

Schizophrenia and Affective Psychoses: I

A Clinical Comparison

R. Mahfouz, M. Howiadi, M. H. El-Dafrawi, E. Hamdi and
Yousrea Amin

ABSTRACT

32 male Egyptian psychiatric inpatients with recurring psychotic episodes were compared from the symptomatological profiles using the Present State Examination (PSE), personological organization using the Minnesota Multiphasic Personality Inventory (MMPI), intellectual functioning using the Wechsler Adult Intelligence Scale (WAIS) and other predictor and follow up measures after 3 years of index evaluation.

Results of diagnostic comparison showed schizophrenic patients (n=22) to have a statistically higher Deterioration Quotient (DQ) and lower scores on predictors than patients with affective psychosis. Also affective psychotics (n=10) obtained a significantly higher score on the MMPI scale (SI) Social Introversion than schizophrenics. These results and their clinical implications are discussed.

INTRODUCTION

Since Kraepelin hypothesized that the functional psychoses consist of two distinct disease entities, studies have tried to delineate or replicate this possible scientific illusion (Brockington *et al*, 1979). However, there is still no compelling evidence that the universe of psychotic patients falls naturally into these two groups. Kendell and Gourloy (1970) failed to differentiate psychotic patients into distinct diagnostic groups with the use of a large number of history and mental state variables.

Recent diagnostic systems based on the Kraepelinean distinction have attempted to resolve this controversial issues and conflicts between the diagnosis of schizophrenia and affective psychosis through establishing a symptomatological diagnostic operational criteria (DSM-III, 1980).

However, doubts are still casted on the utility of the current nosological dis-

tinction in understanding psychopathology (Carpenter and Stephens, 1982).

Recent studies have suggested that there might be a diagnostic functional spectrum extending from affective psychoses to schizophrenia (Townes *et al*, 1985).

The present study was designed to compare between the two groups of affective psychoses and schizophrenia in Egyptian inpatients using symptomatological, personological and intellectual variables together with some predictors and follow up measures.

This paper reports on the initial comparative findings in the first step using diagnosis as the independent variable.

MATERIALS & METHOD

The sample consisted of 32 male Egyptian psychiatric inpatients with the diagnosis of schizophrenia (n=22) and af-

fective psychosis ($n=10$). Diagnoses were according to DMP-I. The mean age for the whole group was 28.9 (± 4.3) years (range 20-42 years). Patients were assessed for their symptomatology using the Present State Examination (PSE) (Wing *et al.*, 1974, Okasha and Ashour, 1981). PSE results were handled statistically in the form of total score, subscores (psychotic and neurotic) and derivative syndromes (delusional and hallucinatory, behavioral and speech, and specific and nonspecific neurotic syndromes). Intellectual functioning was assessed using the Wechsler Adult Intelligence Scale (WAIS) and Wechsler Deterioration Quotient (DQ) was used as a measure of cognitive dysfunctioning (Lezak 1983). Personality organizations were assessed using the Minnesota Multiphasic Personality Inventory (MMPI). In addition to the basic ten clinical scales we have chosen 26 different subscale and indices derived from the MMPI responses to cover a wide spectrum of personality organizational differences. These 26 additional indicators and signs include: index of psychopathology, interpersonal diagnostic indices, anxiety sign, character-disorder sign, frustration-tolerance index, psychotic index, psychotic score, neurotic score, 2-7-8 profile, psychopathic social alienation, self alienation, schizophrenic social alienation, emotional alienation, cognitive lack of ego mastery, conative lack of ego mastery, defective inhibition, subtle psychopathic deviate, denial of symptoms, subtle depression, personal and emotional sensitivity, pure hypochondriasis, inhibition of aggression, subtle paranoia, amorality and ego inflation.

Patients were also assessed for their current functioning on a scale covering areas of psychiatric condition prior to index episode, previous social contact (adjustment) and previous employment (Carpenter 1976, Bland and Orn 1979). Each single item and the total score were used as predictors to compare between

groups.

Follow up assessment was done three years after the initial evaluation. Outcome measures consisted of a 4-item scale assessing the level of functioning and includes duration for nonhospitalization, social contact, employment and absence of psychiatric symptoms. A total score of overall outcome was derived by adding these scores of level of functioning. Follow up data were obtained on twenty one patients (schizophrenia=13 & affective=8).

