

Thought Processes in Paranoid and Nonparanoid Schizophrenia

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The distinction between paranoid and nonparanoid schizophrenia may serve as a basis for better understanding of aetiology of the disorder. There are several indicators that the distinction is clinically valid. This study deals with the possible differences between the two groups in terms of abstraction ability, and intellectual performance. Following the Tsuang-Winokur criteria, 15 paranoid schizophrenic subjects, 15 nonparanoid schizophrenics and 20 age and education matched controls were compared on the Egyptian Colloquial Proverb Test (CPT) and the Wechsler Adult Intelligence Scale (WAIS). Nonparanoid schizophrenics performed poorly on the majority of dimensions of both tests. Paranoid schizophrenic subjects were less impaired but performed worse than controls. The results indicate a continuum of general dysfunction in abstraction and intellectual performance rather than discrete abnormalities that distinguish these two types of schizophrenia from normals. They therefore support a process approach to conceptualizing schizophrenia in which the paranoid type is regarded as a more integrated form of the same disorder rather than a distinct diagnostic entity.

(Egypt.J. Psychiat.,1992,15:71-80).

Introduction

Meaningful research into the aetiology of psychiatric disorders requires first and foremost proper clinical understanding in the sense of homogeneous symptom groups. The aetiology of schizophrenia is no exception. Ever since Kraepelin described the original three subtypes there have been ongoing attempts to understand the heterogeneity in this disorder with the aim of providing meaningful subgroups in terms of aetiology and management. The controversy has not been resolved, and it is still unclear whether the schizophrenic syndrome represents a single disorder with different degrees of severity, and different clinical presentations, or whether further understanding depends upon the successful separation of patients into clinically

distinct categories that probably have different aetiologies.

The most recent attempts at classifying the schizophrenic syndrome, embodied in the DSM-III-R (American Psychiatric Association,1987), and the ICD-10(WHO,1991) witness a considerable convergence of opinion on the content of symptoms and types of what may be considered schizophrenia. Still there seems to be an undue emphasis on reliability of the diagnostic process at the expense of empirical validity of the disorder. Controversy lingers in the form of disagreement on the minimum duration for diagnosis, and the inclusion of subtypes notably simple schizophrenia. Both disciplines have given less emphasis to the characteristic disturbances in the process of thought and abnormalities in reasoning and abstraction that have been traditionally associated with the disorder.

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A large body of literature looking into the heterogeneity of the schizophrenic syndrome focuses on the distinction between the paranoid and nonparanoid variants of the disorder. Winokur and associates (1974) found nonparanoid patients to manifest an earlier age of onset, and more severe social dysfunction than the paranoid patients. Paranoid patients are more likely to be employed, and married, and less likely to have a family history of schizophrenia (Tsuang and Winokur, 1974). Disorganized thought, affect changes, bizarre behaviour, and motor symptoms were more characteristic of nonparanoid cases, whereas delusions, hallucinations, and unusual thought content were more characteristic of paranoid cases. Cluster analyses of symptoms and premorbid characteristics support the paranoid-nonparanoid distinction (Farmer et al., 1983). The distinction also has some predicative validity since nonparanoid patients have a poorer short and long-term outcome (Kendler et al., 1984). Paranoid patients have been found to differ from nonparanoid patients on a number of psychological test parameters (Reed, 1968).

The present study tests the paranoid-nonparanoid distinction from the viewpoint of the thought process. Specifically, this study tests for differences in intellectual performance, levels of abstraction, the quantity and the quality of associations. We hypothesize that compared to controls, paranoid and nonparanoid patients will be impaired in these aspects of thought and that nonparanoid patients will be more impaired than paranoid cases. The hypothesis implies that no firm grounds exist for excluding paranoid schizophrenia as a distinct subgroup apart from being a more integrated form of the disorder.

Subjects and Method

Thirty male schizophrenic subjects diagnosed following the guidelines of the Egyptian Diagnostic Manual of Psychi-

atric Disorders, DMP-I (Egyptian Psychiatric Association, 1975) were included in the study. Cases were diagnosed by the agreement of two qualified psychiatrists. They included 15 cases of the paranoid type, 7 chronic undifferentiated, 5 hebephrenic, 1 catatonic, 1 schizoaffective, and 1 simple type. The Tsuang-Winokur (T-W) criteria for paranoid and hebephrenic schizophrenia (Tsuang et al., 1988) were applied post-hoc to the socio-familial and symptomatic features of the subjects under study. The thirty subjects were divided into two groups: a paranoid group (N=15) and a nonparanoid group (N=15). Subjects with well organized delusions and hallucinations but who in addition exhibit behavioral, affective and thought features of disorganization were diagnosed as undifferentiated schizophrenia in this study and were included according to the scheme of Tsuang and Winokur in the nonparanoid group.

