

# Mental Disorders Diagnosed by Psychiatrist's Clinical Interviews and Results of the Thematic Apperception Test Conducted by Psychologists

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## Abstract

**Background:** One of the most important issues to diagnose mental disorders is the use of independent tools with similar results. Documented history is an important tool to diagnose diseases at each stage. The first and fundamental step in diagnosis is a comprehensive clinical interview.

**Objectives:** The current study aimed to investigate the concordance of mental disorders diagnosed by psychiatrist's clinical interviews and results of thematic apperception test (TAT) conducted by psychologists.

**Methods:** It was a cross sectional descriptive-analytical study. The study population included the patients (male and female) admitted in psychiatry section of Dr. Fatemi hospital in Ardabil, Iran, during 2009-2010. Data were collected from the archive of Ardebil Dr. Fatemi hospital and about 1200 patients were studied. Demographic data of participants including age, gender, marital status, admission date, discharge date and type of insurance were gathered from the recorded documents. The initial diagnosis of psychologist using TAT test was compared with the final diagnosis recorded for the patient attended by physicians. Data were analyzed using SPSS software, ver. 16.

**Results:** Out of 1,200 participants, 660 (55%) were male and 540 (45%) female; 150 (12.5%) subjects were under 25 years old and 284 (23.66%) were over 45 years old. Also, 650 subjects were illiterate and the rest were literate. The results of Chi-square test showed a significant difference between diagnoses of psychiatrist's clinical interviews with TAT results conducted by psychologists ( $P < 0.045$ ). In spite of this difference, the results of TAT test were in relative concordance with psychiatrists' diagnoses for schizophrenia, depression, bipolar depression and anxiety disease.

**Conclusions:** The findings showed a relative concordance between psychiatric interviews and psychological assessments in the clinical diagnosis of mental illness.

**Keywords:** Mental Disorders, Psychological Interview, Thematic Apperception Test

## 1. Background

The multi-axial diagnosis system, formally entered into the field of psychiatry since 1980, concurrent with the release of the third edition of diagnostic and statistical manual of mental disorders (DSM), deals with diagnosis of diseases and psychiatric problems in five-sections (1). This method of coding with different axes was not meant conceptual differences, but aimed to evaluate patients comprehensively based on the biopsychosocial model (2).

Stress aggravates those who have mental disorders. There is the possibility of disease incidence due to biological, psychosocial and social factors as well as the impact of stress inducing factors in persons with mental disorders.

Vulnerability may be environmental, biological or a combination of them. There is also a lot of evidence for the genetic causes (3).

Among the multiple diagnostic axes, the axis is devoted to diagnosis of general medical diseases (1). Mental illnesses are referred to disorders generally characterized by dysregulation of mood, thought, and/or behavior, as recognized by the diagnostic and statistical manual, 4th edition, of the American psychiatric association (DSM-IV). Mood disorders are the most pervasive among mental disorders and include major depression, in which an individual commonly reports feeling for a period of two weeks or more, sadness, uninterested in things that interested

previously, psychomotor retardation or agitation, and increased or decreased appetite since the depressive episode ensued.

The economic burden of mental illness in the United States was about \$300 billion in 2002. Mental illness is an important public health problem; about 25% of U.S. adults have a mental illness since it is associated with chronic medical diseases such as cardiovascular disease, diabetes, and obesity. Mental illness surveillance by organizations such as centers for disease control and prevention (CDC) is a critically important part of disease prevention and control (4). Looking at the resources published in the field of mental disorders in different countries, one could see that about 500 million people worldwide have a kind of mental disorder, of which 50 million people are afflicted with severe mental disorders (5). Over the past three decades, multi-step strategies and diagnostic criteria are used based on current international classification in epidemiological studies of psychiatric disorders, and there is usually an attempt to utilize valid screening tools and standard clinical interviews. Using these tools, researchers can identify the sick in the community to prevent more complications and diagnose their improvement (6). Identifying social and environmental problems in patients with psychiatric disorders is very important due to its important role in creation or exacerbation of psychiatric disorders (7). Several studies showed that medical illnesses in patients with psychiatric disorders generally had a higher prevalence than the general population, and unfortunately, for various reasons, they were not diagnosed in many cases (8). In different studies, the inability rates to diagnose such illnesses were reported from 20% to 72% (9). Mental and behavioral disorders accounted for approximately 7.4% of the global burden of disease and represent the leading cause of disability worldwide (10). Moreover, the lack of proper diagnosis of the mentioned diseases overshadows the accuracy of diagnosis in the other axes, especially in axis I, since in most psychiatric disagreements diagnosis depends on ruling out the general medical factors (1).

Using independent instruments with similar results to evaluate a structure is one of the most important issues to diagnose mental disorders (11). An interesting and influential tool to diagnose a disease at any stage is to get a documentary history, and the ability to execute a comprehensive clinical interview is considered as the first and most fundamental step in the diagnostic evaluation. Therefore, to implement an influential, flexible and fluent interview, mental health professionals should know the basic principles and infrastructure of the interview process (12).

