INTRODUCTION

Schizophrenia is a serious and debilitating psychiatric disorder that affects nearly 1% of the world's population ***(McGrath et al., 2008).*** IT is a heterogeneous syndrome characterized by perturbations of language, perception, thinking, social activity, affect, and volition ***(Harrison, 2005).***

Also, acute psychosis is a common psychiatric emergency that may present to health services ***(Byrne, 2007)***. Its onset is acute or even abrupt within 48 hours. Their response to antipsychotic drugs is very good and their outcome is usually favorable in spite of the fact that they are usually recurrent. The level of post episodic outcome is more favorable in acute psychosis than in schizophrenia ***(Marneros & Pillman, 2002).***

Schizophrenic patients exhibit impaired social cognition, which appears as difficulties in identifying emotions. Studies showed that the impairment in the functional outcome in schizophrenia is more strongly related to social cognition than neurocognition ***(Arija et al., 2012).***

The term "Social Cognition "generally refers to the mental operations that underlie social interactions including the perception and interpretation of the intentions, dispositions, and behaviors of others with the generation of a response to these behaviors. It consists of sub-domains (theory of mind, social

perception, social knowledge, attributional bias and emotion processing) ***(Green & Leitman, 2008).***

The impairment of social cognition in schizophrenia appears to be unrelated to IQ or to the performance at non-social cognitive tasks ***(Penn & Corrigan, 1997).*** Difficulties in emotion recognition are present before the manifestation of psychosis in high risk individuals ***(Thompson et al., 2011)***.

The Theory of Mind (ToM) refers to the ability to infer mental states (e.g., beliefs, desires, intentions, imagination, emotions) that cause actions ***(Baron-Cohen et al., 2001).*** Poor performance on ToM tasks is associated with social behavioral abnormalities ***(Brüne, 2005).*** The concept of dysfunction of the ToM has been increasingly used in studies involving autistic children and adults (including Asperger's Syndrome) ***(Monteiro et al., 2012).*** Currently, the study of the ToM in other mental disorders such as schizophrenia and its effect on social behavior ***(Brüne & Brüne-Cohrs, 2006).***

There is some evidence in favor of a genetic etiology of the social cognitive impairment in psychosis. AS higher rates of social cognitive impairment have been reported in first-degree relatives as compared to the general population ***(Addington et al., 2008).*** Social cognitive performance was significantly worse in schizophrenic patients compared to siblings and healthy controls ***(Arija et al., 2012).***

The first few years of psychosis appear to be a critical period especially in late adolescence and early adulthood during which intervention needs to be initiated before the consequences of psychosis become more severe ***(Ballageer et al., 2005).***

Most people who have schizophrenia do not experience a complete remission of symptoms. However, this disorder can be managed by a combination of psychosocial therapies and medications ***(Bengston, 2014).*** Even when schizophrenic patients are relatively free of psychotic symptoms, many still have extraordinary difficulty with communication, motivation, self-care, and establishing and maintaining relationships with others. Mostly because illness during the critical career-forming years of life (ages 18 to 35), they are less likely to complete the training required for skilled work. As a result, many with schizophrenia not only suffer thinking and emotional difficulties, but lack social and work skills and experience as well ***(NIMH, 2016).***

Many community-based rehabilitation programs for schizophrenic patients have developed intensive services to improve their social cognition and quality of life ***(Roberts et al., 2010).***

Therefore, this study aimed to asses theory of mind deficit in psychotic spectrum as well as how the symptom profile may affect TOM functioning.

RATIONALE OF THE STUDY

Clinical observation in patients with schizophrenia showed that they suffer not only from positive and negative symptom but also from extraordinary difficulty with communication due to difficulty in ability to infer mental states (e.g., beliefs, desires, intentions, imagination, emotions) that cause actions. It is called the "Theory of Mind" (TOM) impairment which is a relatively new concept of the study of managing schizophrenia. Finding out the correlates of theory of mind deficits as an important first step in the process of better understanding of TOM thus pewing the way for intervention and treatment.

HYPOTHESIS

It is hypothesized that patients with psychotic disorders have theory of mind deficits compared to healthy controls. Theory of mind deficit are more profound among patients with schizophrenia compared to patients with acute psychosis. Also, it is hypothesized that disease variable is linked to Theory of Mind (TOM).

Aim of the Work

1- To assess Theory of Mind (TOM) functioning among a sample of patients presenting with schizophrenia.

2- To assess Theory of Mind (TOM) functioning among a sample of patients presenting with acute psychosis.

3- To compare Theory of Mind (TOM) functioning. Between patients presenting with schizophrenia versus patients presenting with acute psychosis versus healthy controls.