The statistical analyses were carried out comparing diagnostic groups (schizophrenia and affective psychoses) and including dependent variables of symptomatological, intellectual, personological, predictive and follow up measures.

RESULTS

There were no statistically significant differences between patients with schizophrenia and patients with affective psychosis as regard to age (28.5 vs 30.8) in years, age at onset of disorder (21-5 vs 25.0), duration of illness (7.0 vs 5.8), years of successful education (13.4 vs 14.7), number of episodes (3.9 vs 3.1) full scale I. Q. (97.7 vs 104.6), PSE total score (44.4 vs 41.8), PSE psychotic subscore (16.3 vs 10.9), PSE neurotic subscore (14.3 vs 18.5), PSE delusional and hallucinatory syndromes (8.3 vs 3.8), PSE behavior, speech and other syndromes (8.0 vs 7.1), PSE specific neurotic syndromes (5.2 vs 6.5), PSE non-specific neurotic syndromes (9.1 vs 12.0) respectively. However, patients with schizophrenia obtained a significantly higher Deterioration Quotient (DQ) of the WAIS (14.6 ± 9.1) than the group with affective psychoses (7.2 ± 6.7) ($t=2.6$, $P<0.02$). (Table I).

MMPI validity and clinical scales, subscales and indices showed no statistically significant differences between schizophrenic patients and those with affective psychoses, except for the clinical

TABLE I

*A Comparison of Some Clinical Variables in Relation to Diagnostic Groups:
Schizophrenia (N=22) Vs. Affective Psychoses (N=10)*

Variable \	Group	Schizophr. (N=22)	Aff. Psychoses (N=10)	t -Value
		Means ($\pm$ SD)	Means ($\pm$ SD)	
Full scale I.Q.		97.7 ($\pm$ 8.0)	104.6 ($\pm$ 13.2)	1.5 NS
Wechsler D.Q.		14.6 ($\pm$ 9.1)	7.2 ($\pm$ 6.7)	2.6 **
PSE total score		44.4 ($\pm$ 19.1)	41.8 ($\pm$ 17.2)	0.4 NS
Psychotic subscore		16.3 ($\pm$ 9.1)	10.9 ($\pm$ 7.4)	1.5 NS
Neurotic subscore		14.3 ($\pm$ 10.7)	18.5 ($\pm$ 13.8)	0.8 NS
MMPI Social Introv. Scale		32.3	39.2	2.6**
Predictors				
Psychiatric condition		2.4	3.7	4.2***
Previous social contact		2.3	3.1	2.4**
Previous employment		2.5	3.7	4.4***
Total of predictors		7.2	10.5	4.4***
Follow-up measures @		(N=13)	(N=8)	
Duration non-hospitalization		3.1	3.3	0.3 NS
Social contact		2.4	3.1	1.0 NS
Employment		2.4	3.1	0.4 NS
Absence of symptoms		2.8	3.0	0.3 NS
Total of outcome		10.5	12.5	0.9 NS

@ = Those patients who were followed-up.

NS* = Nonsignificant

** = Statistically significant at the level of 0.02.

*** = Statistically significant at the level of 0.01.

scale (0) Social Introversion (Si). Patients with affective psychoses obtained a statistically significant score (39.2) than those with schizophrenia (32.3) ($t=2.6$, $P<0.02$) Table I shows some of the predictors and follow up measures. Patients with affective psychosis obtained statistically significant higher score on sum of total predictors (10.5) than schizophrenic patients (7.2) ($t=4.4$, $P<0.01$) However, there were no significant differences between diagnostic groups at follow up. The trend was that affective psychotics obtained a higher means.

DISCUSSION

Statistical analysis comparing both schizophrenic and affective psychoses revealed no statistically significant differences in their PSE symptomatological indicators which included total score, subscore and derivative syndromes. This might suggest that the symptomatological level of assessment of schizophrenia and affective psychoses is not differentiating enough, although these psychoses are diagnostically differentiated. In other words, different diagnoses may have similar symptoms, and that neither the symptoms nor their severity are pathognomonic of any such disorder. This is further supported by the extensive review of literature on schizophrenia and affective psychoses done by Pope and Lipinski (1978) who noted that several putative pathognomonic schizophrenic symptoms, delusions, hallucinations and Schneider's first rank symptoms are found in 20 to 50 percent of well-documented cases of manic depressive illness.