The basic structures of the mentioned assessment methods of psychiatric disorders are not completely identical. The TAT is a projection that includes some pictures

in which subjects are asked to make a story about what he thinks about each picture. Murray (1993) described TAT as follows: "the way which reveals some drives, emotions, feelings, complexes and prominent conflicts of personality to the trained interpretation".

Notable and important point in clinical interviews of psychological tests in the diagnosis of psychiatric disorders is the lack of access to diagnostic tools used in other specialized fields (for example, radiology studies, etc.) (13). In a survey by Fakhari et al., the agreement rate of two methods of clinical interview to diagnose active phase of mental disorders according to DSM-IV-TR and the Minnesota multiphasic personality inventory (MMPI), they found that the reliability of clinical interview and MMPI were not acceptable. This test was mainly useful to rule out the disorders (13). To evaluate the agreement rate of the two methods of clinical interviews and MMPI test to diagnose personality disorder, Nejatbakhsh et al., conducted a study to investigate the validity of MMPI (shortened form). Currently, this test is commonly used in Iran as a confirmed clinical diagnostic method. Their research results showed a relative convergence between MMPI test and clinical diagnosis. Comparing the specificity of this test with its sensitivity indicated its applicability to rule out the personality disorders (12). Nejatbakhsh et al., aimed to assess the extent of agreement in the results obtained from two clinical interviews in accordance with DSM-IV-TR and MMPI to diagnose mood disorders; they performed another research in Tabriz and showed weak convergence between MMPI and clinical diagnosis. High specificity of this test compared with its low sensitivity, showed that it was more useful to rule out psychiatric mood disorders (confirmation of the absence of mood disease) than its diagnosis confirmation (confirmation of the presence of mood disease) (14). In the study by Kashner titled "the influence of the structured clinical interview of physicians on the mental health of society" on 158 patients, randomly selected from patients referred to psychiatric clinics, showed that a structured clinical interview was useful for psychiatrists to diagnose the disease accurately in mental health clinics (15). Each of the diagnostic methods has advantages and defects, and none of them can be considered as the best measure. Although, the structured interviews to diagnose mental disorders indicate high validity through their classified examination, they were not similar to other methods. To increase the utility of a variety of psychological tests and since no study was conducted in this field in Iran.

## 2. Objectives

The current study aimed to concord mental disorders diagnosis by psychiatrists' clinical interview and

psychologists-conducted TAT result.

### 3. Methods

It was a cross sectional descriptive-analytical study. The study population included about 1200 cases, all patients admitted to psychiatric wards (male and female) from January 2009 to December 2010 and who took TAT. In TAT test, classified as a nonstructural interview, 30 pictures were shown to the participants and asked them to make a story about each.

The data were taken from the archive center of Ardebil Dr. Fatemi Hospital in Iran.

The study tool was a check list with two parts: demographic data (including age, gender, marital status, admission date, discharge date, type of insurance) and the second series of data included initial diagnosis using TAT test by the ward psychologist, and the final diagnosis listed in the patients' records by the attending physician. In addition to the methods of descriptive statistics, Chi-square and Spearman correlation methods were used for the statistical analysis using SPSS software, ver. 16. During the study, being fiduciary, getting permission and consent from the relevant authorities and considering values and culture of the society were taken into account.

### 4. Results

According to results, the number of people admitted to the hospital was 660 (55%) male and 540 (45%) female. Among the participants, 150 (12.5%) were less than 25 years, 766 (63.83%) were 25-45 year, and 284 (23.66%) over 45 years. Results showed that 650 (54.1%) patients with psychiatric disorders were illiterate, 375 (31.25%) were under high school diploma, 102 (8.5%) had associated degree, and 73 (6.08%) had bachelor's degree; 380 (31.66%) subjects were single, 775 (64.58%) married and 45 (3.75%) divorced; 850 (70.83%) patients were under insurance cover and 350 (29.17%) had no insurance.

According to [Table 1](#), TAT test results were somewhat in concordance with psychiatrist's diagnosis to determine schizophrenia, monopolar and bipolar depression and generalized anxiety. The highest Kappa coefficient (0.686) was observed in the cut-point 13 that showed a good diagnosis. After that the second order of Kappa coefficient was related to monopolar depression with a cut-off point of 12 (0.623). The schizophrenia (0.604) and anxiety (0.559) followed.

According to [Table 2](#), the hypothesis of the study "diagnosis of mental disorders is possible with clinical interview and TAT test conducted by psychiatrists and psychologists" was confirmed ( $P=0.045$ ). It means that diagnosis of

mental disorders with TAT test conducted by psychologists is somewhat in concordance with the results of clinical interview conducted by psychiatrists.

### 5. Discussion

The findings indicate a moderate agreement between psychiatric interviews and psychological assessments with thematic apperception test to determine the clinical diagnosis of mental illnesses (high Kappa coefficient for monopolar and bipolar depression disorder). Various reasons can be proposed to explain these findings; first, psychiatric diagnoses are performed based on DSM criteria, reflecting an empirical perspective, while TAT test reflects a theoretical perspective.