A control group comprising 20 adult males was included in the study. Controls had no psychiatric complaints, past or family history of psychiatric disorder. Paranoid subjects (mean age 29.8 ± 6.2 ; years of education 13 ± 3.2), nonparanoid subjects (mean age 27 ± 6 ; years of education 12.3 ± 3.4) and controls (mean age 25.9 ± 5.6 ; years of education 14.7 ± 3.6) were matched on both variables ($F=1.93$, and 2.19 respectively, N.S.).

All 50 subjects were individually tested by:

1. The full Arabic version of the Wechsler Adult Intelligence Scale, WAIS (Melika, 1968).

2. The Egyptian Colloquial Proverb Test, CPT (Rakhawy, 1978). This test evaluates abstraction ability quantitatively through the responses on 5 standard questions to each of five Egyptian proverbs. The questions evaluate different levels of abstraction testing the ability of the subject to give the abstract meaning of the proverb (desymbolization), his ability to apply it in a real life example

(abstract-application), his ability to give a maxim or proverb with similar meaning (hyperabstraction), his ability to correlate the stimulus proverb with an offered selection of proverbs (correlation with substitute proverbs), and his ability to select the abstract meaning of the proverb from 3 alternatives (correlation with meanings). The whole procedure is tape recorded, and the subject's responses are evaluated by the consensual agreement of two qualified trained psychiatrists without awareness of the diagnosis. The overall responses of each subject are then evaluated for poverty of speech, poverty of thought according to the scheme of Andreasen (1986), and for the presence of bizarre responses. The detailed technique of administration and scoring have been published elsewhere (Rakhawy, 1978; Amin,1982) Hamdi,1992).

Results

A-Proverb Interpretation

The data comparing the three samples at different levels of abstraction reveals a continuum of declining performance. Controls achieve the highest mean scores at all levels, while paranoid subjects have intermediate scores and non-paranoid schizophrenic subjects obtain the least mean scores (tables1 and 2).

1.Desymbolization(table1)

Desymbolization (Benjamin,1944)

Table 1

Mean Scores on Desymbolization and Abstract Application of Proverbs in Paranoid Schizophrenia, Nonparanoid Schizophrenia and Normal Controls.

	Controls	Paranoid schiz.	Nonparanoid schiz.	U-test*	P
Desymbolization	13.8	9.66	5.64	56	< 0.02
Abstract application	11.3	6.43	2.44	53	<0.02

* Mann - Whitney U-Test.

signifies the ability to give an abstract meaning to the stimulus proverb. It is scored on a 0-4 point scale. The subject receives a full score on abstract meaning only when he can decode all the symbols of the proverb correctly. Nonparanoid schizophrenics score lower than the paranoid schizophrenics and the latter have lower mean scores than controls. The Mann Whitney U test (Roscoe,1969) shows a statistically significant difference ($P < 0.02$).

2. Abstract application (table1)

Abstract application is tested by the ability of the subject to give a concrete situation from every day life to which the proverb may be applied. It is also scored for each proverb on a 5 point scale. Scoring is made after consideration of the thematic content of the situation and its logical coherence i.e. whether it conforms to reality or not, and whether it expresses the meaning of the stimulus proverb or not.

Similar to desymbolization there is a continuum of declining performance with controls scoring highest, paranoid subjects scoring less, and nonparanoid subjects getting the least scores. The differences are significant at the 0.02 level.