Such findings limit the applicability of the pathognomonic symptomatological approach to diagnostic differentiation.

It is possible that in the group of schizophrenia there were some patients with recurrent major psychoses belonging to the affective or mixed with affective and schizophrenic forms.

The MMPI clinical scales, subscales

and indices did not show much personological differentiation neither among diagnostic groups nor when the type of course and recurrence or the illness duration in the schizophrenia group were the independent variables. These results are concordant with Walters (1983) who suggested that there are no significant differences between schizophrenics and affectively disturbed patients (including primary affective disorder inpatients) diagnosed under DSM-III on all 13 standard MMPI scales. He commented nowhere is the heterogeneity of schizophrenia more evident than in research on MMPI.

Also Winters *et al* (1985) found that the MMPI affective codetypes were often overlapped with a diagnosis of schizophrenia. This might suggest that in investigating major recurring psychoses, the traditional MMPI indices need to be either refined or a new innovative measurements of personological factors have to be used. It is also suggested that in studying personological factors in major functional psychoses a departure from the diagnostic boundaries might facilitate exploring the differences.

The results of intellectual assessment showed that the patients with affective psychoses had no evidence of intellectual impairment in comparison to the schizophrenic group. This is further supported by the findings of Friedman (1964) who reported negligible intellectual impairment in patients with affective disorders and Donnelly *et al.* (1982) who found no evidence for intellectual dysfunctioning in affective psychoses using the WAIS.

One of the positive findings in our nosological comparisons was the significant association of higher Wechsler Deterioration Quotient (WDQ) with the schizophrenia subgroup, these results raise many questions than it answers. However, since the premorbid intellectual assessment and WDQ of our psychotic patients (particularly schizophrenia group) were unknown, we were

unable to test directly the hypothesis that the schizophrenia is associated with an increase in intellectual dysfunctioning.

The question is not whether the WDQ differences between subgroups are of diagnostic significance, but rather what such differences signify? One possible explanation is that the disturbance of the information processing as the result of the schizophrenic process might lead to a subtle effect on the intellectual organization of those patients.

These intellectual deficits might not be demonstrated in any particular subtest of the WAIS, but rather as a relation pattern (scattering) among subtests. However, a high score on the WDQ was not the rule in the schizophrenia group since seven of the 22 patients have obtained WDQ below 10. The WDQ differences between diagnostic groups can not be simply explained due to the interference of the psychiatric status since the PSE indicators did not show any significant differences and a correlation matrix between PSE measures and WDQ was very weak ranging from -0.39 to 0.14. Similarly, Townes *et al.* (1985) found no relationship between the degree of neuropsychological impairment and the severity of psychiatric disorder. Also, seven patients from the schizophrenia group obtained WDQ above 20. It is possible that those seven schizophrenic patients, simulating an organic or definite deterioration, have a relative impairment in their subtest that was not detected by comparative groups but rather in relation to their means on other subtests. For example the similarities subtest which is a measure of conceptual judgment and is part of the subtests that do not hold, appeared to be relatively lower than the means of other subtests in three of the seven patients. In another two patients the verbal I. Q. was considerably higher than their performance I. Q. by more than 20 points which strongly suggests a possible organic impairment (Zimmerman and Woo-Sam,

1973). Similarly, patients obtained relatively lower means on digit symbol and block design subtests than their means on other subtests.

It is possible that in the process of schizophrenic psychotic decompensation, deterioration and adaptation at a lower level of functioning might not only apply to the social, occupational or personal domains, but also on those of higher intellectual functions of judgment, spontaneity, and reasoning. Thinking is at the high end of the hierarchical theories of brain functions. These higher intellectual functions tend to be relatively sensitive to diffuse disorganization of the brain processes even when other hierarchically lower functions are intact (Goodglass and Kaplan, 1979). Thus the higher intellectual function tend to be more vulnerable in relation to the schizophrenic process. We recommend that in future studies of recurring psychoses, the use of measures of intellectual impairment, e. g. W. D. Q. in addition to the diagnosis to delineate subgroups, might help in increasing accuracy of classifying impaired psychiatric patients. Interestingly, Townes *et al.* (1985) have suggested that a neuro-behavioral approach to classification of psychiatric patients with associated treatment interventions based on a patient profile of competences and deficits would optimize treatment outcome. However, Bleuler (1966) in discussing the schizophrenic dementia has pointed out that it is a complete misunderstanding of the peculiarities of schizophrenia if one believes that schizophrenic dementia can be proved or excluded by means of an "intelligence test" whether it be one which takes but a few minutes or several days to perform. He added that if one wishes to speak of intellectual demented with regard to certain periods, to certain constellations, and to certain complexes.

