à natureza retrospetiva do mesmo, não acarretará benefício para os mesmos, permitindo, contudo, melhorar a abordagem a estes doentes futuramente;

O protocolo de investigação é adequado e estão definidos os critérios de divulgação dos resultados;

Está demonstrada a aptidão dos membros da equipa de investigação;

Estão reunidas as condições humanas e materiais à realização do estudo;

O estudo terá como população alvo doentes com perturbação psiquiátrica seguidos nas consultas e internamentos do HB, da Casa de Saúde de Bom Jesus e da Casa de Saúde de São João Deus no período compreendido entre 1996 a 2005;

Os critérios de inclusão e exclusão estão definidos no protocolo de investigação;

Não existem situações de conflito de interesse por parte dos elementos que integram a equipa de investigação;

Dado trata-se de um estudo retrospetivo, a sua realização não representará qualquer influência no acompanhamento clínico dos participantes;

Serão recolhidos dados clínicos e demográficos através da consulta dos processos clínicos dos pacientes admitidos nas consultas e internamentos no período de 1996 a 2005 nas instituições referidas, através da consulta dos processos clínicos. Os dados recolhidos serão anonimizados de modo a salvaguardar a confidencialidade dos participantes;

Atendendo ao desenho do estudo, é dispensado o modelo de Consentimento Informado;

Face ao exposto, o estudo cumpre as normas da Bioética e nada há a opor à sua realização.

Braga, 21 de Dezembro de 2016

O Presidente da Comissão de Ética

(Juan R.Garcia)

PARECER DA COMISSÃO DE ÉTICA

A Comissão de Ética da Casa de Saúde do Bom Jesus, após analisar o pedido de Aníbal Neves Anube mestrando da Escola de Ciências da Saúde da Universidade do Minho, cujo tema é a "Consulta dos processos Clínicos para obter informação sobre dados demográficos e outros", deu parecer positivo.

Na realização desta consulta deverão ficar salvaguardados a confidencialidade e o anonimato das informações obtidas.

Braga, 12 de setembro de 2016

O Presidente

Dr. António Guimarães

INSTITUTO S. JOÃO DE DEUS
Casa de Saúde S. João de Deus
Barcelos

e-mail
kantchea@gmail.com

Exmo. Senhor
Dr. Aníbal Neves Anube

BARCELOS, 16 DE JANEIRO DE 2015.

V-Ref.:
N-Ref.: **D/CSSJD-B-554/2016**
Proc.:
Assunto: PEDIDO DE CONSULTA DE PROCESSOS CLÍNICOS PARA A INVESTIGAÇÃO "ESTABILIDADE DIAGNÓSTICA DE PERTURBAÇÕES PSIQUIÁTRICAS NA PRÁTICA CLÍNICA - UM ESTUDO RETROSPETIVO".

Exmo. Senhor,

Conforme informação prestada pela Diretora Clínica deste Estabelecimento, Dr.ª Emília Pereira, estão reunidas as condições para autorização à investigação "Estabilidade Diagnóstica de Perturbações Psiquiátricas na Prática Clínica - Um Estudo Retrospetivo".

A consulta dos processos clínicos poderá ser feita todos os dias úteis, das 9h às 17h.

Para efeitos de articulação, identifica-se o Secretário de Direção, Vítor Duarte.

Com os melhores cumprimentos,

Isabel Costa Bragança
Diretora da
Casa de Saúde S. João de Deus - Barcelos