3.Hyperabstraction (table 2)

Hyperabstraction is tested by the ability of the subject to provide an alternative proverb or maxim that conveys the same meaning of the stimulus proverb. It is the most difficult aspect of the CPT, since it includes a mental activity where the subject can keep in mind and compare the essential meaning of the stimulus proverb and another proverb or maxim. The verbal responses to this step in the test are categorized as either "correct", "incorrect", or "absent". The subject's response is coded as absent when he cannot

Table 2

Levels of Abstraction and Thought Disorder Revealed Through Proverb Interpretation

	Controls		Paranoid schiz		Non Paranoid schiz			
	No	%	No	%	No	%	X ²	P
Hyperabstraction								
Absent	76	76	53	70.7	54	72.0		
Incorrect	15	15	12	16.0	17	22.7	4.39	>0.25
Correct	9	9	10	13.3	4	5.3		
Proverb correlation								
Word association	4	4	15	20.0	32	42.7		
Meaning association	88	88	51	78.0	27	36.0		
Paradoxical association	8	8	9	12.0	16	21.3	54.8	<0.001*
Explanation correlation								
Abstract	91	91	49	65.3	25	33.3		
Abstract - Concrete	9	9	15	20.0	32	42.7		
Concrete	0	0	11	14.7	18	24.0	65.71	<0.001*
Bizarre responses								
Absent	18	90	7	46.7	4	26.7		
Present	2	10	8	35.3	11	73.3	15.24	<0.005*
Poverty of speech								
Absent	17	85	7	46.7	4	26.7		
Present	3	15	8	53.3	11	73.3	12.59	<0.01*
Poverty of thought								
Absent	13	65	4	26.7	0	0.00		
Present	7	35	11	73.3	15	100	16.65	<0.005*

* Statistically significant

give any response to this enquiry about the proverb.

This step is helpful if the subject fails on the previous steps. For each stimulus proverb the subject is offered a choice of three mean-

Correct hyperabstractions are infrequent in the sample as a whole. There is no statistically significant difference among the three groups on this dimension. However, correct hyperabstractions are more frequent in paranoid schizophrenics (13.3%) than normals (9%).

4. Correlation with substituted proverbs (table 2)

The subject is offered a choice of three alternate proverbs to the stimulus proverb. One proverb gives the proper meaning, the second gives an opposite meaning, and the third is similar to the stimulus proverb in one or more words. The subject has the choice of making a meaning association, a paradoxical association, or a word association respectively (Table 2). Nonparanoid schizophrenic subjects show the maximum impairment, with paranoid schizophrenics having intermediate scores and controls having the highest frequency of meaning associations (88%). Word association is higher in nonparanoid schizophrenics than in paranoid schizophrenics (42.7% and 20% respectively). Paradoxical associations are also higher in the nonparanoid group (21%) compared to the paranoid group (12%). The differences are highly significant ($P < 0.001$).

5. Correlation with verbal explanations (table 2)

This step is helpful if the subject fails on the previous steps. For each stimulus proverb the subject is offered a choice of three mean-

Table 3
WAIS Scores in Controls, Paranoid and Nonparanoid Schizophrenia

	Controls N=20	Paranoid N=15	t*	P*	Nonparanoid N=15	t**	P**
Verbal score	68.6 ± 13.5	26.4 ± 13.8	2.78	<0.01	45.7 ± 14.9	2.03	<0.05
Performance score	55.4 ± 11	43.4 ± 9.72	3.30	<0.01	34.5 ± 13	2.16	<0.05
I.Q.	108.8	94.93	2.73	<0.01	81.53	2.20	<0.05

* Student Test for controls paranoid schizophrenia

** Student Test for paranoid versus nonparanoid schizophrenia

ings one of them is abstract, the second is concrete and the third is partly abstract. Responses are scored accordingly. The paranoid group gave more "abstract" responses (65.3%) than the nonparanoid group (33.3%) while the nonparanoid group shows a higher frequency of "concrete" responses (24%) than the paranoid group (14.6%). The differences among the three groups are highly significant ($P < 0.001$)

6. Bizarre responses (table 2)

An overall estimate of bizarreness was assigned to the responses on desymbolization, abstract application, and hyperabstraction of the CPT. Bizarreness was considered present when the subject's responses were either irrelevant to the question, logically inconsistent, or

but not between the two groups of schizophrenia ($X^2 = 1.29, N.S.$).

7. Poverty of speech and thought (table 2)

According to the definitions offered by Andreasen (1986); both poverty of speech and thought are most common in the nonparanoid group (73% and 100% respectively). They are still present in more than half and 73% of the responses of the paranoid group, and detected on 15% and 35% respectively of the control subjects. The differences are significant at the 0.005 level for poverty of thought and at the 0.01 level for poverty of speech. Poverty of speech is not significantly different between controls and the paranoid group ($X^2 = 1.29, N.S.$).