In conclusion it appears that the current distinction of functional psychoses into schizophrenia and affective is only of limited usefulness and there appears

to be a need for further departure from the traditional nosological system in comparing psychotic patients. Although the Kraepelina dichotomy is associated with predictive significance and a possible neuropsychological impairment of schizophrenics, however, there is a lack of understanding of the interrelationship between recurrent major psychoses. Future studies should compare groups using other nondiagnostic approaches. Or in other words to use a polydiagnostic approach as the independent variables rather than diagnostic groupings.

REFERENCES

- Bland, R. C. and Orn, H. (1979) Schizophrenia: diagnostic criteria and outcome, *Brit J. Psychiat.*, **134**: 34-38.
- Bleuler, E. (1966) *Dementia Praecox or the group of schizophrenias*. Translated by J. Zinkin. New York. International University Press.
- Brockington, I. F., Kendell, R. E., Wainwright, S., Hillier, V. F. and Walker, J. (1979) The distinction between the affective psychoses and schizophrenia. *Brit. J. Psychiat.*, **135**: 243-48.
- Carpenter, W. T. (1976) Current diagnostic concept in schizophrenia. *Amer. J. Psychiat.*, **133**: 172-177.
- and Stephens, J. H. (1982) Prognosis as the critical variable in classification of the functional psychoses *J. Nerv. Ment. Dis.*, **170**: 688-91.
- Donnelly, E. F., Murphy, D. L., Goodwin, F. K., (1982) Intellectual function in primary affective disorder. *Brit. J. Psychiat.*, **140**: 633-636.
- Gift, T. E., Strauss, J. S. Harder, D. W. (1981) Established chronicity of psychotic symptoms in first admission schizophrenic patients. *Amer. J. Psychiat.*, **138**: 779-784.
- Goodglass, H. and Kaplan, E. (1979) Assessment of cognitive deficit in the brain-injured patient. In Gazzaniga, M. S. (ed) *Handbook of Behavioral Neurology*. (vol, **III** Neuropsychology) New York: Plenum press.
- Kendell, R. E. and Gourlay, J. (1970) The clinical distinction between the affective psychosis and schizophrenia. *Brit. J. Psychiat.*, **117**: 261-6.
- Friedman, A. S. (1964) Minimal effects of severe depression on cognitive functioning. *J. Abnor. Soc. Psychol.*, **26**: 57-63.
- Lezak, M. D. (1983) *Neuropsychological Assessment*. New York, Oxford University press.
- Okasha, A. and Ashour, A. (1981) Psychodemographic study of anxiety in Egypt: The PSE in its Arabic version. *Brit. J. Psychiat.*, **139**: 70-73.
- Pope, H. G. and Lipinski, J. F. (1978) Diagnosis in schizophrenia and manic-depressive illness. *Arch. Gen. Psychiat.*, **35**: 811-828.
- Townes, B. D., Martin, D. C., Nelson, D., Prosser, R., Pepping, M. and Maxwell, J. (1985) Neurobehavioral approach to classification of psychiatric patients using a competency model. *J. Counsel. Clin. Psychol.*, **53**: 33-42.
- Walters, G. D. (1983) The MMPI and schizophrenia: a review. *Schizophr. Bull.*, **9**: 226-240.
- Wing, J. K., Cooper, J. E. and Sartorius, (1974) *The measurement and classification of psychiatric symptoms: An instruction manual for the PSE and catego program*. London: Cambridge University Press.
- Winters, K. C. Newmark, C. S. and Lumry, A. E. (1985) MMPI codetypes characteristics of DSM-III schizophrenics, depressives, and bipolars. *J. Clin. Psychol.*, **41**: 382-386.
- Zimmerman, I. L. and Woo-Sam, J. M. (1973) *Clinical Interpretation of Wechsler Adult Intelligence Scale*. New York: Grune & Stratton.