Chapter One

SCHIZOPHRENIA AND ACUTE PSYCHOSIS

Definition of psychosis:

The term "psychosis" is very broad and can mean anything from relatively normal aberrant experiences through to the complex and catatonic expressions of schizophrenia and bipolar type 1 disorder ***(Gelder et al., 2005).***

Generally, Psychosis is characterized by an impaired relationship with reality, it is considered as an important sign of serious mental disorder, people who are psychotic may have either hallucinations or delusion or impaired insight, the term is given to noticeable deficits in normal behavior (negative signs and more commonly to diverse types of hallucinations or delusional beliefs, particularly with regard to the relation between self and others as in grandiosity and paranoia ***(Yuhas, 2013).***

History:

The word *psychosis* was introduced to the psychiatric literature in 1841 by Karl Friedrich Canstatt, Psychosis was first introduced in the mid-19th century for the separation of psychiatric disorders from neurological disorders within the neuroses ***(Bürgy, 2008).***

The word was used to distinguish a condition considered a disorder of the mind, as opposed to neurosis, which was considered a disorder of the nervous system, thus psychoses became the modern equivalent of the old notion of madness, and hence there was much debate on whether there was only one (unitary) or many forms of the new disease ***(Berrios et al., 1994).***

One type of broad usage would later be narrowed down by Koch in 1891 to the 'psychopathic inferiorities' later renamed abnormal personalities by Schneider ***(Bürgy, 2008).***

The division of the major psychoses into manic depressive illness (now called bipolar disorder) and dementia praecox (now called schizophrenia) was made by Emil Kraepelin**,** who attempted to create a synthesis of the various mental disorders identified by 19th century psychiatrists, by grouping diseases together based on classification of common symptoms. Kraepelin used the term 'manic depressive insanity' to describe the whole spectrum of mood disorders, in a far wider sense than it is usually used today. Also named the disorder 'dementia praecox' (early dementia) to distinguish it from other forms of dementia (such as Alzheimer's disease) which typically occur late in life. He used this term because his studies focused on young adults with dementia ***(Modinos & Gemma, 2010).***

The Swiss psychiatrist, Eugen Bleuler, coined the term, "schizophrenia" in 1911. He was also the first to describe the symptoms as "positive" or "negative." Bleuler changed the

name to schizophrenia as it was obvious that Krapelin's name was misleading as the illness was not a dementia (it did not always lead to mental deterioration) and could sometimes occur late as well as early in life ***(Ashok et al., 2012).***

Psychosis is not a diagnosis but a symptom or set of symptoms that can have many different causes, Psychosis may be transient, intermittent, short term or part of a longer term psychiatric condition. Psychotic disorders have a devastating impact on the lives of patients and families, producing substantial morbidity and mortality. Early identification and evaluation of the onset of psychosis is an important health concern as outcomes are improved with earlier detection and intervention ***(Boonstra, 2011).***

If we can identify people who may be at risk of psychosis, we may also have the opportunity to reduce the duration of untreated psychosis (DUP) ***(Shrivastava, 2010).***

On this way, recent studies on high-risk youth or adult for psychosis, recognized what is called psychosis-spectrum (PS) symptoms which prevalent in (5–10%) of the general population, also symptoms of psychosis can influence functioning ***(Calkins et al., 2014).*** Unfortunately (PS) associated with increased risk of conversion to a psychotic disorder ***(McGlashan et al., 2001).*** Evidence based studies about (PS) and have been associated neuroimaging abnormalities ***(Satterthwaite et al., 2015).***

Classifications:

The World Health Organization (WHO) is currently revising the International Classification of Disorders (ICD-10), According to the ICD-10 section "F2 Schizophrenia, schizotypal and delusional disorders" will be renamed in (ICD-11) "Schizophrenia spectrum and other primary psychotic disorders." The use of the term "primary" here could be debated, but the intention is to distinguish these disorders from non-primary psychotic disorders. Psychotic symptoms occurring in mood disorders will be classified among the affective disorders. Accordingly, non-primary (ie, "secondary") psychotic disorders such as psychotic disorders in general medical conditions and psychotic disorders due to substance use or withdrawal will be placed in the sections (or "blocks") of the Mental and Behavioural Disorders chapter corresponding to "Substance-induced disorders" and "Mental and behavioural disorders associated with disorders or diseases classified elsewhere.". According the newly s overall structure being proposed for the ICD-11 block on "Schizophrenia spectrum and other primary psychotic disorders" is as follows: Schizophrenia, Schizoaffective disorder, Acute transient psychotic disorder (ATPD), Schizotypal disorder, Delusional disorder, Other primary psychotic disorders and Unspecified primary psychotic disorders ***(Wolfgang & Geoffrey, 2012).***

Acute Psychosis:

Definition:

Acute psychosis is a common psychiatric emergency that may present to health services other than mental health practitioners ***(Byrne, 2007).***

Diagnosis:

Brief psychotic disorder in Diagnostic and Statistical Manual of Mental Disorder Fifth Edition (DSM-5), is characterized by Delusions - Rapidly changing delusional topics, Hallucinations, Bizarre behavior and posture, Disorganized speech, It should at least one day but not than one month which means patient full remission to the premorbid function through one month, definitely the disturbance shouldn't be explained by major depression or bipolar with psychotic features, Same criteria in (DSM-IV) but (DSM-5) differ by specifiers with or without stress or postpartum or with catatonia. Diagnosis should stress that symptoms of brief psychotic disorder must be distinguished from culturally sanctioned response patterns that may resemble such symptoms. For instance, hearing voices may be a component of some religious ceremonies, this generally would not be considered abnormal by most members of the religious community, and the voices typically would not persist into daily life. Cultural and religious background must always be

taken into account when a judgment is to be made about whether a given patient's beliefs are delusional ***(American Psychiatric Association, 2013).***

The defining clinical features of acute and transient psychotic disorders (ICD-10: F23) are an acute onset and a duration of psychotic symptoms not exceeding 1-3 months. Previous empirical investigations show that patients with this diagnosis have a favorable prognosis, but also a high risk of relapses (58-77%). The diagnostic stability in the further course of illness seems to be low (34-73%) with a frequent diagnostic change to schizophrenia and affective disorders being observed ***(Jäger et al., 2007).***

Onset:

Unfortunately, the median age at onset for the first psychotic episode of schizophrenia is the early to mid-20s for men and the late 20s for women. A prodromal phase that lasts months to years can precede the first psychotic episode ***(Mathews et al., 2013).***

Its onset is acute or even abrupt within 48 hours. Their response to antipsychotic drugs is very good and their outcome is usually favorable in spite of the fact that they are usually recurrent ***(Marneros & Pillman, 2002)***.

Management of acute psychosis:

According to study management principles in acute psychosis: First episode psychosis is a useful diagnosis in itself time will determine the final diagnosis**,** Test for substance misuse, Physical examination is an essential part of regular clinical review, should Identify and change environmental factors that perpetuate psychotic symptoms. Also listening to the patient's relatives is the best way to catch relapse earlier and identify harmful components of the ward environment, Start psychosocial interventions at the earliest opportunity, the extent of symptoms and changes in social functioning determine the diagnosis and predict recovery, a low dose, well tolerated atypical antipsychotic drug will increase medium term adherence and reduce future relapses ***(Byrne, 2007)*.**

Patients with a first episode (even those with substance misuse) are best treated by specialist multidisciplinary early intervention teams that deliver psychosocial interventions as essential adjuncts to drugs ***(Chan, 2017).*** Treatment achieves complete remission, without relapse, in 25% of acute psychotic patients ***(Byrne, 2007)***.

Schizophrenia

Definition

Schizophrenia and related psychotic illnesses belong to group of disorders traditionally called the 'functional psychoses'. 'Functional' in this context means impairment of

brain function without corresponding structural abnormality ***(Semple & Smyth, 2013).***

'Social brain' is the characteristic of schizophrenic patients which means abnormal cortical activation patterns during social tasks, negative symptoms of a sociality and avolition, and deficits in social cognition, and social skills ***(Mehta et al., 2013).***

Schizophrenia most commonly strikes between the ages of (16-30) ***(Kaur & Cadenhead, 2010)***.

The National Alliance on Mental Illness (NAMI), a patient- and family-oriented self-help group, has designated schizophrenia a brain disorder, emphasizing that schizophrenia is not simply a product of dysfunctional parenting or other psychosocial stressors. Studies have consistently shown, however, that both genetic and non-genetic factors play a role in the origin of schizophrenia ***(Mathews et al., 2013).***

Prevalence and incidence:

Schizophrenia occurs throughout the world. The prevalence of schizophrenia approaches 1 percent internationally. The incidence (the number of new cases annually) is about 1.5 per 10,000 people. Slightly more men are diagnosed with schizophrenia than women (on the order of 1.4:1), and women tend to be diagnosed later in life than men. There is also some indication that the prognosis is worse in men ***(McGrath et al., 2008).***

Globally, schizophrenia is a leading cause of disease burden and disability. The lifetime risk of suicide is nearly 7% compared with 14% to 15% for mood disorders such as major depression and bipolar disorder ***(Mathews et al., 2013).***

About 30 to 50% of people with schizophrenia fail to accept that they have an illness or their recommended treatment ***(Baier, 2010).***

Overall Schizophrenia is considered a debilitating mental illness that affects one percent of the population in all cultures. It affects equal numbers of men and women, but the onset is often later in women than in men ***(Stephen & Stephen, 2007).***

Onset:

The onset of schizophrenia usually occurs during late adolescence or early adulthood, course of schizophrenia mostly takes on a persistent course of recurrent acute positive symptom exacerbation accompanied persistent functional and social disability, even in the presence of adequate pharmacological treatment. Females tend to have a later age of onset, and a somewhat better prognosis from the disorder ***(Millan et al., 2014).***

Causes:

It's not known what causes schizophrenia, but researchers believe that a combination of genetic and environmental factors play a role in the development of schizophrenia ***(Owen et al., 2016).***