B- Intellectual Performance

Through the WAIS control subjects have the highest mean verbal score, performance score, and I.Q. Paranoid schizophrenic subjects have intermediate scores and nonparanoid schizophrenic achieve the least scores (table 3). All the differences between controls

Table 4
WAIS Scatter Index in Controls, Paranoid and Nonparanoid Schizophrenia

	Controls N=20	Paranoid N=15	Nonparanoid N=15	t**	P**
Verbal Index	10.8 ± 46.8	10.29 ± 8.8	13.22 ± 59	0.71	N. S.
Performance Index	8.43 ± 6.8	757 ± 5.8	99 ± 8	0.46	N. S.
Total Index	16.45 ± 12.7	16.77 ± 13.5	20.23 ± 155	0.37	N. S.

* One way ANOVA NS.= Nonsignificant.

Table 5
WAIS Subtest Scores in Paranoid and Nonparanoid Schizophrenia and Controls

	Paranoid Mean $\pm$ S.D.	Nonparanoid Mean $\pm$ S.D.	Controls Mean $\pm$ S.D.	F*	P
Information	10.5 $\pm$ 2.5	8.2 $\pm$ 2.5	11.1 $\pm$ 2.5	5.92	<0.01
Comprehension	10 $\pm$ 4.6	8 $\pm$ 4.1	12.7 $\pm$ 2.6	6.78	<0.01
Digit span	8.3 $\pm$ 3.4	7.5 $\pm$ 2.8	10.1 $\pm$ 3.3	3.24	<0.05
Arithmetic	6.6 $\pm$ 2.1	5.7 $\pm$ 3.2	11.1 $\pm$ 2.7	20.39	<0.001
Similarities	10.3 $\pm$ 3.1	7.7 $\pm$ 3.6	12.4 $\pm$ 2.96	9.26	<0.01
Vocabulary	10.7 $\pm$ 2.6	8.7 $\pm$ 2.2	11.8 $\pm$ 1.9	8.36	<0.01
Verbal Score	56.4 $\pm$ 13.8	45.7 $\pm$ 14.9	68.6 $\pm$ 13.5	11.53	<0.01
Picture arrangement	8.7 $\pm$ 2.9	6.7 $\pm$ 3.98	10.4 $\pm$ 2.8	5.59	<0.01
Picture completion	9.3 $\pm$ 2.1	7.7 $\pm$ 3.2	10.2 $\pm$ 2.1	4.45	<0.05
Block design	8.8 $\pm$ 3.1	6.4 $\pm$ 3.3	11.5 $\pm$ 3.3	10.98	<0.01
Object assembly	8.1 $\pm$ 2.8	6.6 $\pm$ 3.3	10.5 $\pm$ 2.5	8.33	<0.01
Digit symbols	8.5 $\pm$ 2.4	7.4 $\pm$ 1.9	12.8 $\pm$ 2.6	26.82	<0.001
Performance Score	43.4 $\pm$ 9.72	34.5 $\pm$ 13	55.4 $\pm$ 11	15.04	<0.005
Total Score	99.8 $\pm$ 22	80.5 $\pm$ 26	123 $\pm$ 1.1	14.94	<0.005

* One way ANOVA

and the para noid group are significant at the 0.01 level while those between the paranoid and nonparanoid groups are significant at the 0.05 level.

A scatter index was calculated according to the scheme of Melika(1968) for the verbal, performance and total WAIS scores in the 3 groups. The index is calculated by subtracting the score of each subject from the mean score, the deviations are then summed up and divided by the number of subjects to obtain a mean index of scattering of scores on the particular measure(table 4). Analysis of variance for the scores in the three indices (verbal, performance, and total) showed no significant differences among the controls, paranoid group, and nonparanoid group.

Analysis of individual subtest scores in controls and paranoid subjects indicate that the significant differences may be attributed to the arithmetic subtest ($t=5.33$, $P<0.001$) and to a lesser extent the comprehension subtest ($t=2.17$ $P<0.05$). On

the performance subtests paranoid schizophrenics scored significantly less than controls on block design ($t=2.77$, $P<0.01$), object assembly ($t=2.62$ $P<0.02$), and digit symbols ($t=5.07$, $P<0.001$). The differences between the paranoid and nonparanoid groups may be attributed to three verbal subtests viz information ($t=2.45$), similarities ($t=2.16$), and vocabulary ($t=2.23$), and one performance subtest viz block design ($t=2.08$). All the differences are significant at the 0.05 level.