The value of TAT test is especially on the grounds that this test reflects the basic and inhibited trends that the subjects cannot confess due to their unwillingness to disclose to these trends. This test is different from projective drawings or ink blot tests such as the Rorschach or Holtzman inkblot technique test (HIT), since TAT cards provide more structured stimuli and require more organized and more sophisticated verbal responses. In addition, TAT is mostly based on qualitative interpretation methods, and evaluates the person's here and now life situations rather than basic and fundamental infrastructures of personality. The TAT test is one of the psychological tests since the beginning of the development, and is widely used in clinical studies, while it affects a pattern for many of the same texts. TAT test consists of 20 cards with vague images, the subjects are instructed to make a story about each image and explain about thoughts and feelings of their heroes, the events that cause the current situation and the final results of the story. Efforts to identify individuals based on their interpretations of the world have a long and respected history. The interpretation of paintings (and generally projective test) is mainly based on psychoanalytical theories. One of the underlying assumptions of this approach is that many important aspects of personality are not gathered through conscious self-evaluation and therefore the questionnaires have limited value for this purpose. To obtain an accurate picture of the inner world of a person, unconscious defense and differences should be prevented. Hence, from the psychoanalysis viewpoint, the presence of an indirect approach such as using a projective drawing is essential. The projective paintings are expressive techniques, since they indicate some aspects of the individual features while he/she is dealing with some kinds of activity. Other examples of expressive texts include the interpretation of the game, role, theater, children's game or understanding the hidden meaning of telling jokes. In general, using projective-expressive techniques showed

**Table 1.** Comparing Compliance of Diagnosis TAT and Clinical Interview by Psychiatrists

Type of Disease	Cut-off Point	Number of Diagnosed Patients by Clinical Interview	Number of Correct Diagnoses With TAT According to Clinical Interview	Positive Predictive Value	Negative Predictive Value	Kappa Coefficient	Significant Level
Schizophrenia	14	250	156	80.4	80.0	0.604	P < 0.001
Monopolar depression	13	355	178	92.1	79.3	0.686	P < 0.001
Bipolar depression	12	340	180	91.4	75.4	0.623	P < 0.001
Generalized anxiety	11	82	34	90.6	71.9	0.559	P < 0.001
PTSD	10	68	26	95.8	68.1	0.459	P = 0.06
Intellectual and practical obsession	9	105	66	100	66.7	0.474	P = 0.07

Abbreviations: PTSD, posttraumatic stress disorder; TAT, thematic apperception test.

**Table 2.** Chi-square Coefficient Between Psychiatrist's Clinical Interview and TAT Test

Variables	Clinical Interview and TAT Test
Chi-square	0.12
Degree of freedom	1198
Significant level	0.045

Abbreviation: TAT, thematic apperception test.

that there are many different approaches that projective drawings are among them. Some clinicians ask the subjects to draw merely a human picture; while other clinicians might ask him to draw an image of an opposite gender, a house and even a tree, to make a story about what he/she has drawn, or use paints or colored pencils. Another explanation of TAT is that it is limited in terms of gathering data and evaluating clinical symptoms and diagnosis; therefore, the clinical psychologist may not be successful in his diagnosis.

Another confounding factor in the study was the education level of the subjects; therefore, the patients who had a relatively higher level of education could express their symptoms comfortably when describing the cards, and this could help the psychologist to diagnose more easily. The sensitivity of this test is rather higher for schizophrenic disorder, monopolar and bipolar mood disorder.

It can be concluded that in most of the studied disorders this test was mainly useful to rule out the mentioned psychiatric disorders than confirming the diagnosis. The rate of agreement in schizophrenic and mood disorders

was more significant than the rate in the rest of studied disorders. Nordgaard et al., concluded that fully structured interview is neither theoretically adequate nor practically valid to obtain psycho-diagnostic information. Failure to address these basic issues may contribute to the current state of malaise in psychopathology (16).

Important differences in clinical practice exist between psychiatrists and psychologists. García-Nieto et al., examined the diagnoses assigned to the patients who received treatment from psychiatrists and psychologists in outpatient settings of Madrid, Spain, from 1980 to 2008. They concluded that the psychologists were more likely to see anxiety-related disorders; whereas the psychiatrists tended to see disorders with a more prominent biological underpinning such as schizophrenia or bipolar disorder. The profile of the patients visited by the psychologists is different from those of the psychiatrists. Disorders whose development was more related to distress were usually treated by the psychologists; whereas disorders with a more prominent biological underpinning were usually treated by the psychiatrists. In addition, the dramatic increase in the diagnosis of adjustment disorder might be related to the increasing psychologization and medicalization of the difficulties of everyday life (17).

Limitations of the study were that it was a descriptive and retrospective study, while an interventional study was better. Another limitation was the period of study (two years), studies with longer periods are recommended. The study collected data from the archive center of Ardebil Dr. Fatemi Hospital, Iran, so some information might be missing in the files.

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## Footnote

**Conflict of Interest:** There was no conflict of interests regarding the material and results of the current study.

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