Nonparanoid schizophrenic subjects have consistently lower mean scores than the paranoid group on all the WAIS subtests (table 5).The latter occupy an intermediate position with controls having consistently higher mean scores. The differences are mostly significant due to the wide separation between the scores of the nonparanoid group and the controls. The widest differences are detected in arithmetic and digit symbols, and the least difference is in digit span and picture completion.

Discussion

There is a strong rationale for the distinction between paranoid and nonparanoid schizophrenics (Lang and Buss, 1965; Reed, 1968; Chapman and Chapman, 1973). This study lends further support to the distinction by illustrating that both groups differ when tested for intellectual and abstraction ability. The differences are demonstrated on two independent tests of intellectual performance. The Arabic version of the WAIS has been standardized and used extensively in Egyptian studies. The CPT has demonstrated adequate ability to distinguish between schizophrenic and normal subjects at different levels of abstraction traced in the present study (Hamdi., 1992).

The results of WAIS assessment in the present study run parallel to the traditional literature as regards the more deterioration of nonparanoid schizophrenics than the paranoid schizophrenic (e.g. Kingsley and Struening, 1966 and Lubin et al., 1962). The performance of schizophrenic subjects on the WAIS has been associated with a number of additional abnormalities (Lehmann and Cancro, 1985). These include considerably higher verbal than performance scores, a wide scatter in scores on the various subtests reflecting uneven intellectual functioning and low scores on mental arithmetic, picture arrangement and a relatively intact digit span. Many of these abnormalities could be due to the inclusion of a heterogeneous population of schizophrenic subjects in these studies. The present study shows an even impaired performance on the WAIS by both schizophrenic groups. The performance becomes uniformly lower in the nonparanoid group to a significant degree. The findings of the present study do not indicate a difference between verbal and performance scores higher than that of normal controls, ranging between 11 and 13 points in the three groups. According to Melika (1968) a verbal-performance discrepancy of less than 15 does not have a

diagnostic significance. In his own series, Melika reported a much smaller verbal-performance discrepancy in schizophrenic subjects. Again, there is no evidence from the analysis of the verbal, performance and total scores that there is a significant scattering in the scores in the three groups under study.

Most of the differences between schizophrenics and controls on the WAIS were statistically significant. This finding may be attributed to the uniformly lower performance of the nonparanoid subjects. This preempted further analysis of the data in terms of constellations of subtest scores. When the paranoid group is compared to the controls a different pattern of impairment emerges than that which exists within the group of schizophrenic disorders. Compared to controls paranoid schizophrenics are impaired on more performance than verbal subtests. The opposite is true for the differences between paranoid and nonparanoid schizophrenics. If paranoid schizophrenia is considered a less virulent form of the disorder, and there are a number of prognostic and management indicators that this is the case, then the beginnings of departure from normality manifest in more complex and non-verbal intellectual functions that are influenced by training and motivation. In severer forms of the disorder verbal processes, abstraction and concept formation start to suffer appearing in the differences detected in the present study in the similarities, and vocabulary subtests. These distinctions in pattern of impairment of intellectual functions may be blurred if a mixed cohort of schizophrenic subjects is studied or when nonparanoid cases are studied in isolation and compared to controls.

The Colloquial proverb test aims at a detailed evaluation of the process of abstraction. The findings here indicate a progressive deterioration in abstraction ability tested from multiple angles from normal controls to the paranoid subtype and lastly to the nonparanoid subjects.

Such differential deficit shows that the more we are in the direction of disorganization and negative symptoms, the less the patient is able to abstract. This study does not show, however whether such disability is an expression of a basic failure to formulate a concept or a defensive de-abstraction mechanism. It demonstrates the heterogeneity of the schizophrenic syndrome from the viewpoint of intellectual functioning and abstraction ability with a continuum of abnormalities from normal to paranoid and lastly nonparanoid subtypes. These abnormalities are not only quantitative, but also qualitative.

The formulation and scoring method of the CPT allow for testing a number of variables that seem to distinguish the subgroups of the schizophrenic disorder on the basis of successive stages of impairment. For example, nonparanoid schizophrenics tend to make more paradoxical associations with substitute proverbs than paranoid schizophrenics. This finding is based upon the step in which the subject selects a proverb that has a meaning opposite to the stimulus proverb rather than selecting one that has the same meaning or only a word association with the stimulus proverb. Paradoxical associations may be considered an intermediate step in the breakdown of concepts similar to defining words by their opposites when the proper definition cannot be reached. It entails that some form of abstraction has taken place but has not been completed. The higher scores of nonparanoid schizophrenics on this step validates the finding that as a group they are more impaired than paranoid schizophrenics.

The research literature points that a significant proportion of cases of schizophrenia alter their presentation with progress of the disorder. Thus Depue and Woodburn (1975) have found that over a 10 year period half a cohort of paranoid schizophrenics changed to a nonparanoid diagnosis. Kendler et al., (1985) examined the stability of subtype diagnosis

over a 30-40 year period. Only 41% of the paranoids and 29% of the hebephrenics did not change diagnostically over the follow-up period. They conclude that subtype diagnosis is not a consistent trait of a schizophrenic illness. The continuum of psychopathology in this study illustrates the viewpoint of the Egyptian Diagnostic Manual that schizophrenia may be looked at as a continuing process of disorganization in many cases. Such process manifests with various degrees of disorganization of thought and failure of abstraction in different subjects examined at different points of the march of the disorder (Rakhawy et al., 1983a,b,;1987) There is no contradiction between this hypothesis and the possibility that the process may come to a standstill in many patients with a consequent limited degree of intellectual impairment, or that a significant proportion of cases start the illness by a fulminating disorganization warranting a hebephrenic diagnosis from the onset of disorder. The study points out that when a cohort of schizophrenic patients is examined there are considerable intragroup differences as there are between schizophrenics as a whole and controls. The findings agree with the statement of Tsuang et al., (1988) that subtype research is difficult to interpret especially if different studies are examining patients at different phases of the illness. These differences may be usefully avoided by grouping schizophrenic subjects along a paranoid nonparanoid continuum that reflects degrees of deterioration and impairment rather than distinct syndromes.

References

- American Psychiatric Association (1987). *Diagnostic and Statistical Manual of Mental Disorders. DSM III-R* (3rd edition - Revised), Washington, D.C.:
- Amin Y.(1982) *Clinical and Psychometric Assessment of Disturbance of the Process and Content of Thought in Egyptian Schizophrenic Patients*. Unpub-

- lished M.D. thesis presented to the Faculty of Medicine, Cairo University.
- Andreassen, N.C. (1986) : Scale for the assessment of thought, language and communication (TLC). *Schizo. Bull.* **12**: 381-473.
- Benjamin, J. D. (1944) A method for distinguishing and evaluating formal thinking disorder in schizophrenia. In *Language and Thought in Schizophrenia* (Ed. J. S. Kasanin) Los Angeles : University of California Press, 65-90.
- Chapman, L. J. and Chapman, J. P. (1973) *Disordered Thought in Schizophrenia*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Depue R.A., and Woodburn L.(1975) Disappearance of paranoid symptoms with chronicity. *J. Abnor. Psychol.*, **84**: 84-86.
- Egyptian Psychiatric Association, (1975) *Diagnostic Manual of Psychiatric Disorders (DMPI)*,Cairo: The Egyptian Psychiatric Association.
- Farmer,A.E.,McGuffin P., and Spitznagel E.L. (1983) Heterogeneity in schizophrenia: a cluster analytic approach. *Psychiat. Resea.* **8**:1-12.
- Hamdi, E (1992) Differentiation between schizophrenia and normal subjects through a culturally derived proverb test *Egypt. J. Psychiat.*, (In press).
- Kendler K.S., Gruenberg A.M., and Tsuang M.T.(1984) Outcome of schizophrenic subtypes defined by four diagnostic systems. *Arch. Gen. Psychiat.* **41**:149-154.
- _____ (1985) Subtype stability in schizophrenia. *Amer. J. Psychiat.* **142**: 827-832.
- Kingsley L., and Struening, E. L. (1966) : Changes in intellectual performance of acute and chronic *schizoph. Psychol. Reps.*, **18**: 791-800.
- Lang, P. J., & Buss, A. H.(1965) Psychological deficit in schizophrenia. II- Interference and activation. *J. of Abnor. Psychol.*, **70**: 77-166.
- Lehmann,H.E., and Cancro R.(1985) Schizophrenia:clinical features. In *Comprehensive Textbook of Psychiatry*. (H.I. Kaplan, and B.J. Sadock eds.) 4th Ed., Baltimore : Williams and Wilkins.
- Lubin, A. , Gieseck, C. F. and Williams, H. L. (1962) : Direct measurement of cognitive deficit in schizophrenia. *J. Consul. Psychol.*, **26**: 130-143.
- Melika L.K.(1968) *The Wechsler-Bellevue Intelligence Scale* (Arabic version).Cairo: El-Nasr Printing.
- Rakhawy Y. (1978) The Colloquial Proverb Test. In Amin, Y. *A Study of Types of Schizophrenia*. Cairo: Dar El-Ghad Scientific Publications.
- _____ Amin Y., Hamdi E., Mahfouz R., & Howaidi M., (1983a). Thought disorder in schizophrenia : Relation to activity and temporal dimensions (Part-1). *Egypt. J. Psychiat.* **6**: 76-99.
- _____ (1983b) Thought disorder in schizophrenia : Relation to activity and temporal dimensions (Part II). *Egypt J. Psychiat.*, **6**: 213 - 238.
- _____ Amin Y., Hamdi E., Mahfouz R., Howaidi M., and Arafa M. (1987), Characteristics of thought disorder in schizophrenia : A comparative study. *Egypt. J. Psychiat.*, **10**: 1& 2
- Reed J. L. (1968) : The proverb test in schizophrenia. *Brit. J. Psychiat.*, **114**: 317-321.
- Roscoe,J. T. (1969) : *Fundamental Research Statistics for the Behavioral Sciences*. New York : Holt Rinehart and Winston Inc.
- Tsuang M.T., Faraone S.V., and Day M.(1988) Schizophrenic Disorders. In (A.M. Nicholi Ed.) *The New Harvard Guide to Psychiatry*. Cambridge : Harvard University Press.
- and Winokur G. (1974) Criteria for subtyping schizophrenia:clinical differentiation of hebephrenic and paranoid schizophrenia. *Arch. Gen. Psychiat.*, **31**:43-47.

Winokur G., Morrison, J., Clancy J., and Crowe R. (1974) Iowa 500: the clinical and genetic distinction of hebephrenic and paranoid schizophrenia. *J. Nerv Ment Dis.*, 159:12-19.

World Health Organization (1990). ICD- 10 , Draft of Chapter V: *Mental and Behavioural Disorders. Diagnostic Guidelines.* Geneva: WHO.

Les Processus Cognitifs dans les Schizophrenie Paranoïde et non-Paranoïde

Cette étude pose la possibilité d'une différence entre les schizophrénies paranoïde et non-paranoïde et ceci en fonction des capacités d'abstractions et des performance intellectuelles.

Les resultats indiquent un continuum de mal-fonctionnement generale des capacités d'abstractions et des performaces intellectuelles plutôt que des perturbations délimités qui distinguerait ces deux types de schizophrénies des sujets normaux.

Les resultats supporteraient une approche processuelle dans la conceptualisation de la schizohrenie dans laquelle le type paranoïde serait considéré comme une forme plus atténuée du même trouble plutôt qu'une entité diagnostique distincte.

عمليات التفكير في الفصامين البارنويين وغير البارنويين

تدل الشواهد المتعددة على أن التفرقة الاكلينيكية بين عمليات تفكير الفصامين مرضى التعام البارنويين وغير البارنويين قد تؤدي إلى فهم أنسب لمسببات الفصام، وتهدف هذه الدراسة إلى استكشاف الاختلافات بين مجموعتين من الفصامين البارنويين وغير البارنويين من حيث القدرة على التجريد والاداء الذكائي، وقد تم انتقاء هاتين المجموعتين حسب سمات توانج - ويتوكز بالإضافة إلى مجموعة ضابطة من عشرين سوياً، وقد تمت مقارنتهم باختبار الأمثلة العامة المصرية واختبار وكسلر لذكاء الراشدين، وقد كان أداء الفصامين غير البارنويين مخرلاً على كافة مقاييس الاختبارات، وكان أداء الفصامين البارنويين أقل خلاً ولكن أسوأ من العينة الضابطة، وتشير النتائج إلى أن خلاً عاماً في التجريد والاداء الذكائي يميز هاتين المجموعتين عن الأسوياء، وتؤكد هذه النتائج إمكانية اعتبار مفهوم عملية الفصام مرحلة يميل فيها الفصام البارنوي إلى ناحية الشكل المتماص أكثر من كونه فئة تشخيص منفصلة.